

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

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

**REPORT ON 2005 ADMINISTRATION OF**  
**NATIONAL EDUCATION ASSESSMENT**  
***PRIMARY 3 AND PRIMARY 6***  
***English and Mathematics***

*J.K. Adu*  
*Operations Coordinator, Ghana BECAS*

*March 2006*

*Funds for this Programme were provided by the*  
*United States Agency for International*  
*Development (USAID) under the*  
*Grant Agreement # 641-A-00-04-00073*  
*Between the Government of Ghana and the United States of America*

## EXECUTIVE SUMMARY

In Ghana, test information has consistently indicated problems in the learning repertoires for most pupils, and these problems have persisted. While the education system is improving, it does not appear to be doing so to the extent that donors, authorities, and communities would like. Test scores have only marginally improved over the years. National and school level tests in Ghana have contributed to the promotion of a dialogue around assessment and the improvement of the education system.

The NEA assessments provide an overall summary report card for the country in Mathematics and English – thus giving the Ministry of Education and Sports (MOES) and Ghana Education Service (GES) reliable and useful information for evaluating the quality of primary school education in Ghana. The NEA is an indicator of the overall national status of achievement in the primary school system. The results reported in this document are the outcome of test development, administration, data processing and analysis of a national sample of pupils. The tests for Primary 3 and Primary 6 were developed by a Technical Working Group (TWG), which consisted of representatives from the Ghana Education Service (GES) and other educational organizations with experience in test item writing. Ghanaian university consultants and BECAS staff assisted the group. The group rated the syllabus objectives and chose those they identified as “core.” Test development focused on this set of core objectives. This exercise aligned the tests to the primary school curriculum and took into account the findings of the Opportunity to Learn (OTL) study which preceded the item writing. The broad skill areas tested in NEA for P3 and P6 follow.

### English

- Listening
- Usage (Grammatical Structure)
- Reading Comprehension
- Writing

### Mathematics

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

A sample of four hundred and twenty-three primary schools (423) with P3 and P6 classes was selected and tested in the 2005 administration of the NEA. The 423 primary schools represented a sampling fraction of 3% of all public primary schools in Ghana. The Sample

Design Manager (SAMDEM), a sampling programme noted for its reliability, accuracy and cost-effectiveness and used in most African and other countries, was used for sampling.

Four hundred and fifty-six test administrators were trained to administer and oversee testing of all P3 and P6 pupils in the selected schools.

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% 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 grade level (class) to the degree necessary to work at the next grade level.

### **Test Results**

The national results of the NEA 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 38.5% and 43.1%. The mean scores percent in Mathematics for P3 and P6 respectively were 36.6% and 34.4%. The mean scores in Mathematics are above the chance score of 25% for a multiple-choice test with 4 options per item. 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.

The percentages of pupils meeting the minimum-competency level were higher than those reaching the proficiency level for both English and Mathematics in both P3 and P6. Results from the NEA are presented below.

## PERCENTAGES OF PUPILS

### MEETING THE MINIMUM-COMPETENCY AND PROFICIENCY LEVELS

Subject	P3		P6	
	Minimum-competency 35%	Proficiency 55%	Minimum-competency 35%	Proficiency 55%
English	50.5%	16.4%	63.9%	23.6%
Mathematics	47.2%	18.6%	42.7%	9.8%

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 the girls did slightly better than the boys in English in both P3 and P6. However, the same results show that the boys significantly outperformed the girls in Mathematics in both P3 and P6. The boys' mean scores percent were higher and the percentages reaching proficiency level in both classes were much higher than the girls in Mathematics.

When the performance of the private schools was compared with the public and EQUALL schools, it was found that the former (private schools) had performed significantly better as they had consistently on the CRT. The mean scores percent of the private schools were 69.7% for English and 60.3% for Mathematics at the P3 level. The same trend was seen in English and Mathematics for Primary 6. It should also be noted that even within the private schools, the mean scores percent for English in P3 (69.7%) and P6 (65.6%) were higher than for Mathematics, 60.3% and 59.2% in P3 and P6 respectively. A higher percentage of pupils in private schools also reached the 35% and 55% criteria for English and Mathematics, and the private school figures for English were significantly higher than for Mathematics. This result seems to indicate that Mathematics appears to pose a general problem for primary school children in Ghana.

## **Recommendations**

### Test Administration

1. Continued training of Test Administrators (TAs) is critical to an effective assessment programme. Trainings in smaller, rather than large, are more effective, productive and cost-effective.
2. Scannable answer sheets should be pre-coded by TAs during these training sessions, prior to the actual administration of the tests, to streamline the administration process at schools.
3. Test Monitors are important players in the administration process and should receive a thorough briefing before monitoring the administration of any test. Additionally, the Ghana Education Service should provide enough vehicles for the monitoring exercise, so that monitors can visit as many schools and districts as possible.
4. Accurate enrolment figures for classes taking the NEA are essential for printing, packing and distributing test materials. An effective way of updating school enrolments on a regular basis should be found.
5. Pupils taking the NEA were, for the most part, unfamiliar with shading their answers on answer sheets. Providing pupils with regular practice in shading throughout the school year would streamline the administration process both for pupils and test administrators, possibly enhancing the results. Teachers can organize this on their own at extra cost.

### Areas for Further Research

1. Enhanced pupil achievement and educational quality hinge on many factors. In Ghana it is common knowledge amongst educators that supervision is a key factor in school success. Private schools typically have greater supervision of their teachers. There is therefore the need to strengthen supervision of teaching, learning and overall school management generally in all schools.
2. A study should be conducted to identify the causes of primary school pupils' difficulty in the subject area of Mathematics.
3. The public schools are far behind private schools in Ghana in both English and Mathematics. Research that identifies both reasons for the better performance and

possible lessons learned from the private schools should be conducted and the findings shared with the others.

4. 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.

Education is a complex endeavour which benefits from assessment at all levels of the system. Testing can provide recognition of areas of improvement and areas of need over time, allowing the GES to take corrective action. The NEA, along with the SEA and Continuous Assessment, can provide the GES with critical tools and information to improve education for all in Ghana.

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# 1 INTRODUCTION

Improvement in basic education in Ghana has been receiving a lot of attention in recent years. The effort to improve the quality of education was given greater impetus with the formulation of the Ghana Education Strategic Plan 2003 – 2015. The Plan requires that a comprehensive education assessment system be put in place to ensure that the various measures of learning and achievement used at different levels and times in basic education are systematized. In addition, such a system needs to provide information that is clear, non-contradictory and easily used for diagnosis at the intended levels for school improvement.

## 1.1 Basic Education Comprehensive Assessment System

The **Ghana Basic Education Comprehensive Assessment System (Ghana BECAS)** project aims to fulfill this critical role. The major objectives of the Ghana BECAS project are to:

- Design and implement a comprehensive educational assessment system to ensure that various measures of learning and achievement used at different levels and times in basic education are systematized
- Establish realistic expectations in the setting of examination standards in terms of content and difficulty
- Provide accurate, timely and credible information concerning school achievement
- Encourage the use of examination results for programme and school improvement
- Build capacity for members of the Assessment Services Unit (ASU) of the Curriculum Research and Development Division (CRDD) of the Ghana Education Service (GES) to sustain the new comprehensive assessment system
- Incorporate assessment results in a comprehensive information package for stakeholders, particularly educational administrators, communities and schools
- Establish an Item Bank for storage of test items that can be used to generate tests on an on-going basis.

