

**Republic Of Ghana
Ministry Of Education and Sports**

**Basic Education
Comprehensive Assessment System
(BECAS)**

**REPORT ON 2007 ADMINISTRATION OF
NATIONAL EDUCATION ASSESSMENT
PRIMARY 3 AND PRIMARY 6
*English and Mathematics***

EXECUTIVE SUMMARY

The NEA, as an indicator of Ghana's education quality at the basic level, is based on a random, stratified sample of pupils (Primary 3 and Primary 6). As a result of the design and sampling approach, NEA results can be generalized and compared by region and gender. The assessment is focused on measuring pupils' performance in specific subjects (English and Mathematics) and answers the question, "Are pupils achieving a minimum competency or proficiency in a specific subject?" and "How are pupils performing as a whole in English and Mathematics?"

The NEA 2007 is unique since it serves as a baseline study and an indicator at the commencement of the New Education Reform. Against this backdrop, the analysis and data displayed in this report are intended to motivate all stakeholders to make strategic choices for improving the performance of all pupils irrespective of their characteristics. They are also intended to lead to improved instructional techniques and learning, teacher motivation and improved curriculum review. The findings of the NEA 2007 are also essential for equitable allocation of resources – financial, human and material – and adjustment in policy that might become necessary.

OBJECTIVES OF THE NEA 2007

It is envisaged that the following objectives are key to the fulfillment of NEA 2007's critical role. They are to:

- Determine the level of pupils' achievements in English and Mathematics at the pivotal stages of Primary 3 and Primary 6.
- Examine relationships between achievements and pupils' gender, Region and school type (EQUALL vs. Non EQUALL).
- Examine the pattern of performance in the components of English and Mathematics at Primary 3 and Primary 6.
- Compare the achievement of pupils in:
 1. English with that of Mathematics in 2007
 2. English and Mathematics in 2007 with performance in English and Mathematics in 2005

INSTRUMENTS

For comparison purposes the same multiple-choice tests designed for Primary 3 and Primary 6 for NEA 2005 were administered in July 2007. The broad skill areas tested in NEA for P3 and P6 follow.

English

Listening Comprehension
Usage (Grammar Structure)
Reading Comprehension
Writing

Mathematics

Number and Numeracy
Basic Operations
Measurement
Shape and Space
Collecting and Handling Data

Sample

A sample of five hundred and twenty-one primary schools (521) with P3 and P6 classes was selected and tested in the 2007 administration of the NEA. Out of this number, 461 primary schools represented a sampling fraction of 3.5% of all public primary schools in Ghana. The Sample Design Manager (SAMDEM), a sampling programme noted for its reliability, accuracy and cost-effectiveness was used for sampling.

The remaining 60 are beneficiary schools of the EQUALL Project. They were sampled using simple random sampling in the SPSS.

Test Results

Two cut-off scores were established to provide useful information regarding pupil performance and system effectiveness. The **Minimum-competency** describes pupils obtaining 35% and the **Proficiency level** identifies those reaching 55% of the total score on the test. The 35% minimum-competency level was the collective judgment of item writers with support from other subject specialists and reflects 10% score points above the chance score of 25%, thereby suggesting learning has taken place. The proficiency level of 55%, determined by the same group of educators, shows that the pupil has learned the curriculum for the class (grade level) to the degree necessary to work at the next grade level.

Results from the NEA are presented below FY2005 and FY2007 for ease of reference and to facilitate comparison for the two years.

Overall distribution of mean scores, minimum-competency and proficiency

	2005			2007		
	Mean	% Obtaining Minimum-Competency	% Reaching Proficiency	Mean	% Obtaining Minimum-Competency	% Reaching Proficiency
English P3	38.5	50.5	16.4	37.6	50.1	15.0
English P6	43.2	63.9	23.6	44.2	69.7	26.1
Mathematics P3	36.6	47.2	18.6	35.0	42.6	14.6
Mathematics P6	34.4	42.7	9.8	35.7	46.2	10.8

The results of the NEA 2007 demonstrate that the performance of pupils was weak in both English and Mathematics in the two class levels. The mean scores percent in English for P3 and P6 respectively were 37.6% and 44.2%. The mean scores percent in Mathematics for P3 and P6 respectively were 35.0% and 35.7%. The mean scores in Mathematics are above the chance score of 25% for a multiple-choice test with 4 options per item. However, the difference between the actual score and chance score is so small that results may indicate that not much effort was put into answering the items correctly – possibly due to low mathematical ability.

Comparing achievements of P3 pupils in 2007 to those of 2005, the mean scores, minimum-competency and proficiency were lower in 2007 than in 2005 for both English

and Mathematics. The reverse scenario is observed in P6. It suggests some level of progress was made by pupils in P6 in 2007.

The regional results indicate that the Greater Accra area was the highest performing region in both subjects at both the P3 and P6 levels. It had the highest overall mean score percent as well, and the largest percentage of pupils reaching the minimum-competency and proficiency levels.

Results also indicate that girls did slightly better than boys in English in both P3 and P6. However, in Mathematics the boys did better than the girls in both P3 and P6. The boys' mean scores were higher and the percentages reaching proficiency level in both classes were higher than that of the girls in Mathematics.

When the performance of non EQUALL schools was compared with the EQUALL schools, it was found that very little difference existed in the performance in both subjects in P3. The mean scores percent of the public (non EQUALL) schools were 37.6% for English and 35.0% for Mathematics while EQUALL schools had 38.1% for English and 35.1% for Mathematics at the P3 level. In Primary 6, the public (non EQUALL) schools performed slightly better than the EQUALL schools. The mean scores percent of the public (non EQUALL) schools were 44.2% for English and 35.7% for Mathematics while EQUALL schools had 42.7% for English and 33.3% for Mathematics.

**PERCENTAGE OF PUPILS IN PUBLIC AND EQUALL SCHOOLS
REACHING STANDARDS – ENGLISH AND MATHEMATICS
P3 AND P6**

	Public Schools			EQUALL Schools		
	Mean %	35%	55%	Mean %	35%	55%
P3						
English	37.6	50.1	15.0	38.1	52.7	16.2
Mathematics	35.0	42.6	14.6	35.1	41.9	14.6
P6						
English	44.2	69.7	26.1	42.7	70.7	20.1
Mathematics	35.7	46.2	10.8	33.3	41.1	5.4

Recommendations

The following recommendations are based on the administration of the NEA 2007, its sustainability and the test results in the hope that the issues raised would be addressed.

Areas of Research

1. The differences in regional performance need further research for explanation. Further studies need to be done to establish the causes of variation in performance across the various regions of the country.
2. As is common knowledge, a substantial number of Ghanaian children are not reading at the expected level. This clearly affected their test scores in both English and Mathematics in P3 and P6. A concerted and collaborative effort toward improving reading instruction would greatly improve literacy levels of primary school children.

Training of Test Administrators

The training of large numbers of Test Administrators (TAs) in one place at the same time is ineffective, unproductive and not cost-effective. Such training should be done in batches of much smaller numbers.

Pre-coding of Scannable Answer Sheets

Scannable answer sheets should be procured in time and made available for pre-coding by TAs at their training sessions, prior to the actual administration of the tests.

Test Monitors

Arrangements should be made early to make vehicles available for the monitoring exercise, so that monitors can visit as many schools and districts as possible to monitor the conduct of the testing.

Class Enrolments and Supply of Test Materials

Accurate enrolment figures for classes that take the NEA are essential for the packing and dispatch of test materials to the Test Administrators. A system should be designed to update school enrolments on a regular basis. This will ensure delivery of enough materials.

1.0 INTRODUCTION

An increasing number of international, regional, and national assessments report low and unequal learning outcomes, reflecting the extent to which poor education quality is undermining the achievement of Education For All (EFA Global Monitoring Report 2008). Assessment in itself does not improve the educational system. Assessments merely reflect what is going on within the system and provide information that informs decision-making in developing credible implementation strategies and plans. In response to these concerns in general and to Ghana's ultimate goal for quality education, especially at basic level, the MOESS/GES within the context of its strategic plan, has been measuring learning achievements prior to the Basic Education Certificate Examination. In this direction Ghana's Basic Comprehensive Assessment System (BECAS), which consists of (1) National Education Assessment (NEA), (2) School Education Assessment (SEA) and (3) School-Based Assessment (SBA) has been designed and administered to provide useful information for improving educational planning, management and teaching and learning at the basic level.

The NEA, as an indicator of Ghana's education quality at the basic level, is based on a stratified random sample of pupils in P3 and P6. As a result of the design and sampling approach, NEA results can be generalized and compared by region, gender, type of school (public/private) and by urban/rural classifications. The assessment is focused on measuring pupils' performance in specific subjects (English and Mathematics) and answers the question, "Are pupils achieving a minimum competency or proficiency in a specific subject?" and "How are pupils performing as a whole in English and Mathematics?"

The NEA 2007 is unique since it serves as a baseline study and an indicator at the commencement of the New Education Reform. Against this backdrop, the analysis and data display in this report are intended to motivate all stakeholders to make strategic choices for improving the performance of all pupils irrespective of their characteristics. They are also intended to lead to improved instructional techniques and learning, teacher motivation and improved curriculum review. The findings of the NEA 2007 are also essential for equitable allocation of resources – financial, human and material – and the adjustment in policy that might become necessary.

