

**THE ACHIEVEMENT OF SENIOR TWO STUDENTS IN UGANDA IN
ENGLISH LANGUAGE, MATHEMATICS AND BIOLOGY**

A SUMMARY OF 2010 NAPE REPORT

UGANDA NATIONAL EXAMINATIONS BOARD

1.0 INTRODUCTION

This volume contains a summary of the report on the achievement of S 2 students in the 2010 NAPE assessment.

1.2 SUBJECTS ASSESSED

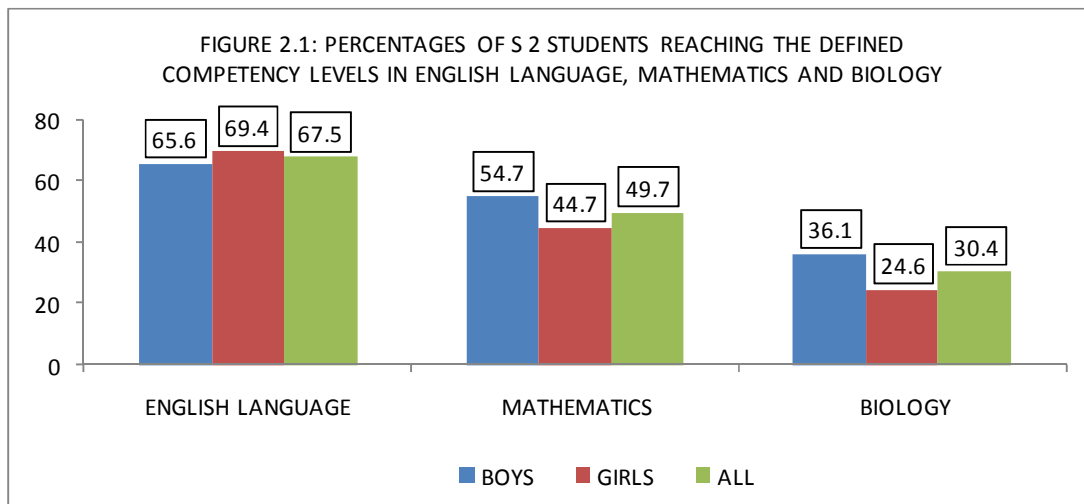
- English Language; Mathematics and Biology.

1.3 SAMPLE SIZE

The national sample consisted of 508 secondary schools. In all there were 19,288 S 2 students: 10,474 (54.3%) boys and 8,814 (45.7%) girls in the sample.

2.1 OVERALL LEVEL OF ACHIEVEMENT OF S 2 STUDENTS IN VARIOUS SUBJECTS

Figure 2.1 shows the percentage of students reaching the defined level of proficiency in English Language, Mathematics and Biology.



The percentage of students who reached the defined competency level was about two-thirds for English Language, a half for Mathematics and nearly a third for Biology. Girls were slightly better in English while boys were significantly better in Mathematics and Biology.

2.2 ACHIEVEMENT OF S 2 STUDENTS IN COMPETENCES OF ENGLISH LANGUAGE, MATHEMATICS AND BIOLOGY

This section highlights the performance of the students in selected competences that were assessed in the tests. The flag on each figure indicates the level of achievement as follows: 'Green' represents competences in which at least three quarters of the students were rated proficient. 'Yellow' represents competences in which at least a half, but less than three quarters of the students reached the desired

proficiency. Lastly, 'Red' consists of competences in which less than a half of the students attained the desired rating.

2.2.1. ACHIEVEMENT OF S 2STUDENTS IN COMPETENCES OF ENGLISH LANGUAGE

Table 2.1 shows the percentages of students who responded correctly to items on selected competences of Reading and Listening Comprehension.

TABLE 2.1: PERCENTAGE OF S 2STUDENTS WHO RESPONDED CORRECTLY TO ITEMS ON SELECTED COMPETENCES OF READING AND LISTENING COMPREHENSION

COMPETENCE	BOYS	GIRLS	ALL
<i>Reading a passage</i>			
Read a passage and extract appropriate information directly from the text to answer a question.	↑ 87.0	↑ 90.5	↑ 88.8
Read a passage and derive contextual meaning of a word.	→ 50.0	↓ 48.8	↓ 49.4
Read a passage and make conclusions by reasoning based on the information given in the text.	↓ 8.5	↓ 7.7	↓ 8.1
<i>Reading tabular information</i>			
Read data in a table and use adjectives to compare quantities.	→ 64.1	→ 63.1	→ 63.6
Read data in a table, form mathematical statements and compute values using the data.	↓ 22.1	↓ 13.3	↓ 17.7
<i>Listening comprehension</i>			
Listen to a story and answer questions requiring direct responses from the text.	↑ 85.9	↑ 89.8	↑ 87.8
Listen to a story and explain an episode in the story.	↓ 18.1	↓ 19.2	↓ 18.6

In Reading and Listening Comprehension, students were able to read or listen to texts and answer questions which required direct responses from the text. However, they found difficulty in using the information in the text to draw conclusions or make judgment. Boys were better than the girls only in formulating mathematical statements from data in a table. In the other competences, performance of the two genders did not differ much.