The call for a systematization of the various measures of effectiveness of instruction through pupil achievement in school became necessary for many reasons. First, in the past, national assessment instruments were developed by different organizations with varying levels of technical competence. The outcome of this process was that the results and information

garnered from the instruments was often contradictory. Second, the Criterion-Referenced Test<sup>1</sup> (CRT) tested all the objectives of the curriculum for English and Mathematics, even though it was clear that primary school teachers in the country rarely completed teaching all the objectives in their class syllabi for any particular year. In fact, an Opportunity to Learn (OTL) study, undertaken by BECAS revealed that on average, teachers covered only 70% of the topics or units of the Curriculum for English and Mathematics.

At the school level, the Performance Monitoring Tests (PMT), used in Ghana during the late 1990's for English and Mathematics, covered only a small proportion of the curriculum content for the various grade levels (classes) that were tested. No systematic effort appeared to have been made to cover the essential knowledge and skills in the syllabi. Finally, teachers have tended to be unsupportive of the Continuous Assessment (CA) system as currently implemented. Teachers indicate that the amount of time required to develop, administer and score the numerous tests, and the level of record-keeping tends to be burdensome.

## 1.2 Components of Ghana BECAS

The major components of the BECAS project are:

- **National Education Assessment** (NEA) - a multiple-choice test designed for Primary 3 and Primary 6 and aligned to the national curriculum (English and Mathematics) to provide policy-level information regarding class achievement and system performance.
- **School Education Assessment** (SEA) – a test to be conducted at the school level for P2, P4 and P6 pupils in all schools to monitor school performance and enable teachers to make instructional adjustments for improved teaching and learning. It consists of multiple-choice and constructed response items.
- A redesigned **Continuous Assessment** (CA) system with a reduced testing load and a focus on essential knowledge and skills to provide formative information for classroom diagnostics to better monitor individual pupil performance.

The NEA is complete and was administered in July 2005, while the SEA and CA have reached various stages of completion. The CA system has been redesigned. The SEA has

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<sup>1</sup> National test that was a precursor to the NEA.

been piloted, item analyzed and reviewed and items refined where necessary and will be ready for nationwide implementation in July 2006.

The NEA tests were taken through all the stages of test development – item and test construction, piloting, item analysis, further review, and revision or refinement of items. This was followed by the nationwide administration of the test to a sample of schools, and subsequent data processing and analysis.

The purpose of this report is to inform the Ministry of Education, Ghana Education Service, the greater donor community and the Ghanaian public about the results of the NEA test administration. The information provided in this report may assist key stakeholders to use the results to improve teaching and learning and inform the formulation of education policies. The results of the NEA are also essential for equitable allocation of resources, both human and material, and the adjustments in policy which might become necessary.

## **2 DEVELOPMENT OF NEA TESTS**

### **2.1 Technical Working Group**

As part of the capacity building role of the BECAS project, a Technical Working Group (TWG) was established whose main responsibility was the development of test items with emphasis on multiple-choice items. The group is composed predominantly of members of the Ghana Education Service (GES) who work in the areas of curriculum development, textbook production, educational assessment, and teacher education. Some subject specialists are also members of the TWG.

### **2.2 Test Item Writing**

Members of the TWG received hands-on training in a series of workshops during which NEA and SEA items were constructed. Before the items were constructed, the English and Mathematics syllabi for P3 and P6, the classes for which the tests were intended, were examined, and “core”<sup>2</sup> objectives selected as a basis for the development of the tests. It should be noted that some CRT and PMT items (mainly the former) were considered suitable and therefore utilized in the NEA.

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<sup>2</sup> “Core” applies to those objectives that a child at a particular grade level must achieve in order to be ready for the next level of schooling.

## **2.3 Review of Draft Items**

The draft items generated through the item writing workshops were subjected to rigorous review for technical inaccuracies and all forms of biases by selected TWG members, BECAS staff, university consultants and subject specialists. In the end, two parallel forms of each test were printed and piloted.

For the July 2005 administration of the English and Mathematics tests for P3 and P6, four parallel forms were developed and used for the base-year testing. All four forms were administered simultaneously in each class. Listening Comprehension, a subtest of the English test, was the exception where only one form was used in each classroom.

## **2.4 Development of Scannable Answer Sheets**

The Educational Assessment and Research Centre (EARC), whose knowledge of the OPSCAN scanning equipment and the development of scannable answer sheets proved invaluable, designed the answer sheets.

# **3 ADMINISTRATION OF NEA TESTS**

## **3.1 Training of Test Administrators and Pilot Testing**

A training manual was prepared and used to train eighty (80) Circuit Supervisors who subsequently administered the tests in a small sample of forty schools (32 primary, P3 and P6, and 8 Junior Secondary Schools) for the pilot testing. The ten regions of Ghana were grouped into four (4) zones on the basis of shared characteristics. Schools were selected from these four zones. The pilot testing was carried out simultaneously in all the zones and lasted approximately three (3) days. Scannable answer sheets were developed locally. The items piloted were analyzed and further revised where needed. These finalized items were eventually assembled into tests for the NEA.

## **3.2 Selection of Sample**

The implementation stage of the NEA began with a random selection of a sample of schools nationwide using the Sample Design Manager programme (SAMDEM).<sup>3</sup> This programme allowed the random selection of a minimum number of schools from the population without

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<sup>3</sup> *Khadim Sylla, Mioko Saito and Kenneth N. Ross*

loss of representativeness. SAMDEM is accurate, efficient, reliable and cost-effective. It is used by UNESCO and the World Bank for its assessment programmes throughout the world.

A sampling fraction of 3% was used to select schools with classes 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 423. Ten private schools (1 from each of the 10 regions) were added to the sample and 30 EQUALL (Education Quality for All) schools<sup>4</sup>. Their inclusion in the testing was meant to allow comparability of performance with the 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 below.

**TABLE 1 NUMBER OF SCHOOLS SELECTED AND PUPILS TESTED**

REGION	NUMBER OF SCHOOLS	NUMBER OF PUPILS EXPECTED			NUMBER OF PUPILS ACTUALLY TESTED		
		P3	P6	TOTAL	P3	P6	TOTAL
WESTERN	47	2441	2294	<b>4735</b>	1718	1635	<b>3353</b>
ASHANTI	75	3975	3780	<b>7755</b>	3407	3399	<b>6806</b>
BRONG AHAFO	42	1956	1675	<b>3631</b>	1727	1521	<b>3248</b>
CENTRAL	44	2005	1899	<b>3904</b>	1702	1717	<b>3419</b>
EASTERN	54	1796	1143	<b>2939</b>	1621	1578	<b>3199</b>
GREATER ACCRA	44	2237	2144	<b>4381</b>	2195	2104	<b>4299</b>
NORTHERN	41	1794	1869	<b>3663</b>	1378	1432	<b>2810</b>
UPPER EAST	21	1580	1112	<b>2692</b>	1167	961	<b>2128</b>
UPPER WEST	13	850	487	<b>1337</b>	715	444	<b>1159</b>
VOLTA	42	1829	1521	<b>3350</b>	1557	1424	<b>2981</b>
<b>TOTAL</b>	423	20463	17924	<b>38387</b>	17187	16215	<b>33402</b>
PRIVATE	10	718	800	<b>1518</b>	644	743	<b>1387</b>
EQUALL	30	877	822	<b>1699</b>	820	796	<b>1616</b>
<b>GRAND TOTAL</b>	463	22058	19546	<b>41604</b>	18651	17754	<b>36405</b>

### 3.3 Second Training of Test Administrators

A second training workshop for additional Test Administrators became necessary as a result of the larger numbers of schools and pupils in the national sample. Altogether, four hundred

<sup>4</sup> Refer to Section 6 for a description of EQUALL schools

and sixty-two (462) Test Administrators, including the eighty (80) who had been previously trained for the pilot testing and about 20 monitors, participated in the training. For most test administrators, this was their first experience with test administration in a national assessment of this magnitude.