2.0 OBJECTIVES OF THE NEA 2007

It is envisaged that the following objectives are key to the fulfillment of NEA 2007's critical role. They are to:

- Determine the level of pupils' achievements in English and Mathematics at the pivotal stages of Primary 3 and Primary 6.
- Examine relationships between achievements and pupils' gender, and regions.
- Examine the pattern of performance in the components of English and Mathematics at Primary 3 and Primary 6.
- Compare the achievement of pupils in:
 - English with that of Mathematics in 2007

- English and Mathematics in 2007 with performance in English and Mathematics in 2005
- Assess progress made by pupils in English and Mathematics in 2007.

3.0 INSTRUMENTS

For comparison purposes the same multiple-choice tests designed for Primary 3 and Primary 6 for NEA 2005 were administered in July 2007. It should be noted that a Technical Working Group (TWG) composed predominantly of members of the Ghana Education Service who work in the areas of curriculum development, textbook production, educational assessment and teacher education and subject specialists was established to develop the test items. The items were aligned to the national curriculum (English and Mathematics) to provide policy-level information regarding class achievement and system performance.

The item pool used was subjected to a sensitivity review and pupils' opportunity to learn (OTL) in order to identify and remove items that, while theoretically and psychometrically sound, have properties that would introduce bias in performance. This reduces the risk of critics using poor items to demonstrate the weakness of the tests. The items were taken through all the stages of test development. These included piloting, item analysis, further review and revision. A nationwide administration of the test to a sample of schools/pupils was also undertaken for subsequent data processing and analysis. Four parallel test forms were used to prevent copying among pupils.

The breakdowns of items in each booklet are as follows:

ENGLISH

SUBTEST	PRIMARY 3	PRIMARY 6
LISTENING	10	15
USAGE/ GRAMMATICAL STRUCTURE	10	21
READING COMPREHENSION	13	14
WRITING	7	10
TOTAL	40	60

MATHEMATICS

SUBTEST	PRIMARY 3	PRIMARY 6
NUMBER & NUMERALS	2	4
BASIC OPERATIONS	27	43
MEASUREMENT	4	5
SHAPE & SPACE	4	3
COLLECTING & HANDLING DATA	3	5
TOTAL	40	60

The analysis of the results did not include attitude items at the end of each booklet.

The importance of the above stated broad areas tested or subtests cannot be overemphasized. Competencies as well as proficiency in each of the skills (i.e. foundational literacy and numeracy) are necessary for improving the quality of teaching and learning. The measured characteristics also inform decision- making in education delivery at the pivotal stages of P3 and P6.

The four parallel forms for the administration of the English and Mathematics for P 3 and P 6 were again administered in 2007. These forms were administered simultaneously in each class. Listening Comprehension, a subset of the English test was the exception where only one form was used in each classroom.

4.0 SAMPLE SELECTION

The administration of the NEA 2007 began with a random selection of a sample of schools nationwide using the Sample Design Manager (SAMDEM) programme. This software facilitates the random selection of national sample of schools and pupils/students. It uses a stratified two-stage cluster sample design, which is commonly used in educational research studies that are concerned with monitoring and evaluating the quality of education.

A sample fraction of 3.5% was used to select schools with Primary 3 and 6 from all districts and regions in the country. At schools with multiple streams, all streams were included in the sample. Intact classes (grade levels) were tested. The number of schools in the national sample was five hundred and twenty-one (521). This figure includes sixty (60) EQUALL (Education Quality for All) schools¹ randomly selected using SPSS. Their inclusion in the testing was meant to allow comparability of performance with the rest of the selected public schools, which were the target of this assessment. The distribution of schools and number of pupils tested in P3 and P6 are shown in the Table 1.

¹ *Education Quality for All (EQUALL) is a USAID-funded project which supports the MOESS and GES Education Strategic Plan.*

TABLE 1: NUMBER OF SCHOOLS, PUPILS EXPECTED AND ACTUAL NUMBER OF PUPILS TESTED

REGION	NO. OF SCHOOLS		NO. OF PUPILS EXPECTED					
	PUBLIC	EQUALL	PRIMARY 3			PRIMARY 6		
			PUBLIC	EQUALL	TOTAL	PUBLIC	EQUALL	TOTAL
WESTERN	48	0	2560	0	2560	2208	0	2208
ASHANTI	75	18	4466	823	5289	3900	654	4554
B/AHAFO	52	0	2794	0	2794	2186	0	2186
CENTRAL	47	2	2708	99	2807	2235	90	2325
EASTERN	63	19	2723	866	3589	2427	739	3166
G/ACCRA	44	0	2950	0	2950	2775	0	2775
NORTHERN	44	7	3168	259	3427	2539	182	2721
U/EAST	23	0	1947	0	1947	1427	0	1427
U/WEST	16	0	1169	0	1169	774	0	774
VOLTA	49	14	2208	439	2647	1795	416	2211
TOTAL	461	60	26693	2486	29179	22266	2081	24347

REGION	NO. OF PUPILS TESTED					
	PRIMARY 3					
	ENGLISH			MATH		
	PUBLIC	EQUALL	TOTAL	PUBLIC	EQUALL	TOTAL
WESTERN	2201	0	2201	2228	0	2228
ASHANTI	3723	810	4533	3729	811	4540
B/AHAFO	2343	0	2343	2344	0	2344
CENTRAL	2189	64	2253	2193	65	2258
EASTERN	2264	777	3041	2270	775	3045
G/ACCRA	2512	0	2512	2510	0	2510
NORTHERN	2415	234	2649	2295	239	2534
U/EAST	1536	0	1536	1537	0	1537
U/WEST	1070	0	1070	1076	0	1076
VOLTA	1567	363	1930	1829	360	2189
TOTAL	21820	2248	24068	22011	2250	24261

REGION	NO. OF PUPILS TESTED					
	PRIMARY 6					
	ENGLISH			MATH		
	PUBLIC	EQUALL	TOTAL	PUBLIC	EQUALL	TOTAL
WESTERN	1975	0	1975	1907	0	1907
ASHANTI	3390	614	4004	3248	634	3882
B/AHAFO	1865	0	1865	1887	0	1887
CENTRAL	1828	75	1903	1800	74	1874
EASTERN	2013	643	2656	2039	643	2682
G/ACCRA	2581	0	2581	2470	0	2470
NORTHERN	2096	173	2269	1984	173	2157
U/EAST	1174	0	1174	1172	0	1172
U/WEST	667	0	667	664	0	664
VOLTA	1758	359	2117	1514	357	1871
TOTAL	19347	1864	21211	18685	1881	20566

5.0 ADMINISTRATION OF NEA 2007

5.1 Training of Test Administrators

A four-day intensive training workshop was held from 15th to 18th June 2007 at the auditorium and lecture rooms of the University of Education, Kumasi Campus. The NEA 2005 Training Manual was used to train 394 Circuit Supervisors and Assistant Directors in charge of supervision of schools in the districts. For about 50% of the trainees, this was their first experience with test administration in a national assessment of this magnitude.

Key issues, such as test materials and procedures, use of Test Administrator's Manual, coding scheme, Pupil Identification Numbers, usage of test forms, subject codes, test material receipt forms, report forms and procedures for post-administration were covered. At the time of the training session, the answer sheets had not yet been delivered. Therefore, the pre-coding of answer sheets could not be done at the workshop. Workshop facilitators developed several practice coding exercises so that test administrators could more effectively code all test materials, which added to the success of the eventual scanning and scoring activities. Additionally, trainees participated in micro-administration activities using peer groups. This exercise enabled participants to practice the actual administration with experienced TAs and trainers who provided them with valuable feedback before administering the test in schools.

5.2 Administration and Monitoring

The administration of the test, due to unforeseen challenges, was rescheduled to start officially on Wednesday, July 25, 2007 in all districts instead of the proposed date of July 18, 2007. However, few districts that had their security bags earlier began the administration of the test on July 23, 2007. The task of pre-coding the answer sheets with Pupil Identification Numbers (PINs), which included regional, district and school codes, along with Sex, Subject codes and Form Numbers was undertaken by the test administrators/pupils in the field before/during the administration of the tests.

For most of the pupils taking the tests in Primary 6, the method of using a separate answer sheet and shading their responses on the scannable answer sheet was a new experience. Test Administrators were therefore encouraged at the training workshop to engage them to practice shading answers before the administration began. This is to reduce the incidence of shading error on the part of the pupils. Those in Primary 3, on the other hand, had had this experience since they took part in the School Education Assessment (SEA) in 2006.

The Test Administrators worked in pairs and in schools with double streams, four test administrators were assigned to them.

Monitoring Teams drawn from CRDD/ASU and EQUALL Technical Support Team observed the test administration in all ten regions. As many schools as possible were monitored. But given the limited transportation five or six schools were observed in the selected districts. Monitors provided feedback in a variety of areas. Generally, the

administration of the NEA tests was successful despite weather and few logistics problems. TA performance was seen as positive, for the most part.

5.3 Data Processing and Data Analysis

The NEA 2007 tests, like that of 2005, for P3 consisted of forty (40) multiple-choice items with four (4) alternative answers each for English and Mathematics respectively. Similarly, for P6 the test consisted of sixty (60) multiple-choice items with (4) alternative answers each for both subjects. These excluded eight (8) attitudinal items for P3 and P6 in Mathematics.

The scannable answer sheets retrieved from the regions were sorted by class, by subject and by region to facilitate processing and analysis. Initial data quality checks were conducted to clean the answer sheets of errors in the Pupil Identification Number (PIN), Sex, Subject, Test Form and the Listening Comprehension Test Form. Since the P3 pupils have had some experience in shading i.e. in P2 while writing the SEA 2006, minimum shading errors were detected in their sheets in the sample countrywide.