In Writing, one of the tasks required students to write a report about an event. Table 2.2 shows the percentages of students who responded correctly selected competences of the report writing.

TABLE 2.2: PERCENTAGE OF S 2 STUDENTS WHO RESPONDED CORRECTLY TO ITEMS ON SELECTED COMPETENCES OF REPORT WRITING

COMPETENCE	BOYS	GIRLS	ALL
Title	↑ 87.2	↑ 88.9	↑ 88.1
Date/Time	→ 73.8	↑ 75.5	→ 74.6
Venue	→ 64.4	→ 61.0	→ 62.7
Relevant contents	↓ 48.9	↓ 42.5	↓ 45.7
Name/Signature	↓ 23.7	↓ 22.1	↓ 22.9

The majority of the students used suitable titles for their reports and indicated dates for the event, but not many signed or included relevant contents.

2.2.2. ACHIEVEMENT OF STUDENTS IN COMPETENCES OF MATHEMATICS

The percentages of students who responded correctly to selected competences of Mathematics are shown in Tables 2.3 and 2.4.

TABLE 2.2: PERCENTAGE OF S 2STUDENTS WHO RESPONDED CORRECTLY TO SELECTED COMPETENCES OF MATHEMATICS: NUMERICAL CONCEPTS AND GEOMETRY

COMPETENCE	BOYS	GIRLS	ALL
Numerical concepts			
Perform the four basic operations.	↑ 97.1	↑ 95.7	↑ 96.4
Correct a number to a specified number of decimal places.	↓ 16.4	↓ 12.7	↓ 14.6
Use LCM in daily life.	↓ 10.7	↓ 6.2	↓ 8.5
Geometry			
Measure angles and lengths.	→ 70.4	→ 58.6	→ 64.5
Construct triangles and angles.	→ 55.2	↓ 45.6	→ 50.4

Variations occurred in the performance of the students in different topics and also in the competences within a particular topical area. For instance, although the majority of students (96.4%) could carry out the four operations on whole and decimal numbers, few were able to correct a given number to a specified number of decimal places, and fewer still could apply the concept of LCM in daily life. In Geometry, more students could measure angles and lengths compared the proportion that was able to construct triangles and angles.

Boys performed better than girls in Geometry, but their performance in Numerical concepts did not differ much.

TABLE 2.: PERCENTAGE OF S 2 STUDENTS WHO RESPONDED CORRECTLY
SELECTED COMPETENCES OF MATHEMATICS: MEASURES AND
TRANSFORMATIONS

COMPETENCE	BOYS	GIRLS	ALL
Measures			
Carry out currency conversions.	↑ 90	↑ 82.8	↑ 86.4
Compute simple interest.	→ 54.8	↓ 48.7	→ 51.7
Transformations & Functions			
Work out values of linear functions.	→ 66.7	→ 62.5	→ 64.6
Plot graphs of linear functions.	↓ 13.2	↓ 10.7	↓ 11.9
Determine images of points under multiple reflections.	↓ 3.7	↓ 3.1	↓ 3.4

In Measures, students did well in currency conversions; fewer however, were able to compute simple interest. In Transformations and Functions, more students (64.5%) were able to work out values of linear functions. Nonetheless, they had difficulty in determining images of points under multiple reflections and in plotting graphs of linear functions. Although slightly more boys than girls gave correct responses to all the competences in this area, the differences were not significant.

2.2.3 ACHIEVEMENT OF P 3 STUDENTS IN COMPETENCES OF BIOLOGY

The percentages of students who responded correctly to items on the competences of Biology are shown in Table 2.5.