The training was done in two separate workshops – one for the Northern Sector regions and the other for the Southern Sector regions - to ensure effectiveness. 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 printed. Therefore, the pre-coding of answer sheets could not be done at the workshops. 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 later scanning and scoring activities. Additionally, trainees participated in micro-administration activities using peer groups. This exercise enabled participants to practise the actual administration with experienced TAs and trainers who provided them with valuable feedback before administering the test in schools.

### **3.4 Administration and Monitoring**

For most of the pupils taking the tests, the method of using a separate answer sheet and shading their responses on this scannable answer sheet was a new experience. The difficulty that pupils would have completing the answer sheets was identified during the pilot test phase. As a result, a practice test was designed and sent with sample answer sheets for the pupils concerned (P3 and P6) in all schools to practice shading their answers before the actual administration began. In classes where the practice tests were given, test administrators found a reduction in the incidence of error on the part of the pupils.

The administration was planned for the week of 11th July. However, Test Administrators in some of the districts did not receive their test materials in time to precode the answer sheets with Pupil Identification Numbers (PINs), which included regional, district and school codes, along with Subject codes and Form Numbers before beginning on 11<sup>th</sup> July. Facilitators had planned a session of the training workshops for the supervised precoding of answer sheets. However, unavoidable delays with the delivery of machines needed for scanning prevented

the printing of the answer sheets before the trainings took place, leaving this task to be completed in the field

Monitors were dispatched to all the regions and monitored as many schools as was possible given the limited transportation. Monitors provided feedback in a variety of areas. TA performance was seen as positive, for the most part. Transportation was overwhelmingly lacking making visiting more than just a few schools impossible. Challenges like reading and shading of answer sheets were reported as common.

### **3.5 Data Processing and Data Analysis**

With modern research demonstrating the advantages of “thinking” curricula to develop deeper understanding in subject areas, tests like the Ghanaian NEA encourage higher order thinking and processing skills that minimize generalization and transfer and focus on declarative knowledge (facts). Multiple choice tests present several challenges, however, that can slow the process of data analysis and even impact the data itself. For example, the answer sheets must be “cleaned”. The cleaning process requires that staff review each answer sheet and shade in the bubbles that may only be partially darkened or erase pencil marks that may impact the ability of the OPSCANs to correctly read the answer sheet. It is a time consuming process, which if not done completely and correctly, negatively affects scanning and scoring.

A second challenge was that many districts were unable to meet the deadline for delivery of their test materials to the regional offices for collection by personnel of the BECAS office in Accra. The late retrieval of the test materials, combined with the extended length of time it took to clean the data, due to the numerous coding and other errors, caused an undue delay in processing and analyzing the data.

The Statistical Package for the Social Sciences (SPSS 11.0) was used in the analysis of the results. The first step was to clean the data received from the OPSCAN 8 in the SPSS files. This was done by running a frequency distribution on each of the variables in the data files. The outputs were carefully reviewed for missing data and unusual or unexpected responses.

The SPSS data files were then broken into Forms for each subject and grade. For each Form, item analysis was 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, medians 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, medians, 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 (nonEQUALL) schools. Performance on each section of the English language and Mathematics tests was also analyzed by region and gender.

## **4 Presentation of Test Results**

The results of the NEA tests are presented in percentages for all pupils and show pupil performance by region, gender and school type. Furthermore, the results are presented in relation to two set standards - minimum-competency level and proficiency level.

The minimum-competency level refers to pupils who score 35% of the total score on the test and proficiency level applies to pupils who obtain 55% of the total score.

## **5 National and Regional Results – English P3 and P6**

The P3 English test contains forty (40) multiple-choice items, while the P6 test has sixty (60) items.<sup>5</sup> The raw scores have been converted to percentages in column 3 of the tables below. The national and regional results for English total scores are presented in Tables 2 and 3 for P3 and P6 respectively.

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<sup>5</sup> One item each for P3 and P6 was disqualified leaving 39 and 59 items each for P3 and P6 respectively.

**TABLE 2 PERFORMANCE OF PUPILS ACROSS REGIONS ENGLISH P3**

REGION	NUMBER OF PUPILS	OVERALL MEAN %	STANDARD DEVIATIONS	% REACHING MINIMUM-COMPETENCY 35%	% REACHING PROFICIENCY LEVEL 55%
WESTERN	1662	40.09	17.69	54.3	18.9
ASHANTI	3357	38.04	16.54	50.5	15.5
BRONG AHAFO	1716	38.09	16.29	49.5	13.8
CENTRAL	1701	33.73	14.81	37.5	8.5
EASTERN	1580	36.95	17.86	44.0	15.8
GREATER ACCRA	2195	46.42	21.83	63.5	33.5
NORTHERN	1378	34.56	16.66	42.0	10.2
UPPER EAST	1164	31.39	13.85	29.5	6.3
UPPER WEST	715	33.8	13.59	41.0	7.4
VOLTA	1557	35.66	15.71	43.0	12.2
<b>TOTAL</b>	<b>17024</b>	<b>38.51</b>	<b>17.52</b>	<b>50.5</b>	<b>16.4</b>
<b>BOYS</b>	8558	38.18	17.30	46.8	15.0
<b>GIRLS</b>	8401	38.91	17.73	48.0	16.3

**TABLE 3 PERFORMANCE OF PUPILS ACROSS REGIONS ENGLISH P6**

REGION	NUMBER OF PUPILS	OVERALL MEAN %	STANDARD DEVIATIONS	% REACHING MINIMUM-COMPETENCY 35%	% REACHING PROFICIENCY LEVEL 55%
WESTERN	1552	41.70	15.44	62.5	20.4
ASHANTI	3354	44.10	15.60	67.8	25.3
BRONG AHAFO	1507	42.75	14.99	63.8	22.1
CENTRAL	1653	38.68	13.82	52.8	14.0
EASTERN	1537	43.27	16.11	64.1	24.3
GREATER ACCRA	2004	53.36	16.76	84.6	47.2
NORTHERN	1404	39.36	15.52	54.5	16.1
UPPER EAST	953	41.22	14.60	61.2	17.1
UPPER WEST	444	37.63	12.90	50.2	10.6
VOLTA	1385	40.53	14.87	57.8	18.0
<b>TOTAL</b>	<b>15793</b>	<b>43.19</b>	<b>15.97</b>	<b>64.1</b>	<b>23.6</b>
<b>BOYS</b>	8167	42.71	15.65	63.6	22.6
<b>GIRLS</b>	7603	43.70	16.24	64.7	24.8

The national mean for P3 English is 38.5%, which is 13.5% score points above the chance score of 25%. The mean score of 43.2% for P6 is 18.2% of 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.

Forty-nine percent of pupils reached the minimum-competency level (35%) for P3 and 64.1% 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 (16.3% and 23.6% 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 45.0% for P3 and 53.0% 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, Usage (Grammatical Structure), Reading Comprehension and Writing. The pupils performed best in Listening Comprehension and showed the greatest weakness in Writing. It is evident, when the performances of the boys and girls are compared, that the girls performed better than the boys on all subtests, except P6 Listening Comprehension, 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 4 FREQUENCY DISTRIBUTION OF SCORES**  
**ENGLISH P3**

<b>SCORE RANGE</b>	<b>NUMBER OF PUPILS</b>	<b>PERCENTAGE OF PUPILS</b>	<b>CUMULATIVE PERCENTAGE</b>
<b>91-100</b>	89	.5	100.0
<b>81-90</b>	389	2.3	99.5
<b>71-80</b>	701	4.1	97.2
<b>61-70</b>	894	5.3	93.1
<b>51-60</b>	1315	7.7	87.8
<b>41-50</b>	2572	15.1	80.1
<b>31-40</b>	4795	28.2	65.0
<b>21-30</b>	4650	27.3	36.8
<b>11-20</b>	1405	8.3	9.5
<b>0-10</b>	217	1.3	1.3
<b>TOTAL</b>	17027	100.0	

Table 4 indicating the frequency distribution of P3 English scores shows that of the 17,027 pupils who took the test, 4650 representing 27.3% scored from 21.0% to 30.0% of the total mark for the test. Thus, in percent cumulative terms 36.8% of all the pupils obtained from 0 to 30.0% of the total marks. 80.1%, representing the bulk of the pupils, scored below 51.0%. The scores are clustered in the lower range, 00-50%, which indicates a weak performance in English.