The sheets were subsequently scanned using OPSCAN 8 and 6. The Statistical Package for the Social Sciences (SPSS 12.0) was used in the analysis of the results. The first step was to clean the data received from the OPSCAN 8 and 6 (in the SPSS files.) This was done by running a frequency distribution on each of the variables in the data files and cross-tabulating. The outputs were carefully reviewed for missing data and unusual or unexpected responses i.e. for outliers.

The SPSS data files were then broken into Forms for each subject and class. For each Form, scoring and item analysis were done using the ITEMAN 3.6 software. Item analysis results, producing information on each item and aggregate information such as means, standard errors and reliabilities for each Form, as well as total score output, were calculated. Scores on each objective were also obtained. Total score output was then imported into SPSS as a data file and analyzed for individual schools, districts, regions, gender and the entire country. Means and standard deviations were obtained for each Form. The total score output files from the Forms were later merged into one file as a complete data file for each subject and class. The analysis was redone for individual schools, districts, regions, gender and nation. Means and standard deviations and percentages meeting 35% and 55% criteria were obtained. Standard errors on means and percentages meeting each criteria, as well as scores on each objective, were calculated. Comparative analysis was also done for public (non-EQUALL) and EQUALL schools. Performance on each section of the English and Mathematics tests was also analyzed by region and gender.

6.0 PRESENTATION OF TEST RESULTS

6.1 Minimum-Competency (35%) and Proficiency (55%) levels

Two cut-off scores were established to provide useful information regarding pupil performance and system effectiveness. **Minimum-competency** describes pupils reaching 35% and **Proficiency level** identifies those reaching 55% of the total score on the test. The 35% minimum-competency level was the collective judgment of some item writers

with support from other subject specialists and reflects 10% points above the chance score of 25%, thereby suggesting learning has taken place. The proficiency level of 55%, determined by the same group of educators, shows that the pupil has learned the curriculum for the class (grade level) to the degree necessary to work at the next grade level.

6.2 System errors/limitations: impact on interpretation and use of NEA tests results

During the administration and analysis of tests data of the NEA, great care was taken to control the envisaged errors to acceptable minimums. These errors which are likely to impact on interpretation and use of the results include:

Errors associated with tests administration

Due to improper stacking of test booklets forms by test administrators, booklets could be miss-assigned. Pupils/administrators may code incorrectly. Both pupils and schools may artificially alter or improve the results. The most common way in which schools artificially alter results in intact classes is to systematically exclude, through whatever means, less able pupils. Increase in the fraction of such excluded pupils show false improvement over time. In addition the capitation grants policy concentrate in increasing access i.e. to raise participation rate. Success in doing so without improving school management system as well as instruction could however result in decline in results as less able pupils, especially from poorer backgrounds, are drawn into the system.

Errors associated with data capture and cleaning and editing

Errors associated with scoring

Errors in analysis

The information provided by the analysis is critical for policy decisions. Any wrong results could have an effect on the educational system. It is necessary that care was therefore taken in handling each step of the analysis.

In particular, the following areas that could produce errors were carefully watched:

1. In importing the data from ASCII into SPSS, the variable spaces were carefully watched so that wrong columns are not assigned to different variables.
2. In keying the correct responses, care was taken to ensure that wrong responses are not recorded as correct.
3. The syntax commands were cross-checked because a slight change could bring wrong results.

6.3 Percentage of pupils meeting the minimum-competency and proficiency levels

The national results of the NEA indicate that the performance of pupils was weak in both English and Mathematics in the two class levels. The mean scores percent in English for P3 and P6 respectively were 37.6% and 44.2%. The mean scores percent in Mathematics for P3 and P6 respectively were 35.0% and 35.7%. The mean scores in Mathematics are above the chance score of 25% for a multiple-choice test with 4 options per item. Yet the difference between the actual score and chance score are so small that results may indicate that not much effort was put into answering the items correctly – possibly due to low mathematical ability. Results from the NEA are presented below.

TABLE 2: Distribution of minimum-competency and proficiency for NEA 2007

	% Obtaining Minimum-Competency	% Reaching Proficiency
English P3	50.2	15.0
English P6	69.7	26.1
Mathematics P3	42.6	14.6
Mathematics P6	46.2	10.8

6.4 National and Regional Results – English P3 and P6

The national and regional results for English total scores 2007 are presented in Table 3 and 4 for P3 and P6 respectively. The raw scores have been converted to percentages and presented with their overall means in column 3 of the tables

TABLE 3: PERFORMANCE OF PUPILS ACROSS REGIONS**ENGLISH P3**

REGION	NUMBER OF PUPILS	OVERALL MEAN %	STANDARD DEVIATIONS	% REACHING MINIMUM- COMPETENCY	% REACHING PROFICIENCY
GREATER ACCRA	2512	47.4	19.98	71.6	33.4
ASHANTI	3723	40.8	18.80	55.5	21.4
WESTERN	2201	39.4	16.20	57.8	16.8
BRONG AHAFO	2343	35.5	14.53	45.8	11.4
EASTERN	2264	35.2	14.30	45.6	9.8
CENTRAL	2189	35.0	14.04	45.4	9.8
VOLTA	1567	34.3	15.10	42.0	10.5
NORTHERN	2415	34.1	15.31	40.9	9.5
UPPER WEST	1070	33.5	13.21	41.7	6.7
UPPER EAST	1536	32.9	12.69	39.5	5.9
TOTAL	21820	37.6	16.66	50.1	15.0
BOYS	11301	37.1	16.30	49.3	14.0
GIRLS	10519	38.1	17.04	51.1	16.0

TABLE 4: PERFORMANCE OF PUPILS ACROSS REGIONS**ENGLISH P6**

REGION	NUMBER OF PUPILS	OVERALL MEAN %	STANDARD DEVIATIONS	% OBTAINING COMPETENCY	% REACHING PROFICIENCY
GREATER ACCRA	2581	53.7	16.74	86.7	50.3
ASHANTI	3390	46.6	17.29	72.6	32.0
WESTERN	1975	45.0	15.59	72.7	26.7
EASTERN	2013	43.4	14.5	69.9	23.7
CENTRAL	1828	42.9	14.36	68.3	21.1
VOLTA	1758	40.8	16.98	61.0	23.3
BRONGAHAFO	1865	40.5	13.16	64.2	15.5
UPPER EAST	1174	40.3	13.87	62.6	15.8
UPPER WEST	667	40.2	13.04	62.4	16.5
NORTHERN	2096	38.9	13.58	60.4	13.4
TOTAL	19347	44.2	16.01	69.7	26.1
BOYS	10171	43.6	15.77	68.3	24.5
GIRLS	9176	44.8	16.26	71.2	27.9

The national mean for P3 English is 37.6%, which is 12.6 score points above the chance score of 25%. The mean score of 44.2% for P6 is 19.2 score points above the chance score for a multiple-choice test of four options like the NEA test. The performance of girls in English is slightly better than that of boys in both P3 and P6.

Fifty percent of pupils reached the minimum-competency level (35%) for P3 and 69.7% of pupils reached a minimum-competency for P6. The percentages of pupils reaching 35% are relatively higher - particularly for P6 - while the percentage of pupils reaching the proficiency level of 55% is comparatively low (15.0% and 26.1% for P3 and P6 respectively).

Once again, the percentage of girls reaching the 35% and 55% is higher than those for boys in both P3 and P6 English. At the regional level, pupils in the Greater Accra region obtained the highest mean scores of 47.4% for P3 and 53.7% for P6. A similar pattern is seen in the percentages of pupils reaching the minimum-competency and proficiency levels respectively.

The English tests (P3 and P6) contained four sections or subtests – Listening Comprehension, Usage (Grammatical Structure), Reading Comprehension and Writing (See Table 21). The pupils performed best in Listening Comprehension and showed the greatest weakness in Writing except P3 where they showed the greatest weakness in Grammar. It is evident, when the performances of the boys and girls are compared, that the girls performed better than the boys on all subtests in both P3 and P6. The large standard deviations across the regions show that there is a wide variation in the public school pupils' understanding and use of English in both P3 and P6.

TABLE 5: FREQUENCY DISTRIBUTION OF SCORES**ENGLISH P3**

SCORE RANGE	NUMBER OF PUPILS	PERCENTAGE OF PUPILS	CUMULATIVE PERCENTAGE
0-10	193	0.9	0.9
11-20	2320	10.6	11.5
21-30	66185	30.3	41.8
31-40	6017	27.6	69.4
41-50	2945	13.5	82.9
51-60	1449	6.6	89.6
61-70	973	4.5	94.0
71-80	734	3.4	97.4
81-90	442	2.0	99.4
91-100	129	0.6	100.0
TOTAL	21820	100.0	

Table 5 indicates the frequency distribution of P3 English scores. It shows that of the 21820 pupils who took the test, 6618 representing 30.3% scored from 21.0% to 30.0% of the total mark for the test. Thus, in percent cumulative terms 41.8% of all the pupils obtained from 0 to 30.0% of the total marks. Eighty-three percent, representing the bulk of the pupils, scored below 51.0%. The scores are clustered in the lower range, 0-50%, which indicates a weak performance in English.