TABLE 2.5: PERCENTAGE OF S 2 STUDENTS WHO RESPONDED CORRECTLY TO
SELECTED COMPETENCES OF BIOLOGY

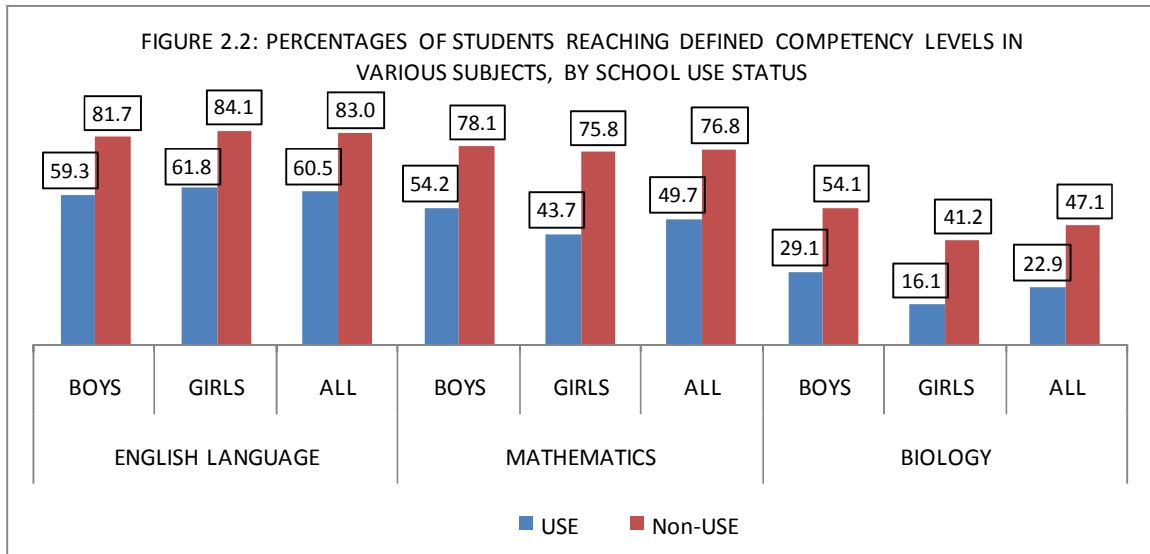
TOPIC	COMPETENCE	BOYS	GIRLS	ALL
CLASSIFICATION	State the characteristics of living things.	↑ 95.6	↑ 95.6	↑ 95.6
	Estimate the number of organisms in a given area.	↓ 20.0	↓ 16.4	↓ 18.2
	Describe how to collect living things using a given method.	↓ 2.1	↓ 2.0	↓ 2.1
FLOWERING PLANTS	Draw and label the external parts of a flower.	↓ 49.4	↓ 42.6	↓ 46.0
	Describe the leaf arrangement on a stem.	↓ 3.7	↓ 3.2	↓ 3.4
INSECTS	Describe the life cycle of a named vector.	↑ 90.7	↑ 88.4	↑ 89.6
	Draw the external features of a named vector.	→ 55.5	→ 50.8	→ 53.2
SOIL	Explain the importance of soil air to plants and animals.	→ 59.6	→ 52.3	→ 56.0
	Compute the percentage of water in a soil sample.	↓ 4.4	↓ 2.0	↓ 3.2

The majority of students were able to state the characteristics of living things and describe the life cycle of a vector; and about a half of students could draw the

external features of a flower or explain the importance of soil air to plants and animals. However this proportion dropped to less than 5% for those who could describe how to collect living things and the leaf arrangement on a stem or compute the percentage of water in a soil sample. The percentages of the boys rated proficient significantly exceeded the girls' in the competences where there was better performance.

2.3 ACHIEVEMENT OF S 2 STUDENTS IN VARIOUS SUBJECTS, BY SCHOOL USE STATUS

The percentages of students attaining the desired proficiency levels in the various subjects by school status are given in Figure 2.2



For all subjects, more students from non-USE schools reached the defined competency levels in comparison to those from USE schools. The difference was largest in Biology, followed by Mathematics and then English Language.

2.4 ACHIEVEMENT OF S 2 STUDENTS IN VARIOUS SUBJECTS BY SCHOOL PROGRAM

The percentages of students reaching defined competency levels in various subjects by school program are shown in Figure 2.3.