**TABLE 5 FREQUENCY DISTRIBUTION OF SCORES  
ENGLISH P6**

<b>SCORE RANGE</b>	<b>NUMBER OF PUPILS</b>	<b>PERCENTAGE OF PUPILS</b>	<b>CUMULATIVE PERCENTAGE</b>
<b>91-100</b>	13	0.1	100
<b>81-90</b>	215	1.4	99.9
<b>71-80</b>	845	5.4	98.6
<b>61-70</b>	1580	10.0	93.2
<b>51-60</b>	2294	14.5	83.2
<b>41-50</b>	3073	19.5	68.7
<b>31-40</b>	4301	27.2	49.2
<b>21-30</b>	3000	19.0	22.0
<b>11-20</b>	452	2.9	3.0
<b>1-10</b>	20	0.1	0.1
<b>TOTAL</b>	<b>15793</b>	<b>100</b>	

Table 5 lists the frequency distributions of the English scores in P6. The table shows, for example, that 3000 pupils representing 19.0% of all the pupils who took the test had from 21 to 30% of the items correct. The cumulative percent of 22.0% means 22.0% of all the pupils scored between 0.0% and 30.0%. Similarly, as many as 68.7% of the pupils scored below 51.0% of the total mark. There is also a clustering of scores in the lower ranges (00-50.0%) with only 31.3% of the pupils scoring between 51.0% and 100.0%.

## 6 National and Regional Results – Mathematics P3 and P6

The P3 Mathematics test contains forty (40) multiple-choice items, and the P6 has sixty (60). The scores have been converted to percentages in column 3 of Tables 6-9, which outline the national and regional results for Mathematics total scores and their frequency distributions for P3 and P6 respectively. Following the tables are the frequency distributions of the total scores for the relevant class (grade level). A large number of the pupils falling into a low score range can be seen as an indication of poor or weak performance on the test.

**TABLE 6 PERFORMANCE OF SCHOOLS AND PUPILS ACROSS REGIONS  
MATHEMATICS P3**

REGION	NUMBER OF PUPILS	OVERALL MEAN %	STANDARD DEVIATIONS	% REACHING MINIMUM-COMPETENCY 35%	% REACHING PROFICIENCY LEVEL 55%
WESTERN	1718	36.73	17.72	50.3	17.8
ASHANTI	3407	36.74	18.34	47.2	18.7
BRONG AHAFO	1727	38.69	18.11	53.8	20.9
CENTRAL	1702	35.36	17.19	44.7	15.0
EASTERN	1621	38.16	18.54	50.7	20.3
GREATER ACCRA	2138	43.72	21.31	59.9	32.7
NORTHERN	1348	30.24	17.22	32.5	10.5
UPPER EAST	1167	33.72	17.19	39.8	13.5
UPPER WEST	1167	30.34	16.96	33.1	10.1
VOLTA	1491	34.47	16.99	42.8	14.2
<b>TOTAL</b>	<b>17004</b>	<b>36.63</b>	<b>18.59</b>	<b>47.2</b>	<b>18.6</b>
<b>BOYS</b>	8560	37.65	18.95	49.5	20.2
<b>GIRLS</b>	8382	35.6	18.16	45.0	17.1

**TABLE 7 PERFORMANCE OF SCHOOLS AND PUPILS ACROSS REGIONS  
MATHEMATICS P6**

<b>REGION</b>	<b>NO. OF PUPILS</b>	<b>MEAN (%)</b>	<b>STANDARD DEVIATION</b>	<b>% REACHING MINIMUM-COMPETENCY LEVEL 35%</b>	<b>% REACHING MASTERY LEVEL 55%</b>
<b>WESTERN</b>	1635	35.24	14.67	44.9	11.7
<b>ASHANTI</b>	3399	34.88	14.16	44.9	9.8
<b>BRONG AHAFO</b>	1521	35.04	13.86	44.6	10.3
<b>CENTRAL</b>	1717	31.79	12.09	33.8	5.4
<b>EASTERN</b>	1578	35.79	15.28	45.8	12.5
<b>GREATER ACCRA</b>	2104	40.02	15.79	59.6	17.5
<b>NORTHERN</b>	1432	28.67	13.45	25.9	4.8
<b>UPPER EAST</b>	961	34.45	13.53	41.5	9.4
<b>UPPER WEST</b>	408	31.48	12.53	35.0	5.1
<b>VOLTA</b>	1424	31.21	12.37	35.4	5.1
<b>TOTAL</b>	<b>16179</b>	<b>34.37</b>	<b>14.35</b>	<b>42.7</b>	<b>9.8</b>
<b>BOYS</b>	8448	35.29	14.87	45.3	11.6
<b>GIRLS</b>	7711	33.41	13.68	40.0	8.0

Tables 6 and 7 show the national and regional results for Mathematics - means (%), standard deviations, percentages of pupils reaching the standards set for minimum-competency (35%) and proficiency (55%) for P3 and P6.

The national means and standard deviations are 36.6% and 7.4% for P3 and for P6, 34.4% and 8.6%. These mean scores are above the chance score of 25% by 11.6 score points (P3) and 9.1 score points (P6). In all, 47.2% of the pupils in P3 reached the minimum-competency level of 35% of the total score while 18.6% reached the proficiency level of 55% and above. The small standard deviation 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 43.7% as the highest performing region. The mean scores for P6 Mathematics range from a high of 40.1% for Greater Accra to a low of 28.7% for the Northern region. The standard deviation here is only slightly bigger than that for P3, which is an indication of a slight variation in the Mathematics ability of the P6 pupils. Whereas 42.8% of the pupils reached the minimum-competency

level, only 9.9% reached the proficiency level and above. On the P6 Mathematics test boys outperformed girls with a higher mean percent. The percentages of boys reaching the minimum-competency level and proficiency level and above in Mathematics are also much 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. The analysis of pupil performance in each of these areas identifies specific areas of weakness in English and Mathematics. Basic Operations, especially fractions, decimals, percentages and ratios, present the greatest Mathematical challenge for school children.

**TABLE 8 FREQUENCY DISTRIBUTION OF SCORES**  
**MATHEMATICS P3**

<b>SCORE RANGE</b>	<b>NUMBER OF PUPILS</b>	<b>PERCENTAGE OF PUPILS</b>	<b>CUMULATIVE PERCENTAGE</b>
<b>91-100</b>	50	0.3	100.0
<b>81-90</b>	315	1.9	99.7
<b>71-80</b>	661	3.9	97.9
<b>61-70</b>	1076	6.3	94.0
<b>51-60</b>	1464	8.6	87.6
<b>41-50</b>	2144	12.6	79.0
<b>31-40</b>	3354	19.7	66.4
<b>21-30</b>	4567	26.9	46.7
<b>11-20</b>	2620	15.4	19.8
<b>0-10</b>	754	4.4	4.4
<b>TOTAL</b>	<b>17005</b>	<b>100.0</b>	

Performance in the P3 Mathematics test is no better, as shown in the Frequency Distribution Table 8. The number of pupils who obtained scores from 21 to 30% of the total mark is 4567 representing 26.9% of all the pupils. In percent cumulative terms, 46.7% of the pupils obtained from 00 to 30.0% of the total score for the P3 Mathematics test. The bulk of the pupils (79.8%) scored below 51.0% of the total mark for the test. Again, the greater clustering of scores in the lower range, 00-50%, in the distribution indicates a weak performance in Mathematics.