TABLE 6: FREQUENCY DISTRIBUTION OF SCORES**ENGLISH P6**

SCORE RANGE	NUMBER OF PUPILS	PERCENTAGE OF PUPILS	CUMULATIVE PERCENTAGE
0 -10	37	0.2	0.2
11-20	786	4.0	4.2
21-30	3385	17.5	21.7
31-40	5125	26.5	48.2
41-50	3983	20.6	68.8
51-60	2676	13.8	82.6
61-70	1916	9.9	92.5
71-80	1138	5.9	98.4
81-90	283	1.5	99.9
91-100	18	0.1	100
TOTAL	19347	100	

Table 6 lists the frequency distributions of the English scores in P6. The table shows, for example, that 3385 pupils representing 17.5% of all the pupils who took the test had from

21% to 30% of the items correct. The cumulative percent of 21.7 means that $\frac{1}{5}$ of all the pupils scored between 0.0% and 30.0%. Similarly, as many as 68.8% of the pupils scored below 51.0%. There is also a clustering of scores in the lower ranges (0-50.0%) with only 31.2% of the pupils scoring between 51.0% and 100.0%.

6.5 National and Regional Results – Mathematics P3 and P6

The national and regional results for Mathematics total scores 2007 are presented in Tables 7 and 8 for P3 and P6 respectively. The raw scores have been converted to percentages and presented with their overall means (%), standard deviations, percentages of pupils reaching the standards set for minimum-competency and proficiency.

TABLE 7: PERFORMANCE OF SCHOOLS AND PUPILS ACROSS REGIONS

MATHEMATICS P3

REGION	NUMBER OF PUPILS	OVERALL MEAN %	STANDARD DEVIATIONS	% OBTAINING MINIMUM-COMPETENCY	% REACHING PROFICIENCY LEVEL
GREATER ACCRA	2510	42.2	19.17	61	27.2
WESTERN	2228	38.2	16.62	53.3	18.6
ASHANTI	3729	35.6	17.61	42.7	16.1
BRONG AHAFO	2344	35.4	16.77	44.1	13.7
CENTRAL	2193	34.0	15.30	40.6	11.4
EASTERN	2270	32.4	15.02	37.1	9.8
UPPER WEST	1076	32.3	15.84	34.8	10.9
NORTHERN	2295	31.8	17.34	33.9	12.2
VOLTA	1829	31.8	15.40	34.0	10.0
UPPER EAST	1537	31.6	15.05	33.7	9.0
TOTAL	22011	35.0	17.0	42.6	14.6
BOYS	11401	35.4	17.13	44.0	15.2
GIRLS	10610	34.5	16.84	41.0	14

TABLE 8: PERFORMANCE OF SCHOOLS AND PUPILS ACROSS REGIONS**MATHEMATICS P6**

REGION	NO. OF PUPILS	MEAN (%)	STANDARD DEVIATION	% OBTAINING MINIMUM-COMPETENCY	% REACHING PROFICIENCY LEVEL
GREATER ACCRA	2470	41.9	15.53	64.1	20.2
ASHANTI	3248	37.6	16.25	49.8	15.0
WESTERN	1907	37.1	14.56	49.0	13.1
UPPER EAST	1172	35.2	13.92	45.9	9.6
EASTERN	2039	34.2	12.13	43.4	6.3
VOLTA	1514	34.2	13.01	41.6	8.1
BRONG AHAFO	1887	34.0	12.25	41.7	7.3
CENTRAL	1800	33.8	12.27	41.1	7.3
UPPER WEST	664	32.4	11.63	39.6	5.0
NORTHERN	1984	30.9	12.84	33.0	5.6
TOTAL	18685	35.7	14.24	46.2	10.8
BOYS	9849	36.1	14.57	47.5	11.6
GIRLS	8836	35.2	13.86	44.7	9.8

Tables 7 and 8 show the national and regional results for Mathematics - means (%), standard deviations, percentages of pupils reaching the standards set for minimum-competency and proficiency for P3 and P6.

The national means and standard deviations are 35.0% and 17.0% for P3 and for P6, 35.7% and 14.24%. These mean scores are above the chance score of 25% by 10 percentage points (P3) and 10.7 percentage points (P6). In all, 42.6% of the pupils in P3 reached the minimum-competency level of 35% of the total score while 14.6% reached the proficiency level of 55% and above. The size of the standard deviations compared with the sample sizes for each region indicates that there is a small variation among the pupils in their mathematics ability. In other words, in Mathematics, the pupils are fairly homogeneous, which is to be expected in the lower primary.

The regional means for P3 Mathematics show Greater Accra with 42.2% as the highest performing region. The mean scores for P6 Mathematics range from a high of 41.9% for Greater Accra to a low of 30.9% for the Northern region. Whereas 46.2% of the P6 pupils reached the minimum-competency level, only 10.8% reached the proficiency level and above. On both the P3 and P6 Mathematics tests boys performed better than the girls. The percentages of boys reaching the minimum-competency level and proficiency level and above in Mathematics are also higher.

The tests were made up of five (5) subtests as follows: Numbers and Numerals, Basic Operations, Measurement, Shape and Space, and finally Collecting and Handling Data (See Table 21).

The analysis of pupil performance in each of these areas identifies specific areas of weakness in Mathematics. The weakest area is Numbers and Numerals in P3 and Basic Operations in P6.

TABLE 9: FREQUENCY DISTRIBUTION OF SCORES**MATHEMATICS P3**

SCORE RANGE	NUMBER OF PUPILS	PERCENTAGE OF PUPILS	CUMULATIVE PERCENTAGE
0-10	630	2.9	2.9
11-20	3698	16.8	19.7
21-30	6913	31.4	51.0
31-40	4522	20.5	71.6
41-50	2536	11.5	83.1
51-60	1664	7.6	90.7
61-70	1088	4.9	95.6
71-80	637	2.9	98.5
81-90	256	1.2	99.7
91-100	67	0.3	100.0
TOTAL	22011	100.0	

Performance in the P3 Mathematics test is shown in the Frequency Distribution Table 9. The number of pupils who obtained scores from 21 to 30% of the total mark is 6913 representing 31.4% of all the pupils. In percent cumulative terms, 51.1% of the pupils obtained from 0% to 30.0%. The bulk of the pupils (83.1%) scored below 51.0% of the total mark for the test. Again, the greater clustering of scores in the lower range, 0-50%, in the distribution indicates a weak performance in Mathematics. The modal score of 25% indicates that the performance of many pupils in P3 is equal to the chance score of 25%.

TABLE 10: FREQUENCY DISTRIBUTION OF SCORES**MATHEMATICS P6**

SCORE RANGE	NUMBER OF PUPILS	PERCENTAGE OF PUPILS	CUMULATIVE PERCENTAGE
0-10	159	0.8	0.8
11-20	1829	9.8	10.6
21-30	6008	32.2	42.8
31-40	5269	28.2	71.0
41-50	2818	15.1	86.1
51-60	1430	7.7	93.8
61-70	686	3.7	97.5
71-80	305	1.6	99.1
81-90	137	0.7	99.8
91-100	44	0.2	100.0
TOTAL	18685	100.0	

Frequency distribution of P6 scores on the Mathematics test is presented in Table 10. As shown in the table, 6008 pupils, representing 32.2%, fell within the score range of 21% -

30%. In cumulative terms, 42.8% of all the pupils scored from 0.0% to 30% on the P6 Mathematics test. Similarly 86.1% of all the pupils scored below 51.0%, showing a clustering of scores in the lower range of the distribution. This indicates a weak performance on the Mathematics test, where only 13.9% of all the pupils scored above 50.0%.

In sum, the P3 pupils performed slightly better in English than in Mathematics, although their scores show a general weakness in both subjects. Likewise, on the whole, P6 pupils did better in English than in Mathematics. Their low scores on both subjects indicate a less-than-satisfactory performance in the two subjects.

7.0 Gender Performance of Public Schools in English and Mathematics

TABLE 11: MEAN DIFFERENCES IN PERFORMANCE OF BOYS AND GIRLS

Gender	Primary 3 – English			Primary 3 - Mathematics		
	Mean %	S.D.	% Reaching Proficiency	Mean %	S.D.	% Reaching Proficiency
Boys	37.1	16.29	14.0	35.4	17.13	15.2
Girls	38.1	17.04	16.0	34.5	16.84	13.9
Gender	Primary 6 – English			Primary 6 – Mathematics		
	Mean %	S.D.	% Reaching Proficiency	Mean %	S.D.	% Reaching Proficiency
Boys	43.6	15.77	24.5	36.1	14.57	11.6
Girls	44.8	16.26	27.9	35.2	13.86	9.8

Table 11 shows the comparative scores of boys and girls on the English and Mathematics tests. The means percent for boys and girls in the P3 and P6 English tests show that the girls performed slightly better than the boys at both grade levels. The percentages of girls in P3 and P6 reaching the proficiency level of 55% are higher than those of the boys. Although statistically significant at the 0.05 and 0.01 levels of confidence, the mean differences are too small to be of any “practical” significance.

The Mathematics side of the table shows that the differences in the mean scores (percent) larger in favour of the boys. The mean scores (percent) for boys in the P3 and P6 Mathematics are higher by 0.9% in both cases. The percentages of boys reaching the “proficiency” level in both the P3 and P6 tests are greater than those for the girls.

The mean differences in Mathematics are statistically significant at both the 0.05 and 0.01 levels of confidence. Although statistically significant at the 0.05 and 0.01 levels of confidence, the mean differences are too small to be of any “practical” significance.

8.0 Comparison of Non- EQUALL and EQUALL Schools

The national sample (521 schools) consists of 461 public (non-EQUALL) schools and 60 EQUALL schools.