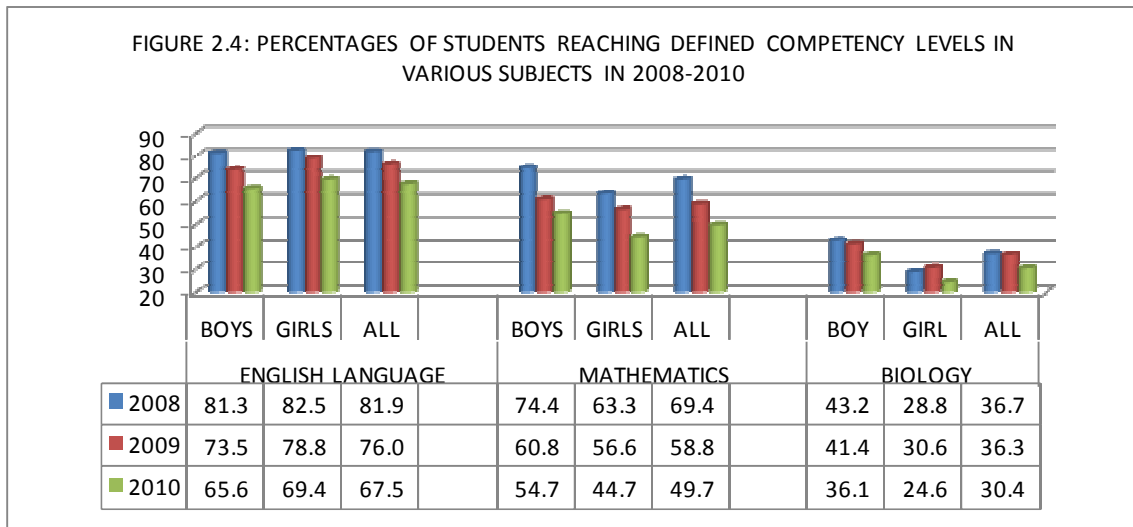
TABLE 2.6: PERCENTAGE OF S 2 STUDENTS WHO REACHED DEFINED COMPETENCY LEVELS IN VARIOUS SUBJECTS BY SCHOOL PROGRAM

	ENGLISH LANGUAGE			MATHEMATICS			BIOLOGY		
	BOYS	GIRLS	ALL	BOYS	GIRLS	ALL	BOYS	GIRLS	ALL
SINGLE-SESSION	67.7	70.4	69.1	64.8	62.3	63.6	40.0	28.0	33.8
DOUBLE-SESSION	59.5	65.4	62.2	53.1	42.0	48.4	24.9	11.5	18.8

Significantly more students in the single-session schools than those in double-session schools reached the desired ratings. The greatest difference occurred in Biology, followed by Mathematics and then English Language. In addition, the difference in the performance of students of the same gender in the two types of schools was greater for girls in Biology and Mathematics.

2.5 ACHIEVEMENT OF S 2 STUDENTS IN VARIOUS SUBJECTS in 2008-2010

The percentages of students reaching defined competency levels in various subjects in 2008-2010 are shown in Figure 2.3.



The proportions of students who reached the defined levels of competency declined between 2008 and 2010.

3.0 CONCLUSIONS

3.1 OVERALL LEVEL OF ACHIEVEMENT

While about two thirds of the students (67.5%) were reached the desired level of proficiency in English Language, just about a half (49.7%) did so in Mathematics. A much smaller proportion (30.4%) attained a similar rating in Biology.

3.2 ACHIEVEMENT BY COMPETENCES

3.2.1 Achievement Of Students In Various Competences of English Language

Students were able to:

- Read or listen to texts and answer questions which required direct responses from the text.
- Write a report on an event, giving it a suitable title and indication the date of the event.

Problem areas of English Language

- Using information from texts to draw conclusions or make judgment.
- Writing a piece that is relevant to the topic.

3.2.2 Achievement Of Students In Various Competences Of Mathematics

Students were able to:

- Carry out the four operations on whole and decimal numbers.
- Carry out currency conversions.

Problem areas of Mathematics

- Applying concepts to solve problems in daily life.
- Constructing triangles and angles.
- Plotting graphs of linear functions.
- Determining images of points under multiple reflections.

3.2.3 Achievement Of S 2 Students In Various Competences of Biology

Students were able to:

- State the characteristics of living things.
- Describe the life cycle of a named vector.

Problem areas of Biology

- Describing how living things can be collected.
- Estimating the number of organisms in an area.
- Describing the leaf arrangement on a stem.
- Computing the percentage of water in a soil sample.

3.3 ACHIEVEMENT BY GENDER

- Girls slightly better than boys in English Language.
- Boys significantly better than girls in Biology and Mathematics.

3.4 ACHIEVEMENT BY SCHOOL USE STATUS

- Non-USE schools better than the USE schools, difference greatest in performance in Biology.

3.5 ACHIEVEMENT BY SCHOOL PROGRAM

- Achievement levels were higher in single-session schools than double-session schools.
- Difference greatest in Biology followed by Mathematics.

3.6 ACHIEVEMENT BETWEEN IN 2008-2010

In the years 2008 and 2010, the percentage of the students who reached the defined competency levels significantly dropped, with the biggest the decrease occurring in Mathematics.