**TABLE 9 FREQUENCY DISTRIBUTION OF SCORES**  
**MATHEMATICS P6**

<b>SCORE RANGE</b>	<b>NUMBER OF PUPILS</b>	<b>PERCENTAGE</b>	<b>CUMULATIVE PERCENTAGE</b>
<b>91-100</b>	9	0.1	100
<b>81-90</b>	97	0.6	99.9
<b>71-80</b>	257	1.6	99.3
<b>61-70</b>	581	3.6	97.8
<b>51-60</b>	1160	7.2	94.2
<b>41-50</b>	2245	13.9	87.0
<b>31-40</b>	4237	26.2	73.1
<b>21-30</b>	5192	32.1	47.0
<b>11-20</b>	2195	13.6	14.9
<b>0-10</b>	207	1.3	1.3
<b>TOTAL</b>	<b>16180</b>	<b>100.0</b>	

Frequency distribution of P6 scores on the Mathematics test is presented in Table 9. As shown in the table, 5192 pupils, representing 32.1%, fell within the score range of 21-30%. In cumulative terms, 47.0% of all the pupils scored from 0.0 to 30% on the P6 Mathematics test. Similarly 87.0% of all the pupils scored below 51.0%, showing a bunching of scores in the lower range of the distribution. This indicates a weak performance on the Mathematics test, where only 13.0% 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 Gender Performance of Public Schools in English and Mathematics

**TABLE 10 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	38.18	17.30	15.0	37.65	18.95	20.2
Girls	38.91	17.73	16.3	35.63	18.16	17.1
Gender	Primary 6 - English			Primary 6 - Mathematics		
	Mean %	S.D.	% Reaching Proficiency	Mean %	S.D.	% Reaching Proficiency
Boys	42.63	15.66	22.6	35.2	14.87	11.6
Girls	43.60	16.26	24.8	33.42	13.69	8.0

Table 10 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% of the total score 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 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 2.02% and 1.78% points respectively. The mean differences in Mathematics are statistically significant at both the 0.05 and 0.01 levels of confidence. The percentages of boys reaching the “proficiency” level in both the P3 and P6 tests are greater than those for the girls.

## 8 Comparison of Performance of Public, Private and EQUALL Schools

The 423 public schools in the national sample are those initially selected using the Sampling Design Manager (SAMDEM) programme. As their name implies, private schools are schools established and owned by individuals or groups of individuals. Although they do not come under the direct control of the government or the Ministry of Education and Sports, they have

to meet certain criteria or conditions set by the Ministry. Ten private schools were selected, one from each region, without using no particular criteria.

EQUALL<sup>6</sup> 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:

- P1 and P2 teachers should be literate in the local language and must be professionally trained
- the school should have a secure place for the storage of instructional materials
- the school should have a substantive headteacher, not an acting one
- the school should have an active and supportive community
- class size in P1 should be not less than 20 pupils

These above-noted criteria are among the factors which can affect the schools for the better. Thirty such schools were selected, but only 27 of them provided useable data.<sup>7</sup>

This report compares these three categories of schools – Public, Private and EQUALL schools - using their means and standard deviations, and their percentages reaching the standards set for English and Mathematics.

**TABLE 11 MEAN SCORES AND STANDARD DEVIATIONS IN ENGLISH AND MATHEMATICS – P3 PUBLIC, PRIVATE AND EQUALL SCHOOLS**

Subject	Public Schools		Private Schools		EQUALL Schools	
	Mean %	S.D.	Mean %	S.D.	Mean %	S.D.
English	38.1	17.51	69.7	24.06	34.9	15.02
Mathematics	36.6	18.59	60.3	23.82	32.2	15.31

Table 11 shows the means and standard deviations of the 3 categories of school.

<sup>6</sup> Education Quality for All (EQUALL) is a USAID-funded project which supports the MOES and GES Education Strategic Plan.

<sup>7</sup> The fact that these schools were not randomly selected might explain the lower performance of the EQUALL schools.

Pupils in P3 in the private schools outperformed the pupils in the public and EQUALL schools in English with a mean of 68.7% as against the 38.1% and 34.9% for public and EQUALL schools. Public school pupils performed better than those at the EQUALL schools.

The mean percentage of 60.3 in Mathematics shows a superior performance of the private schools. Here, as in English, the public schools with 36.6% outperformed the EQUALL schools whose mean was 32.2% in Mathematics.

The small 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. The standard deviations of the private schools are only slightly larger than those for the public and EQUALL schools, signifying that the private school pupils also do not vary much in their understanding and use of English and Mathematics.

**TABLE 12 MEAN SCORES AND STANDARD DEVIATIONS IN ENGLISH AND MATHEMATICS - P6 PUBLIC, PRIVATE AND EQUALL SCHOOLS**

Subject	Public Schools		Private Schools		EQUALL Schools	
	Mean %	S.D.	Mean %	S.D.	Mean %	S.D.
English	43.1	16.0	65.6	19.4	39.9	14.8
Mathematics	34.4	14.4	59.2	20.1	32.3	12.7

As in P3, the P6 pupils in private schools with a mean percent score of 65.6% in English outperformed their counterparts in public and EQUALL schools with 43.1 and 40.1 mean scores percent. Once more, the P6 pupils in public schools performed better than pupils in the EQUALL schools on the English test.

The picture is similar in Mathematics. The pupils in private schools performed better with a mean score of 59.2% than their counterparts in public and EQUALL schools. Again, the pupils in public schools performed better in Mathematics than those in EQUALL schools. The means for all schools are lower in Mathematics than in English by fairly wide margins.

**TABLE 13 PERCENTAGE OF PUPILS IN PUBLIC, PRIVATE AND EQUALL SCHOOLS REACHING STANDARDS – ENGLISH AND MATHEMATICS P3 AND P6**

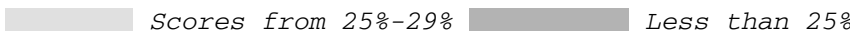

P3	Public Schools			Private Schools			EQUALL Schools		
	Mean %	35%	55%	Mean %	35%	55%	Mean %	35%	55%
English	38.1	48.6	16.3	69.7	89	72.6	34.9	42.8	9.7
Mathematics	36.3	47.2	18.6	60.34	80.6	65.8	32.15	37.7	11.0
P6									
English	43.1	64.1	23.6	65.7	91.0	73.5	40.0	56.7	17.2
Mathematics	34.4	42.7	9.8	59.2	87.3	58.5	32.33	35.9	6.7

Table 13 shows the percentages of pupils in public, private and EQUALL schools reaching standards set in English and Mathematics.

The percentages of pupils in P3 and P6 reaching both standards 35% and 55% are highest in private schools. The differences between them and those of the pupils in public and EQUALL schools are very large in all cases. Similarly, the percentages of pupils in public schools reaching the two standards are higher than those of pupils in EQUALL schools in P3 and P6. The generally low performance of the EQUALL schools may be due to the fact that at the time of testing, the project had not reached P2, not to mention P3. The 2007 testing should be opportune for identifying the impact the project will have had on its schools.

## 9 Scores on Objectives

Tables 14-17 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. The tables show the various objectives needing remediation of one kind or another. These are objectives with scores below 30% and especially those with scores below 25%.<sup>8</sup>

<sup>8</sup>  Scores from 25%-29%  Less than 25%

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

1. 50% and above correct scores = Good
2. 30%-49% correct scores and above = Satisfactory
3. 25%-29% correct scores = Fairly weak
4. Below 25% correct scores = Poor or Weak Performance

The purpose of this section is to draw attention to the areas of the curriculum in which the pupils are weakest and performed rather poorly. These are the areas to which the bulk of the effort at improving teaching and learning to enhance learner achievement should be directed.