EQUALL² schools are public schools in which the teachers are given special training in reading instruction and are provided learner materials. The selection criteria of the EQUALL schools include:

1. P1 and P2 teachers should be literate in the local language and must be professionally trained.
2. The school should have a secure place for the storage of instructional materials.
3. The school should have a substantive headteacher, not an acting one.
4. The school should have an active and supportive community.
5. Class size in P1 should be not less than 20 pupils.

This report compares both categories of schools – Public (non-EQUALL) and EQUALL schools, using their means and standard deviations, and their percentages reaching the standards set for English and Mathematics for 2007

TABLE 12: MEAN SCORES AND STANDARD DEVIATIONS IN ENGLISH AND MATHEMATICS – P3 PUBLIC AND P3 EQUALL SCHOOL

Subject	Public (Non-EQUALL Schools)		EQUALL Schools	
	Mean %	S.D.	Mean %	S.D.
English	37.6	16.66	38.2	16.04
Mathematics	35.0	17.0	35.1	16.74

Table 12 shows the means and standard deviations of the 2 categories of school.

Pupils in P3 in the EQUALL schools performed slightly better than the pupils in public (non-EQUALL) schools in English with a mean of 38.2% as against the 37.6%. In Mathematics the performances were basically the same

The standard deviations of the Public and EQUALL schools show that the pupils in the two types of schools do not vary much in their ability to understand and use English and Mathematics.

² Education Quality for All (EQUALL) is a USAID-funded project which supports the MOES and GES Education Strategic Plan.

TABLE 13: MEAN SCORES AND STANDARD DEVIATIONS IN ENGLISH AND MATHEMATICS - P6 PUBLIC AND P6 EQUALL SCHOOLS

Subject	Public (Non-EQUALL) Schools		EQUALL Schools	
	Mean %	S.D.	Mean %	S.D.
English	44.2	16.01	42.7	13.69
Mathematics	35.7	14.25	33.3	11.87

Table 13, Pupils in P6 in the EQUALL schools performed slightly worse than the pupils in public (non-EQUALL) schools in English with a mean of 42.7% as against the 44.2%. In Mathematics the performances were better in the Public (non-EQUALL) schools than the EQUALL schools.

TABLE 14 PERCENTAGE OF PUPILS IN PUBLIC AND EQUALL SCHOOLS REACHING STANDARDS – ENGLISH AND MATHEMATICS P3 AND P6

	Public (Non-EQUALL) Schools			EQUALL Schools		
	Mean %	35%	55%	Mean %	35%	55%
P3						
English	37.6	50.2	15.0	38.2	53.1	16.3
Mathematics	35.0	42.6	14.6	35.1	41.9	14.5
P6						
English	44.2	69.7	26.1	42.7	70.7	20.1
Mathematics	35.7	46.2	10.8	33.3	41.1	5.4

Table 14 shows the percentages of pupils in Public and EQUALL schools reaching standards set in English and Mathematics.

The percentages of pupils in P3 reaching both standards 35% and 55% in English are higher in EQUALL schools than in Public schools. However, in P6 English more pupils in EQUALL schools obtained the 35% minimum competency level than those of public schools but more pupils in the Public schools reached the proficiency level. In Mathematics, more pupils from the Public (non-EQUALL) schools reached standards, 35% and 55%, than the EQUALL schools.³

³ The fact that the EQUALL Project has not reached P6 and that its schools are located in deprived districts may account for observed slightly poor performances in P6 English and Mathematics.

9.0 Diagnostic Analysis of Pupils Performance

Tables 17 – 20 in the Annex of this report present the overall scores on the objectives for English and Mathematics in P3 and P6. The objectives are arranged in descending order of magnitude of their scores for easy reference. Objectives with percent correct below 25% need remediation. These objectives are highlighted.

Four levels (or categories) of performance indicated by the scores have been identified as follows:

- 50% and above correct scores = Good
- 30% - 49% correct scores = Satisfactory
- 25% - 29% correct scores = Fairly weak
- Below 25% correct scores = Poor or Weak Performance

The purpose of this section is to, firstly, draw attention to the areas of the curriculum in which the pupils are weakest and performed rather poorly. These are areas to which the bulk of the effort at improving teaching and learning to enhance learner achievement should be directed. Secondly, it is to provide general information on the skills and competencies tested in English and Mathematics.

10.0 Summary, Conclusions and Recommendations

10.1 Summary

While nearly half of pupils tested in P3 and P6 reached the minimum-competency level in both English and Mathematics, their proficiency in the two subjects needs to be improved. The national mean percent of 37.6% and 44.2% for P3 and P6 English respectively are low, especially for P3.

In Mathematics, for P3 and P6, the national means percent of 35.0 and 35.7 respectively are slightly lower compared with English, indicating the pupils' general weakness in the subject. At the regional level, the large mean scores for the Greater Accra region shows it is the highest performing region in both English and Mathematics for both P3 and P6.

The percentages of pupils reaching the previously set minimum-competency and proficiency levels were expectedly higher at the minimum-competency level. Only 15.0% (P3 English) and 26.1% (P6 English) of the pupils reach the proficiency level. For Mathematics, 14.6% (P3) and 10.8% (P6) reached proficiency level.

Generally, girls performed slightly better in English than the boys. In Mathematics, however, the boys did better at both P3 and P6. The public schools scored slightly higher than the EQUALL schools in P6 English and Mathematics.

Conclusions

The ability to read and understand simple texts in English is essential for success in taking any test written in English.

In the situation where:

1. 85% of P3 public school pupils obtain scores lower than 55% in English (with a mean of 37.6 percent),
2. 73.9% of P6 pupils obtain scores lower than 55% (with a mean of 44.2 percent),

it is very obvious that the performance of most public school pupils is low despite the huge investment made through interventions geared towards access and quality.

The diagnostic analysis of pupils' performance in Tables 17 – 20 can provide recognition of areas of improvement and areas of need over time, and allowing the GES and its partners to take corrective action by adopting active learning strategies to invigorate teaching and learning across the country.

Recommendations

The following recommendations are based on the administration of the NEA 2007, its sustainability and the test results in the hope that the issues raised would be addressed.

Training of Test Administrators

The training of large numbers of Test Administrators (TAs) in one place at the same time is ineffective, unproductive and not cost-effective. Such training should be done in batches of much smaller numbers.

Pre-coding of Scannable Answer Sheets

Scannable answer sheets should be procured in time and made available for pre-coding by TAs at their training sessions, prior to the actual administration of the tests.

Test Monitors

Arrangements should be made early to make vehicles available for the monitoring exercise, so that monitors can visit as many schools and districts as possible to monitor the conduct of the testing.

Class Enrolments and Supply of Test Materials

Accurate enrolment figures for classes that take the NEA are essential for the packing and dispatch of test materials to the Test Administrators. A system should be designed to update school enrolments on a regular basis. This will ensure delivery of enough materials.

Annex 1 Overall Performance in P3

TABLE 15: OVERALL P3 PERFORMANCE ON NATIONAL EDUCATION ASSESSMENT JULY 2007

P3 – ENGLISH

REGION	MEAN % BOYS	MEAN % GIRLS	OVERALL MEAN %	% OBTAINING MINIMUM-COMPETENCY	% REACHING PROFICIENCY
GREATER ACCRA	46	48.8	47.4	71.6	33.4
ASHANTI	40.5	41.2	40.8	55.5	21.4
WESTERN	38.3	40.4	39.4	57.8	16.8
BRONG AHAFO	35.2	35.9	35.5	45.0	11.4
EASTERN	34.6	35.6	35.1	45.6	9.8
CENTRAL	33.9	36.5	35.0	45.4	9.8
VOLTA	34.2	34.4	34.3	41.0	10.5
NORTHERN	34.5	33.7	34.1	40.9	9.5
UPPER WEST	35.1	32.0	33.5	41.7	6.7
UPPER EAST	33.3	32.4	32.9	39.5	5.9
TOTAL	37.1	38.1	37.6	50.2	15.0

P3 – MATHEMATICS

REGION	MEAN % BOYS	MEAN % GIRLS	OVERALL MEAN %	% OBTAINING MINIMUM-COMPETENCY	% REACHING PROFICIENCY
GREATER ACCRA	41.7	42.8	42.2	61.0	27.2
WESTERN	38.6	37.9	38.2	53.3	18.6
ASHANTI	36.0	35.2	35.6	42.7	16.1
BRONG AHAFO	36.2	34.4	35.4	44.1	13.7
CENTRAL	33.9	34.0	34.0	40.6	11.4
EASTERN	32.8	32.1	32.4	37.1	9.8
UPPER WEST	34.1	30.7	32.3	34.8	10.9
NORTHERN	32.9	30.4	31.8	33.9	12.2
VOLTA	32.5	31.1	31.8	34.0	10.0
UPPER EAST	32.7	30.5	31.6	33.7	9.0
TOTAL	35.4	34.5	35.0	42.6	14.6

Annex 2 Overall Performance in P6

TABLE 16: OVERALL P6 PERFORMANCE ON NATIONAL EDUCATION ASSESSMENT, JULY 2007

P6 – ENGLISH

REGION	MEAN % BOYS	MEAN % GIRLS	OVERALL MEAN %	% OBTAINING MINIMUM-COMPETENCY	% REACHING PROFICIENCY
GREATER ACCRA	53	54.5	53.7	86.7	50.3
ASHANTI	46	47.2	46.6	72.6	32.0
WESTERN	44.8	45.2	45.0	72.7	26.7
EASTERN	43.0	44.0	43.4	69.9	23.7
CENTRAL	41.9	44.3	42.9	68.3	21.1
VOLTA	41.4	40.1	40.8	61.1	23.3
BRONG AHAFO	40.8	40.1	40.5	64.2	15.5
UPPER EAST	39.8	40.7	40.3	62.6	15.8
UPPER WEST	40.4	40.1	40.2	62.4	16.5
NORTHERN	38.7	39.2	38.9	60.4	13.4
TOTAL	43.7	44.8	44.2	69.7	26.1

P6 – MATHEMATICS

REGION	MEAN % BOYS	MEAN % GIRLS	OVERALL MEAN %	% OBTAINING MINIMUM-COMPETENCY	% REACHING PROFICIENCY
GREATER ACCRA	42.3	41.5	41.9	64.1	20.2
ASHANTI	38.1	37.0	37.6	49.8	15.0
WESTERN	37.6	36.7	37.1	49.0	13.1
UPPER EAST	35.7	34.8	35.2	45.9	9.6
EASTERN	35.0	33.4	34.2	43.4	6.3
VOLTA	35.2	32.8	34.2	41.6	8.1
BRONG AHAFO	35.3	32.3	34.0	41.7	7.3
CENTRAL	33.6	34.1	33.8	41.1	7.3
UPPER WEST	34.4	30.1	32.4	39.6	5.0
NORTHERN	31.2	30.5	30.9	33.0	5.6
TOTAL	36.1	35.2	35.7	46.2	10.8

Annex 3 Scores on Objectives

TABLE 17: SCORES ON OBJECTIVES FOR P3 ENGLISH

Item ⁴	% correct	Syllabus Objective Code and Label
A1	73	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A2	65	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A4	59	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A9	59	3.1.4.4 State the names of the months of the year in chronological order
A3	54	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A6	49	3.1.4.3 Give accurate description of the features of a friend
A5	50	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A8	45	3.1.4.8 Make polite requests
A10	38	3.1.4.4 State the names of the months of the year in chronological order
A7	36	3.1.4.8 Make polite requests
B10	40	3.2.8.2 Use adjectives appropriately in sentences
B8	40	3.2.4.1 Use appropriate prepositions in sentences
B9	39	3.2.4.1 Use appropriate prepositions in sentences
B7	34	3.2.6.1 Answer yes/no questions correctly using the future tense
B2	32	3.2.3.1 Distinguish between the Simple Present and the Simple Past Tense Forms
B3	30	3.2.3.1 Distinguish between the Simple Present and the Simple Past Tense Forms
B6	27	3.2.3.3 Use the Simple Past Continuous tense form correctly
B4	26	3.2.3.3 Use the Simple Past Continuous tense form correctly
B1	25	3.2.3.1 Distinguish between the Simple Present and the Simple Past Tense Forms
B5	25	3.2.5.1 Express the future using “will”
C1	41	3.3.2.2 Answer questions based on passages read silently
C9	38	3.3.2.2 Answer questions based on passages read silently
C6	37	3.3.2.2 Answer questions based on passages read silently
C3	37	3.3.2.2 Answer questions based on passages read silently
C5	35	3.3.2.2 Answer questions based on passages read silently
C2	34	3.3.2.2 Answer questions based on passages read silently
C10	33	3.3.2.2 Answer questions based on passages read silently
C7	33	3.3.2.2 Answer questions based on passages read silently
C4	30	3.3.2.2 Answer questions based on passages read silently
C12	30	3.3.2.2 Answer questions based on passages read silently
C11	29	3.3.2.2 Answer questions based on passages read silently
C8	28	3.3.2.2 Answer questions based on passages read silently
C13	28	3.3.4.1 Make picture dictionaries

⁴ A=Listening, B=Usage, C=Reading, D=Writing

D7	37	3.4.2.2 Use full stop, comma, upper case and lower case letters in simple sentences
D3	37	3.4.2.1 Write short descriptions of people, objects, places, animals, etc.
D4	36	3.4.2.1 Write short descriptions of people, objects, places, animals, etc.
D5	31	3.4.2.2 Use full stop, comma, upper case and lower case letters in simple sentences
D2	30	3.4.2.1 Write short descriptions of people, objects, places, animals, etc.
D1	28	3.4.2.1 Write short descriptions of people, objects, places, animals, etc.
D6	28	3.4.2.2 Use full stop, comma, upper case and lower case letters in simple sentences

TABLE 18: SCORES ON OBJECTIVES FOR P6 ENGLISH

Item	% correct	Syllabus Objective Code and Label
A7	84	6.1.4.2 Talk about/describe people, things, places, topics, occasions, events
A1	83	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A2	82	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A3	81	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A4	79	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A8	69	6.1.4.2 Talk about/describe people, things, places, topics, occasions, events
A14	64	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A15	64	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A9	62	6.1.4.4 Talk in detail about the need to avoid drug abuse and HIV/AIDs.
A11	59	6.1.1.3 Talk about and act whole/parts of rhymes/poems
A6	52	6.1.1.6 Read and follow complicated instructions.
A12	53	6.1.1.3 Talk about and act whole/parts of rhymes/poems
A10	48	6.1.4.6 Talk about some important or interesting personalities
A13	47	6.1.1.3 Talk about and act whole/parts of rhymes/poems
A5	34	6.1.1.5 Give more complicated directions accurately.
B4	61	6.2.2.2 Use anomalous finites appropriately.
B14	51	6.2.10.2 Use quantifiers correctly
B18	48	6.2.6.2 Use direct/reported speech forms appropriately
B10	48	6.2.5.3 Use prepositions appropriately
B17	44	6.2.6.2 Use direct/reported speech forms appropriately
B12	44	6.2.7.1 Use determiners appropriately
B7	42	6.2.11.1 Use adverbs of more than one word
B8	39	6.2.11.1 Use adverbs of more than one word
B13	40	6.2.7.1 Use determiners appropriately
B21	40	6.2.8.2 Use idioms appropriately
B11	38	6.2.5.3 Use prepositions appropriately
B6	36	6.2.2.2 Use anomalous finites appropriately.
B15	35	6.2.3.2 Use adjectives appropriately
B3	35	6.2.1.2 Use the past perfect continuous tense form correctly.
B9	33	6.2.11.1 Use adverbs of more than one word
B5	33	6.2.2.2 Use anomalous finites appropriately.
B1	32	6.2.1.2 Use the past perfect continuous tense form correctly.
B2	30	6.2.1.1 Distinguish the past perfect tense from the past perfect continuous.
B19	29	6.2.8.2 Use idioms appropriately
B16	28	6.2.3.2 Use adjectives appropriately
B20	26	6.2.8.2 Use idioms appropriately
C3	48	6.3.3.1 Answer questions based on passages/texts read.
C11	46	6.3.3.1 Answer questions based on passages/texts read.
C1	45	6.3.3.1 Answer questions based on passages/texts read.
C10	41	6.3.3.1 Answer questions based on passages/texts read.
C12	40	6.3.3.1 Answer questions based on passages/texts read.

C2	38	6.3.3.1 Answer questions based on passages/texts read.
C4	38	6.3.3.1 Answer questions based on passages/texts read.
C9	35	6.3.3.1 Answer questions based on passages/texts read.
C7	35	6.3.3.1 Answer questions based on passages/texts read.
C6	33	6.3.3.1 Answer questions based on passages/texts read.
C8	33	6.3.3.1 Answer questions based on passages/texts read.
C5	30	6.3.3.1 Answer questions based on passages/texts read.
C13	29	6.4.3.2 Identify the ordering of events in stories.
C14	27	6.4.3.2 Identify the ordering of events in stories.
D10	44	6.3.2.3 Spell 6-10 letter words
D4	42	6.4.2.1 Identify the features and layout of semi-official letters.
D5	42	6.4.2.4 Identify the features and layout of official letters.
D8	40	6.4.1.1 Use punctuation marks appropriately
D6	39	6.4.1.1 Use punctuation marks appropriately
D7	37	6.4.1.1 Use punctuation marks appropriately
D9	36	6.3.2.3 Spell 6-10 letter words
D1	34	6.4.3.2 Identify the ordering of events in stories.
D3	34	6.4.2.1 Identify the features and layout of semi-official letters.
D2	15	6.4.3.2 Identify the ordering of events in stories.