## **10 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 38.1% and 43.2% for P3 and P6 English respectively are low, especially for P3.

In Mathematics, for P3 and P6, the national means percent of 36.6% and 34.4% 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 as 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 16.3% (P3 English) and 23.6% (P6 English) of the pupils reach the 55% proficiency level. For Mathematics, 18.6% (P3) and 9.8% (P6) reached proficiency level.

Generally, girls performed slightly better in English than the boys. In Mathematics, however, the boys did much better at both P3 and P6. The private schools, with their high mean scores, performed significantly better than both the public and EQUALL schools in both English and Mathematics in P3 and P6. The public schools scored slightly higher than the EQUALL schools.

## 10.2 Conclusions

The ability to read and understand simple texts in English is essential for success in taking any test written in English. The testees should read the directions and questions with understanding if they are to be able to provide accurate and appropriate responses to the items. A low literacy level will definitely adversely affect the results of any test, as was detected in the NEA testing.

It was observed during the testing that many of the P3 pupils and some P6 pupils could not read. Some of them were unable to even write their own names. Thus, the pupils filling out the “School and Pupil Information” section of their answer sheets took an unduly long time to complete it. Test administrators were also compelled to spend a great deal of time explaining the directions for taking the tests, and in many cases, had to resort to the local language for further explanation and clarification of the tasks to be done by the pupils. The public school pupils’ low literacy level and poor language skills must have adversely affected their performance on the tests.

The generally poor performance of the pupils could be traced to the opportunity they had to learn, as revealed by the study on “Opportunity to Learn” (OTL) in 2004. The OTL study indicated that most teachers never completed the curriculum (syllabus) for their classes in any particular year, so a test based on the whole of the curriculum meant that the pupils were answering questions on some topics or content they had not been taught. When the OTL factor was taken into account by aligning the test items to only the core objectives, the performance of the pupils improved as seen in the results of the test under review, even though the improvement is modest.

In this test, the pupils were required to shade their responses to the items on a separate answer sheet. Most of the pupils were encountering this kind of test-taking for the first time. It became evident during the administration of the test that most of the pupils spent quite some time struggling to shade their answers. This could have prevented some of them from answering all the items as was later seen during the scanning and scoring stages of the testing process.

## 10.3 Recommendations

The following recommendations are based on the maiden administration of the NEA and the test results, in the hope that the issues raised are 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. In future trainings of TAs, this should be considered at the planning stage.

### Pre-coding of Scannable Answer Sheets

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

### Test Monitors

The participation of Test Monitors in TAs training workshops alone is not enough. Monitors should be given a thorough briefing as to what specifically to look for and do in their monitoring of the administration of the test.

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.

### The Mathematics “Bogey”

In the whole testing exercise the pupils overall mean percent scores for Mathematics have been found to be lower than in English, in both P3 and P6. Even among pupils in the private

schools whose overall mean percent scores are significantly higher, the Mathematics mean scores are always lower than the English mean scores.

Whereas, in English both sexes performed about equally, in Mathematics, the boys performed significantly better than the girls. There is a need to investigate this situation further to find the cause(s) and to find ways of solving this problem.

#### What Makes the Difference?

Private schools have consistently been performing significantly better than public schools as shown in this NEA testing. This calls for a study to find out what makes the private schools better, so that good practices found in private schools can be shared with public schools.

#### Practice Shading Prior to Test-taking

Pupils taking the NEA and other tests, which require shading of responses on separate answer sheets, should be given practice in shading prior to the actual testing. Teachers can organize this on their own at no cost.

## **Annex 1 Overall P3 Performance on NEA July 2005**

### **OVERALL P3 PERFORMANCE ON NATIONAL EDUCATION ASSESSMENT JULY 2005**

	<b>PRIMARY 3 - ENGLISH</b>				
	<b>MEAN % BOYS</b>	<b>MEAN % GIRLS</b>	<b>OVERALL MEAN %</b>	<b>% REACHING MINIMUM- COMPETENCY 35%</b>	<b>% REACHING PROFICIENCY LEVEL 55%</b>
<b>WESTERN</b>	37.79	38.32	40.09	54.3	18.9
<b>ASHANTI</b>	37.79	38.32	38.04	50.5	15.5
<b>BRONG AHAFO</b>	38.98	37.13	38.09	49.5	13.8
<b>CENTRAL</b>	33.4	34.18	33.73	37.5	8.5
<b>EASTERN</b>	36.25	38.11	36.95	44.0	15.8
<b>GREATER ACCRA</b>	45.2	47.46	45.42	63.5	33.5
<b>NORTHERN</b>	34.88	34.2	34.57	42.0	10.2
<b>UPPER EAST</b>	31.45	31.37	31.39	29.5	6.3
<b>UPPER WEST</b>	35.07	32.79	33.80	41.0	7.4
<b>VOLTA</b>	35.48	35.98	35.66	43.0	12.2
<b>TOTAL</b>	<b>37.35</b>	<b>38.04</b>	<b>38.1</b>	<b>50.5</b>	<b>16.4</b>
	<b>PRIMARY 3 – MATHEMATICS</b>				
	<b>MEAN % BOYS</b>	<b>MEAN % GIRLS</b>	<b>OVERALL MEAN %</b>	<b>% REACHING MINIMUM- COMPETENCY 35%</b>	<b>% REACHING PROFICIENCY LEVEL 55%</b>
<b>WESTERN</b>	37.45	36.04	36.73	50.3	17.8
<b>ASHANTI</b>	37.6	35.9	36.74	47.2	18.7
<b>BRONG AHAFO</b>	41.01	36.14	38.69	53.8	20.9
<b>CENTRAL</b>	35.9	34.8	35.36	44.7	15
<b>EASTERN</b>	38.48	37.93	38.16	50.7	20.3
<b>GREATER ACCRA</b>	45.36	42.34	43.72	59.9	32.7
<b>NORTHERN</b>	31.8	28.22	30.24	32.5	10.5
<b>UPPER EAST</b>	34.23	33.24	33.72	39.8	13.5
<b>UPPER WEST</b>	32.77	28.28	30.34	33.1	10.1
<b>VOLTA</b>	35.51	33.32	34.47	42.8	14.2
<b>TOTAL</b>	<b>37.65</b>	<b>35.63</b>	<b>36.63</b>	<b>47.2</b>	<b>18.6</b>

## Annex 2 Overall P6 Performance on NEA July 2005

### OVERALL P6 PERFORMANCE ON NATIONAL EDUCATION ASSESSMENT JULY 2005

REGION	PRIMARY 6 - ENGLISH				
	Mean (%) Boys	Mean (%) Girls	Overall Mean (%)	% at Min. Comp.	% Reaching Proficiency
WESTERN	41.97	41.48	41.7	62.3	20.4
ASHANTI	43.33	44.71	44.0	67.6	25.3
BRONG AHAFO	43.35	41.85	42.66	63.2	21.9
CENTRAL	37.93	39.27	38.56	52.6	13.9
EASTERN	42.56	43.78	43.15	63.6	24.3
GREATER ACCRA	52.43	53.99	53.28	84.4	47.2
NORTHERN	39.37	39.35	39.35	54.1	16.0
UPPER EAST	40.29	42.08	41.13	61.0	16.9
UPPER WEST	39.35	35.61	37.49	49.5	10.6
VOLTA	40.35	40.57	40.45	57.6	17.9
<b>TOTAL</b>	<b>42.63</b>	<b>43.6</b>	<b>43.09</b>	<b>63.9</b>	<b>23.6</b>
REGION	PRIMARY 6 - MATHEMATICS				
	Mean (%) Boys	Mean (%) Girls	Overall Mean (%)	% at Min. Comp.	% Reaching Proficiency
WESTERN	36.51	33.92	35.24	44.9	11.7
ASHANTI	35.98	33.74	34.87	44.9	9.8
BRONG AHAFO	36.8	33.01	35.04	44.6	10.3
CENTRAL	32.74	30.83	31.79	33.8	5.4
EASTERN	36.34	35.24	35.79	45.8	12.5
GREATER ACCRA	41.23	39.02	40.02	59.6	17.5
NORTHERN	29.19	27.93	28.67	25.9	4.8
UPPER EAST	34.95	33.88	34.43	41.5	9.4
UPPER WEST	34.2	28.62	31.48	35.0	5.1
VOLTA	32.18	29.98	31.21	35.4	5.1
<b>TOTAL</b>	<b>35.29</b>	<b>33.41</b>	<b>34.37</b>	<b>42.7</b>	<b>9.8</b>