TABLE 19: SCORES ON OBJECTIVES FOR P3 MATHEMATICS

Item	% Correct	Syllabus Objective Code and Label
MII6	34	3.3.4.3 Identify and write symbols for fractions
MII27	46	3.3.8.1 Recall the basic division facts up to product 18
MV40	47	3.3.1.6 Use the symbols <, >, = correctly to compare two numbers up to 10,000
MII9	47	3.3.4.7 Compare two like fractions
MII12	42	3.3.11.2 Add like fractions
MII7	41	3.3.9.2 Identify plane shapes with square corners
MII4	40	3.3.2.2 Add numbers up to sums 9,999
MII23	39	3.3.11.2 Add like fractions
MII13	39	3.3.11.3 Subtract two like fractions
MV38	39	3.3.2.3 Subtract numbers (0-9,999)
MII19	39	3.3.1.6 Use the symbols <, >, = correctly to compare two numbers up to 10,000
MIV37	38	3.3.2.2 Add numbers up to sums 9,999
MII17	38	3.3.2.2 Add number up to sums 9,999
MIII32	37	3.3.3.2 Compare surfaces (regions) of plane shapes
MII28	37	3.3.8.7 Solve simple word problems involving division
MII26	37	3.3.9.5 Identify rectangles and squares
MV39	36	3.3.10.4 Read the clock by the hours and minutes
MII5	36	3.3.2.3 Subtract numbers (0-9,999)
MIV35	35	2.2.15.3 Identify plan shapes with straight edges
MIV34	35	3.3.1.6 Use the symbols <, >, = correctly to compare two numbers up to 10,000
MII16	34	3.3.2.2 Add numbers up to sums 9,999
MII21	34	3.3.10.5 Write and read dates
MIII31	34	3.3.5.1 Collect data by counting objects and results of activities, record
MII24	34	3.3.11.3 Subtract two like fractions
MII15	33	3.3.2.2 Add numbers up to sums 9,999
MII18	32	3.3.2.3 Subtract numbers (0-9,999)
MIII33	32	3.3.10.2 Measure the time of an event in minutes
MII29	32	3.3.8.4 Find missing factors in division sentences
MII8	32	3.3.5.1 Collect data by counting objects and results of activities, record
MII10	31	3.3.10.5 Write and read dates
MII11	31	3.3.5.1 Collect data by counting objects and results of activities, record
MIV36	31	3.3.1.4 Break 4-digit numbers into thousands, hundreds, tens and ones, and read and write them
MII14	31	3.3.1.4 Break 4-digit numbers into thousands, hundreds, tens and ones, and read and write them
MII25	29	3.3.7.8 Find missing factors in multiplication sentences
MII20	29	4.4.7.3 Multiplying 2-digit number by 1-digit number with regrouping
MI1	28	3.3.7.1. Recall basic multiplication facts up to 18
MI2	28	3.3.7.2 Build multiplication facts up to product 36 and factors less than 10
MI3	26	3.3.7.1. Recall basic multiplication facts up to 18
MII22	24	2.2.9.9 Find the total cost of two or three items
MIII30	19	3.3.4.6 Fractions as part of a group

Note:

MI – NUMBER & NUMERALS

MII – BASIC OPERATIONS

MIII – MEASUREMENT

MIV – SHAPE & SPACE

MV – COLLECTING & HANDLING DATA

TABLE 20: SCORES ON OBJECTIVES FOR P6 MATHEMATICS

Item	% Correct	Syllabus Objective Code and Label
MII11	74	6.6.5.3 Add and subtract decimal fractions up to three decimal places
MII7	71	6.6.5.3 Add and subtract decimal fractions up to three decimal places
MII6	58	6.6.4.2 Subtract numbers
MII18	57	6.6.5.3 Add and subtract decimal fractions up to three decimal places
MII31	56	6.6.9.2 Read and write information from data presented in tables
MII14	56	6.6.6.11 Add and subtract given masses in kg and g
MII15	56	6.6.4.2 Subtract numbers
MII27	57	6.6.5.4 Multiply and divide a decimal fraction by 1-digit number
MI1	55	3.3.1.4 Break 4-digit numbers into thousands, hundreds, tens and ones
MII16	51	6.6.2.1 Compare fractions
MIII2	51	6.6.3.4 Write number names for numerals up to 100,000
MV58	50	6.6.6.1 Measure line segments of a shape and perimeter of the shape in cm and mm
MII10	49	6.6.5.2 Change a common fraction to a decimal (and vice versa)
MII45	47	5.5.6.5 Identify congruent line segments and angles in plane shapes
MII46	43	6.6.11.5 Write a set of ordered pairs that obey a given rule (or relation)
MIII50	41	6.6.9.6 Find the mode and median of a set of data
MIII52	41	6.6.13.1 Solve problems involving transactions with money
MII13	41	6.6.2.8 Divide a whole number by a fraction
MII32	39	6.6.8.4 Make and identify the nets of a cube, cuboid, and cylinder
MIV55	38	6.6.9.5 Read and write information from graphs
MI4	36	6.6.2.6 Multiply a fraction by a whole number
MII19	36	6.6.3.6 Round off numbers to the nearest ten, hundred, and thousand
MII25	34	6.6.11.4 Write the relation between a set of pairs of numbers
MV57	34	6.6.9.3 Represent data using block graph, bar graph and pictograph
MII35	34	6.6.4.3 Solve word problems involving addition and subtraction
MII44	33	6.6.9.2 Read and write information from data presented in tables
MII28	34	6.6.2.1 Compare two fractions
MII41	33	6.6.5.3 Add and subtract decimal fractions up to three decimal places
MII38	34	6.6.7.3 Find missing numbers in ratios
MIV53	33	6.6.13.1 Solve problems involving transactions with money
MII36	32	6.6.7.3 Find missing numbers in ratios
MII22	32	6.6.7.2 Find ratio of a pair of numbers, and express it in the simplest form
MII30	32	6.6.15.3 Assign ordered pairs for two points on a plane
MII47	32	5.5.9.2 Find the number of centimeter squares That will cover a given rectangular region
MII23	32	6.6.2.7 Multiply a fraction by a fraction
MII43	32	6.6.10.7 Solve word problems involving multiplication and division
MIII49	31	6.6.13.2 Solve simple problems involving profit and loss
MII17	31	6.6.5.4 Multiply and divide a decimal fraction by 1-digit whole number
MV60	29	6.6.7.2 Find ratio of a pair of numbers, and express it in the simplest form
MII9	29	6.6.2.1 Compare two fractions
MII39	29	6.6.2.2 Order three fractions according to size in ascending or descending order

TABLE 20: SCORES ON OBJECTIVES FOR P6 MATHEMATICS

Item	% Correct	Syllabus Objective Code and Label
MII34	28	6.6.5.7 Find the percentage of a given quantity
MII29	26	6.6.14.4 Find the chance of an event
MI3	26	6.6.2.7 Multiply a fraction by a fraction
MII26	26	6.6.12.1 Calculate the area of a rectangle with given dimensions
MII12	25	6.6.5.3 Add and subtract decimal fractions up to three decimal places
MV59	24	6.6.11.5 Write a set of ordered pairs that obey a given rule (or relation)
MII37	25	6.6.5.2 Change a common fraction to a decimal fraction (and vice versa)
MII33	23	6.6.5.7 Find the percentage of a given quantity
MIII48	24	6.6.13.1 Solve problems involving transactions with money
MII40	24	6.6.5.5 Express a percentage as a common fraction and vice versa
MII20	23	6.6.5.1 Order decimal fractions
MII21	23	6.6.7.2 Find ratio of a pair of numbers, and express it in the simplest form
MIV54	22	6.6.6.1 Measure line segments of a shape and perimeter of the shape in cm and mm
MII24	21	6.6.2.4 Add and subtract fractions with different denominators
MII8	19	6.6.2.4 Add and subtract fractions with different denominators
MV56	18	6.6.7.6 Use ratio method to solve problems on direct proportion
MII5	18	6.6.2.4 Add and subtract fractions with different denominators
MII42	18	6.6.7.6 Use ratio method to solve problems on direct proportion
MIII51	17	6.6.5.2 Change a common fraction to a decimal fraction (and vice versa)

Note:

MI – NUMBER & NUMERALS

MII – BASIC OPERATIONS

MIII – MEASUREMENT

MIV – SHAPE & SPACE

MV – COLLECTING & HANDLING DATA

Annex 4 Scores on Subtests

TABLE 21: SCORES ON SUBTESTS

ENGLISH

SUBTEST	PRIMARY 3				PRIMARY 6			
	No. of Items	MEAN % BOYS	MEAN % GIRLS	OVERALL MEAN %	No. of Items	MEAN % BOYS	MEAN % GIRLS	OVERALL MEAN %
LISTENING COMPREHENSION	10	52.5	52.8	52.6	15	63.9	64.2	64.1
USAGE/ GRAMMATICAL STRUCTURE	10	31.4	32.3	31.8	21	37.8	39.5	38.6
READING COMPREHENSION	13	32.4	34.0	33.1	14	36.4	37.7	37.0
WRITING	7	32.0	32.8	32.4	10	35.6	36.6	36.1

MATHEMATICS

SUBTEST	PRIMARY 3				PRIMARY 6			
	No. of Items	MEAN % BOYS	MEAN % GIRLS	OVERALL MEAN %	No. of Items	MEAN % BOYS	MEAN % GIRLS	OVERALL MEAN %
NUMBER & NUMERALS	2	31.0	30.4	30.7	4	46.4	45.0	45.7
BASIC OPERATIONS	27	36.0	35.1	35.6	43	34.4	33.3	33.9
MEASUREMENT	4	34.3	32.4	33.4	5	37.8	36.7	37.3
SHAPE & SPACE	4	37.7	37.3	37.5	3	39.8	38.9	39.3
COLLECTING & HANDLING DATA	3	30.8	31.4	31.1	5	38.8	39.3	39.0