## Annex 3 Scores on Objectives

**TABLE 14 SCORES ON OBJECTIVES P3 ENGLISH**

Item <sup>9</sup>	% correct	Syllabus Objective Code and Label
A1	80	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A2	62	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A4	60	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A9	58	3.1.4.4 State the names of the months of the year in chronological order
A3	57	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A6	53	3.1.4.3 Give accurate description of the features of a friend
A8	40	3.1.4.8 Make polite requests
A5	37	3.1.4.1 Talk about people (parents and relatives), their work and places of work, using correct and appropriate language
A7	31	3.1.4.8 Make polite requests
A10	-	3.1.4.4 State the names of the months of the year in chronological order
B10	48	3.2.8.2 Use adjectives appropriately in sentences
B8	45	3.2.4.1 Use appropriate prepositions in sentences
B7	39	3.2.6.1 Answer yes/no questions correctly using the future tense
B1	35	3.2.3.1 Distinguish between the Simple Present and the Simple Past Tense Forms
B9	34	3.2.4.1 Use appropriate prepositions in sentences
B5	27	3.2.5.1 Express the future using “will”
B4	26	3.2.3.3 Use the Simple Past Continuous tense form correctly
B6	26	3.2.3.3 Use the Simple Past Continuous tense form correctly
B2	25	3.2.3.1 Distinguish between the Simple Present and the Simple Past Tense Forms
B3	19	3.2.3.1 Distinguish between the Simple Present and the Simple Past Tense Forms
C6	59	3.3.2.2 Answer questions based on passages read silently
C1	47	3.3.2.2 Answer questions based on passages read silently
C9	40	3.3.2.2 Answer questions based on passages read silently
C5	37	3.3.2.2 Answer questions based on passages read silently
C10	37	3.3.2.2 Answer questions based on passages read silently
C8	36	3.3.2.2 Answer questions based on passages read silently
C7	35	3.3.2.2 Answer questions based on passages read silently
C3	34	3.3.2.2 Answer questions based on passages read silently
C2	33	3.3.2.2 Answer questions based on passages read silently
C4	32	3.3.2.2 Answer questions based on passages read silently
C12	28	3.3.2.2 Answer questions based on passages read silently
C11	26	3.3.2.2 Answer questions based on passages read silently
C13	26	3.3.4.1 Make picture dictionaries

<sup>9</sup> A=Listening, B=Usage, C=Reading, D=Writing

D4	40	3.4.2.1 Write short descriptions of people, objects, places, animals, etc.
D7	36	3.4.2.2 Use full stop, comma, upper case and lower case letters in simple sentences
D5	34	3.4.2.2 Use full stop, comma, upper case and lower case letters in simple sentences
D1	32	3.4.2.1 Write short descriptions of people, objects, places, animals, etc.
D2	29	3.4.2.1 Write short descriptions of people, objects, places, animals, etc.
D6	26	3.4.2.2 Use full stop, comma, upper case and lower case letters in simple sentences

25-29%

below 25%

**TABLE 15 SCORES ON OBJECTIVES P6 ENGLISH**

Item	% correct	Syllabus Objective Code and Label
A1	87	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A2	85	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A3	80	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A8	79	6.1.4.2 Talk about/describe people, things, places, topics, occasions, events
A4	77	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A9	72	6.1.4.4 Talk in detail about the need to avoid drug abuse and HIV/AIDs.
A10	72	6.1.4.6 Talk about some important or interesting personalities
A6	62	6.1.1.6 Read and follow complicated instructions.
A7	-	6.1.4.2 Talk about/describe people, things, places, topics, occasions, events
A14	59	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A15	57	6.1.2.2 Recall and say some of the words, issues, and morals used in stories.
A12	56	6.1.1.3 Talk about and act whole/parts of rhymes/poems
A11	53	6.1.1.3 Talk about and act whole/parts of rhymes/poems
A13	42	6.1.1.3 Talk about and act whole/parts of rhymes/poems
A5	33	6.1.1.5 Give more complicated directions accurately.
B4	65	6.2.2.2 Use anomalous finites appropriately.
B18	55	6.2.6.2 Use direct/reported speech forms appropriately
B14	53	6.2.10.2 Use quantifiers correctly
B8	52	6.2.11.1 Use adverbs of more than one word
B6	50	6.2.2.2 Use anomalous finites appropriately.
B10	50	6.2.5.3 Use prepositions appropriately
B17	45	6.2.6.2 Use direct/reported speech forms appropriately
B12	44	6.2.7.1 Use determiners appropriately
B9	38	6.2.11.1 Use adverbs of more than one word

B19	37	6.2.8.2 Use idioms appropriately
B13	36	6.2.7.1 Use determiners appropriately
B15	36	6.2.3.2 Use adjectives appropriately
B21	35	6.2.8.2 Use idioms appropriately
B11	33	6.2.5.3 Use prepositions appropriately
B3	29	6.2.1.2 Use the past perfect continuous tense form correctly.
B16	29	6.2.3.2 Use adjectives appropriately
B20	28	6.2.8.2 Use idioms appropriately
B5	28	6.2.2.2 Use anomalous finites appropriately.
B1	25	6.2.1.2 Use the past perfect continuous tense form correctly.
B2	17	6.2.1.1 Distinguish the past perfect tense from the past perfect continuous.
B7	17	6.2.11.1 Use adverbs of more than one word
C1	61	6.3.3.1 Answer questions based on passages/texts read.
C6	49	6.3.3.1 Answer questions based on passages/texts read.
C11	47	6.3.3.1 Answer questions based on passages/texts read.
C2	46	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.
C8	35	6.3.3.1 Answer questions based on passages/texts read.
C3	34	6.3.3.1 Answer questions based on passages/texts read.
C7	32	6.3.3.1 Answer questions based on passages/texts read.
C4	27	6.3.3.1 Answer questions based on passages/texts read.
C9	25	6.3.3.1 Answer questions based on passages/texts read.
C13	25	6.4.3.2 Identify the ordering of events in stories.
C14	25	6.4.3.2 Identify the ordering of events in stories.
C5	21	6.3.3.1 Answer questions based on passages/texts read.
D9	46	6.3.2.3 Spell 6-10 letter words
D7	45	6.4.1.1 Use punctuation marks appropriately
D3	45	6.4.2.1 Identify the features and layout of semi-official letters.
D4	35	6.4.2.1 Identify the features and layout of semi-official letters.
D5	35	6.4.2.4 Identify the features and layout of official letters.
D8	33	6.4.1.1 Use punctuation marks appropriately
D6	32	6.4.1.1 Use punctuation marks appropriately
D10	24	6.3.2.3 Spell 6-10 letter words
D1	17	6.4.3.2 Identify the ordering of events in stories.
D2	8	6.4.3.2 Identify the ordering of events in stories.

25-29%

below 25%

**TABLE 16 SCORES ON OBJECTIVES P3 MATHEMATICS**

Item	% Correct	Syllabus Objective Code and Label
M6	60	3.3.4.3 Identify and write symbols for fractions
M4	55	3.3.2.2 Add numbers up to sums 9,999
M12	52	3.3.11.2 Add like fractions
M27	51	3.3.8.1 Recall the basic division facts up to product 18
M23	50	3.3.11.2 Add like fractions
M10	47	3.3.10.5 Write and read dates
M9	45	3.3.4.7 Compare two like fractions
M13	45	3.3.11.3 Subtract two like fractions
M37	45	3.3.2.2 Add numbers up to sums 9,999
M15	44	3.3.2.2 Add numbers up to sums 9,999
M38	44	3.3.2.3 Subtract numbers (0-9,999)
M17	43	3.3.2.2 Add number up to sums 9,999
M7	41	3.3.9.2 Identify plane shapes with square corners
M39	41	3.3.10.4 Read the clock by the hours and minutes
M5	40	3.3.2.3 Subtract numbers (0-9,999)
M40	38	3.3.1.6 Use the symbols <, >, = correctly to compare two numbers up to 10,000
M1	37	3.3.7.1. Recall basic multiplication facts up to 18
M16	36	3.3.2.2 Add numbers up to sums 9,999
M18	36	3.3.2.3 Subtract numbers (0-9,999)
M21	36	3.3.10.5 Write and read dates
M32	36	3.3.3.2 Compare surfaces (regions) of plane shapes
M35	36	2.2.15.3 Identify plan shapes with straight edges
M19	35	3.3.1.6 Use the symbols <, >, = correctly to compare two numbers up to 10,000
M28	35	3.3.8.7 Solve simple word problems involving division
M33	35	3.3.10.2 Measure the time of an event in minutes
M34	34	3.3.1.6 Use the symbols <, >, = correctly to compare two numbers up to 10,000
M25	34	3.3.7.8 Find missing factors in multiplication sentences
M2	33	3.3.7.2 Build multiplication facts up to product 36 and factors less than 10
M20	32	4.4.7.3 Multiplying 2-digit number by 1-digit number with regrouping
M24	31	3.3.11.3 Subtract two like fractions
M11	30	3.3.5.1 Collect data by counting objects and results of activities, record
M31	30	3.3.5.1 Collect data by counting objects and results of activities, record
M36	29	3.3.1.4 Break 4-digit numbers into thousands, hundreds, tens and ones, and read and write them
M29	28	3.3.8.4 Find missing factors in division sentences
M8	28	3.3.5.1 Collect data by counting objects and results of activities, record
M14	28	3.3.1.4 Break 4-digit numbers into thousands, hundreds, tens and ones, and read and write them
M26	27	3.3.9.5 Identify rectangles and squares
M22	17	2.2.9.9 Find the total cost of two or three items
M30	11	3.3.4.6 Fractions as part of a group

25-29%

below 25%

**TABLE 17 SCORES ON OBJECTIVES P6 MATHEMATICS**

<b>Item</b>	<b>% Correct</b>	<b>Syllabus Objective Code and Label</b>
M11	74	6.6.5.3 Add and subtract decimal fractions up to three decimal places
M7	71	6.6.5.3 Add and subtract decimal fractions up to three decimal places
M31	69	6.6.9.2 Read and write information from data presented in tables
M18	68	6.6.5.3 Add and subtract decimal fractions up to three decimal places
M14	66	6.6.6.11 Add and subtract given masses in kg and g
M6	59	6.6.4.2 Subtract numbers
M15	58	6.6.4.2 Subtract numbers
M27	56	6.6.5.4 Multiply and divide a decimal fraction by 1-digit number
M45	56	5.5.6.5 Identify congruent line segments and angles in plane shapes
M44	52	6.6.9.2 Read and write information from data presented in tables
M16	52	6.6.2.1 Compare fractions
M10	49	6.6.5.2 Change a common fraction to a decimal (and vice versa)
M58	47	6.6.6.1 Measure line segments of a shape and perimeter of the shape in cm and mm
M2	46	6.6.3.4 Write number names for numerals up to 100,000
M1	45	3.3.1.4 Break 4-digit numbers into thousands, hundreds, tens and ones
M28	41	6.6.2.1 Compare two fractions
M29	41	6.6.14.4 Find the chance of an event
M46	41	6.6.11.5 Write a set of ordered pairs that obey a given rule (or relation)
M50	41	6.6.9.6 Find the mode and median of a set of data
M25	40	6.6.11.4 Write the relation between a set of pairs of numbers
M32	40	6.6.8.4 Make and identify the nets of a cube, cuboid, and cylinder
M57	38	6.6.9.3 Represent data using block graph, bar graph and pictograph
M36	38	6.6.7.3 Find missing numbers in ratios
M22	37	6.6.7.2 Find ratio of a pair of numbers, and express it in the simplest form
M30	35	6.6.15.3 Assign ordered pairs for two points on a plane
M52	35	6.6.13.1 Solve problems involving transactions with money
M17	35	6.6.5.4 Multiply and divide a decimal fraction by 1-digit whole number
M59	34	6.6.11.5 Write a set of ordered pairs that obey a given rule (or relation)
M55	32	6.6.9.5 Read and write information from graphs
M33	32	6.6.5.7 Find the percentage of a given quantity
M4	31	6.6.2.6 Multiply a fraction by a whole number
M26	31	6.6.12.1 Calculate the area of a rectangle with given dimensions
M47	31	5.5.9.2 Find the number of centimeter squares That will cover a given rectangular region
M35	31	6.6.4.3 Solve word problems involving addition and subtraction
M39	31	6.6.2.2 Order three fractions according to size in ascending or descending order
M41	31	6.6.5.3 Add and subtract decimal fractions up to three decimal places
M3	29	6.6.2.7 Multiply a fraction by a fraction
M23	29	6.6.2.7 Multiply a fraction by a fraction
M43	29	6.6.10.7 Solve word problems involving multiplication and division
M37	29	6.6.5.2 Change a common fraction to a decimal fraction (and vice versa)
M48	29	6.6.13.1 Solve problems involving transactions with money
M40	28	6.6.5.5 Express a percentage as a common fraction and vice versa
M38	28	6.6.7.3 Find missing numbers in ratios
M20	27	6.6.5.1 Order decimal fractions
M21	27	6.6.7.2 Find ratio of a pair of numbers, and express it in the simplest form
M49	27	6.6.13.2 Solve simple problems involving profit and loss
M60	27	6.6.7.2 Find ratio of a pair of numbers, and express it in the simplest form
M53	27	6.6.13.1 Solve problems involving transactions with money
M9	25	6.6.2.1 Compare two fractions
M34	24	6.6.5.7 Find the percentage of a given quantity
M19	23	6.6.3.6 Round off numbers to the nearest ten, hundred, and thousand
M51	22	6.6.5.2 Change a common fraction to a decimal fraction (and vice versa)

**TABLE 17 SCORES ON OBJECTIVES P6 MATHEMATICS**

<b>Item</b>	<b>% Correct</b>	<b>Syllabus Objective Code and Label</b>
M54	22	6.6.6.1 Measure line segments of a shape and perimeter of the shape in cm and mm
M12	21	6.6.5.3 Add and subtract decimal fractions up to three decimal places
M42	19	6.6.7.6 Use ratio method to solve problems on direct proportion
M8	19	6.6.2.4 Add and subtract fractions with different denominators
M56	18	6.6.7.6 Use ratio method to solve problems on direct proportion
M13	18	6.6.2.8 Divide a whole number by a fraction
M5	17	6.6.2.4 Add and subtract fractions with different denominators
M24	7	6.6.2.4 Add and subtract fractions with different denominators

25-29%

below 25%