Annex 5 Pictorial Comparisons of Performances

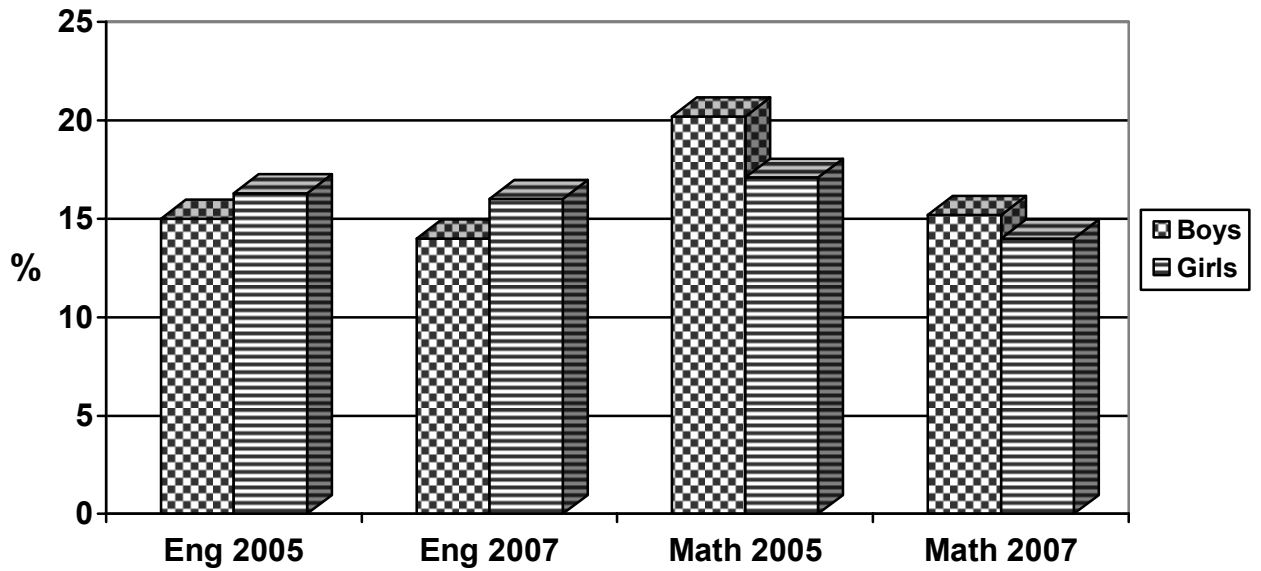


Fig. 1 : Percentage of pupils rated Proficient in English and Mathematics P3 by gender 2005 & 2007

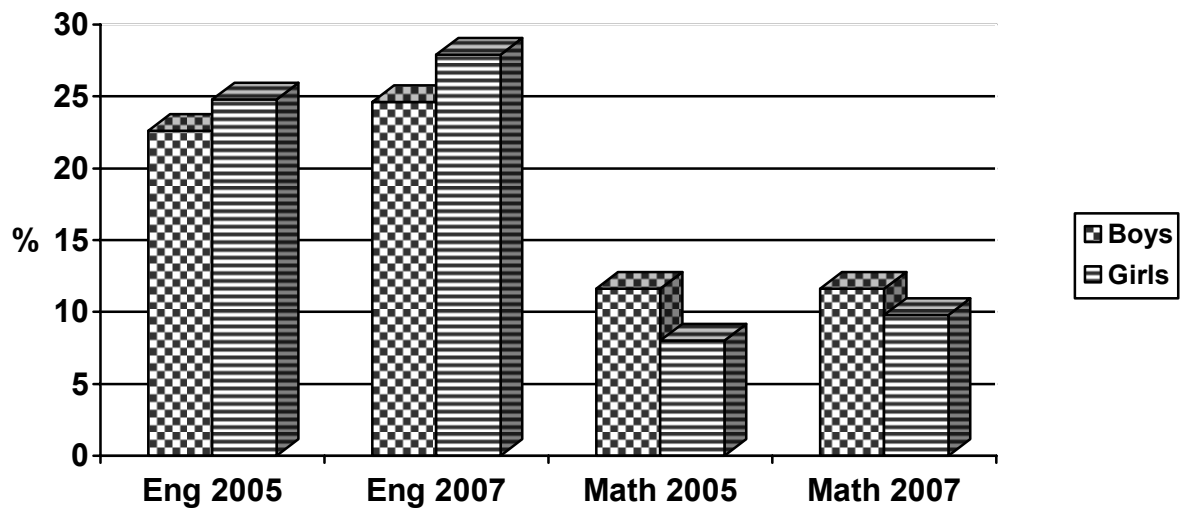


Fig. 2: Percentage of pupils rated Proficient in English and Mathematics P6 by gender 2005 & 2007

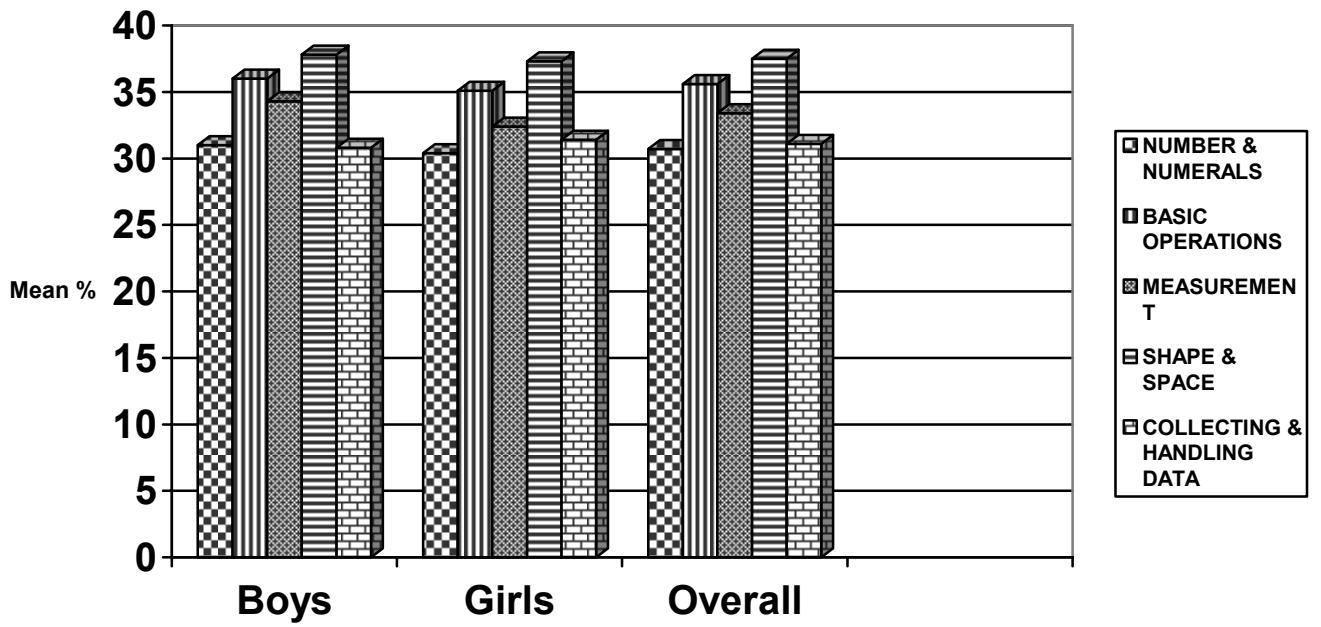


Fig. 3: Mean percentage score of P3 pupils in mathematics subtests (2007) – by gender

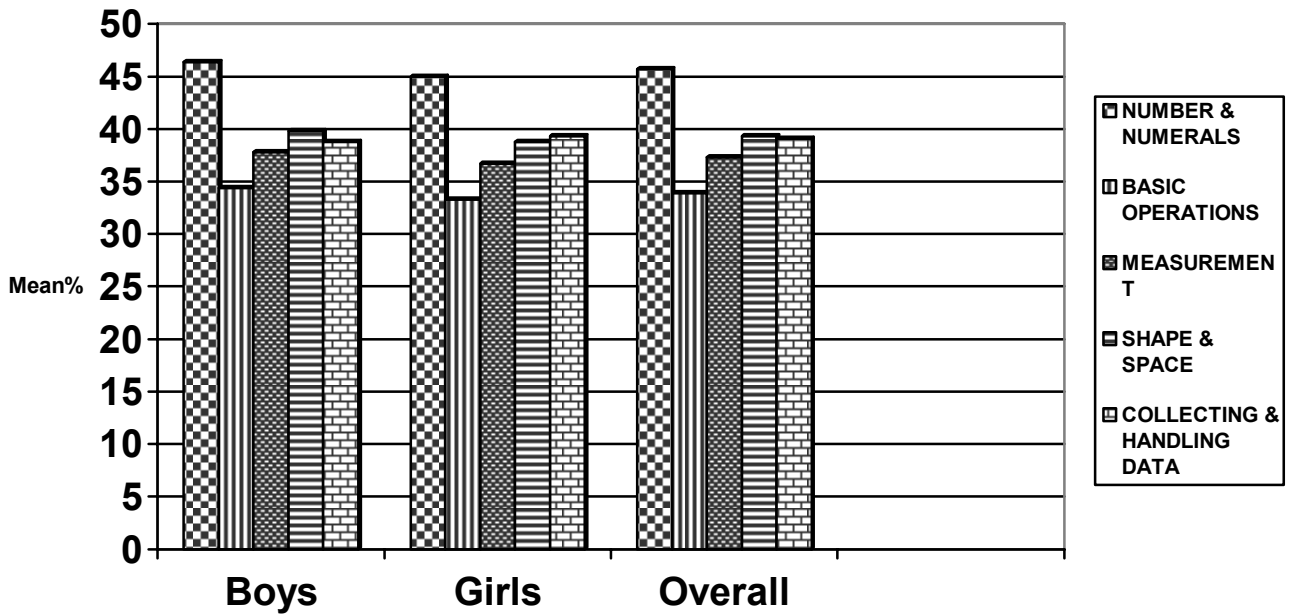


Fig. 4: Mean percentage score of P6 pupils in mathematics subtests (2007) – by gender