The State of Lower Basic Education in the Gambia

A Baseline Survey Report prepared for the Ministry for Basic & Secondary Education, the Gambia

Adebimpe Adekanmbi

Moussa P. Blimpo
The World Bank

David K. Evans
The World Bank

September 2009

Table of Contents

I. Introduction 5

II. School Environment 8

A. Facilities 8

B. Multiple Shifts, School Enrollment, and School, Teacher, and Student Characteristics 11

III. School Management 14

A. Record Keeping 14

B. School Development and Community Participation 16

C. Students and Teacher Absenteeism 18

IV. Classroom Activities 20

A. Teacher Activities 20

B. Corporal Punishment 22

V. Student Characteristics and Performance 25

A. Socioeconomic Characteristics of Students 25

B. Student Test Performance 26

1. Oral Test of Literacy and Listening Comprehension 26

2. Written Numeracy & Literacy 28

VI. Impact Evaluation Sampling 33

A. Sampling Methodology 33

B. Comparison across Impact Evaluation Groups 34

VII. Concluding Remarks 35

VIII. Appendixes 37

Appendix 1: Description of Survey Instruments 37

Appendix 2: Sampling and Survey Procedures 39

Appendix 3: Letter Recognition Testing Instrument 41

Appendix 4: Oral Reading Test Instrument 42

Appendix 5: Listening Comprehension Instrument 43

Appendix 6: Detailed Comparison of Means across Impact Evaluation Groups 44

List of acronyms

APEIE – Africa Program for Education Impact Evaluation, the World Bank

BESPOR – Basic Education Support for Poverty Reduction

DFID – Department for International Development (UK)

MoBSE – Ministry for Basic and Secondary Education, the Gambia

EPDF – Education Program Development Fund

USD – United States Dollars

WSD – Whole School Development

I. Introduction

1.1 Purpose

This report presents the results of the baseline survey administered in the context of The Gambia Ministry of State for Basic and Secondary Education's impact evaluation of two pilot programs: the Whole School Development (WSD) program (a holistic school management capacity building program) coupled with school grants, and a separate program of school grants alone. The surveys were conducted by the Gambia Bureau of Statistics in May and June 2008. The findings summarized here were gathered from 273 lower basic schools (i.e., Grades 1-6) in four of The Gambia's administrative areas (Regions 2, 3, 4, and 6). These findings illustrate the current school environment, school management, teaching activities, and student performance. The report also includes summary statistics comparing the schools selected randomly to participate in various aspects of the impact evaluation (WSD + grants, grants only, and comparison schools).

1.2 Background on the Gambian education sector

The Gambian education sector faces many challenges in assuring high quality basic education. In many cases, classrooms are overcrowded and infrastructure is dilapidated. Teachers do not adequately prepare to deliver lessons and teaching records are not prepared or kept. Many unqualified teachers teach at the basic level (although MoBSE currently has programs to ameliorate this problem) and higher teacher's certificate and graduate teachers teach at the secondary and tertiary level. It is felt that poor housing conditions and inadequate incentives for teachers are factors responsible for the poor retention of qualified teachers especially in rural areas). Teaching of English is inadequate because of an insufficient supply of textbooks and supplementary readers.

Gambian students currently perform poorly on national exams. On recent national exams, a maximum of 10% of students in Grades 3 and 5 reached a mastery level in English, science, or mathematics (MoBSE, *Education Sector Medium Term Plan: 2008-2011*). Hence, there is growing demand for the need to improve the learning achievements of children. Furthermore, improving students' learning outcomes is pivotal for attaining *Vision 2020*, Gambia's national development strategy. Vision 2020 recognizes the role a "well-educated, trained, [and] skilled" population has in transforming The Gambia into a middle-income country.

1.3 Background on Whole School Development and School Grants

The objective of the Whole School Development (WSD) program is to improve the quality of teaching and learning to enhance students' learning outcomes and to build the capacity of the "whole" school in order to be able to meet improvement targets. The WSD approach is a broad effort from the Ministry of State for Basic & Secondary Education (MoBSE), implemented by

Basic Education Support for Poverty Reduction (BESPOR) with support from the UK Department for International Development (DFID). In WSD schools, head teachers and representatives from the parent-teacher association receive training in a variety of areas: school leadership and management, community participation, curriculum management, teacher professional development, teaching and learning resources (e.g., textbooks and libraries), and the school environment. In the course of this, the school stakeholder community develops a school development plan addressing each of these areas with guidance from the central WSD management committee at BESPOR. In order to help the schools initiate the implementation of their plan, the MoBSE will provide a targeted grant worth approximately 500 USD. In schools participating in the "grant-only" aspect of the program, the schools will receive a grant of identical size but without the comprehensive school management training program.

A new school constitution has been developed between MoBSE and BESPOR to enhance cooperation in schools between teachers and the community. Acceptance of the new constitution is a prerequisite for receipt of the grant. All schools receiving grants (both schools with WSD and grant and also grant-only schools) will use the grant towards some aspect of the school development plan that deals with teaching and learning.

The objective of the impact evaluation accompanying these programs is to estimate the causal impact of participation in WSD and school grants on various aspects of the school environment and – ultimately – on student learning outcomes. In addition, this impact evaluation will provide country-level evidence on the effectiveness of school improvement grants versus grants in conjunction with a particular program of school management capacity building.

This impact evaluation is part of the Africa Program for Education Impact Evaluation (APEIE), a World Bank program currently working with 11 countries to build in-country capacity to develop and implement rigorous evaluations of policy interventions to improve schooling and learning outcomes. The APEIE program is a collaborative effort between two units in the World Bank (the Africa Impact Evaluation Initiative in the Results and Learning Unit and the education team in the Africa Region's Human Development Department), as well as national teams from participating Ministries of Education and impact evaluation experts from research and academic institutions. The program counts with the financial support of Education Program Development Fund (EPDF) donors. The objective of APEIE is to enable policy makers to obtain solid evidence to shape education programs and position them to deliver results on the ground.

1.4 Structure of this report

This report principally relies on figures to summarize the information gathered in the baseline survey. The report systematically summarizes results in each general area covered by the

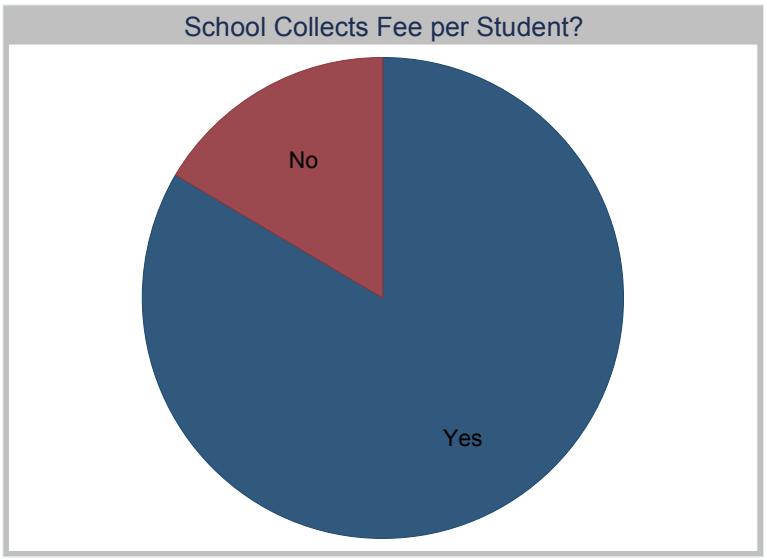
survey: School Environment, School Management, Classroom Activities, Student Performance, and Comparisons across Impact Evaluation Groups.

II. School Environment

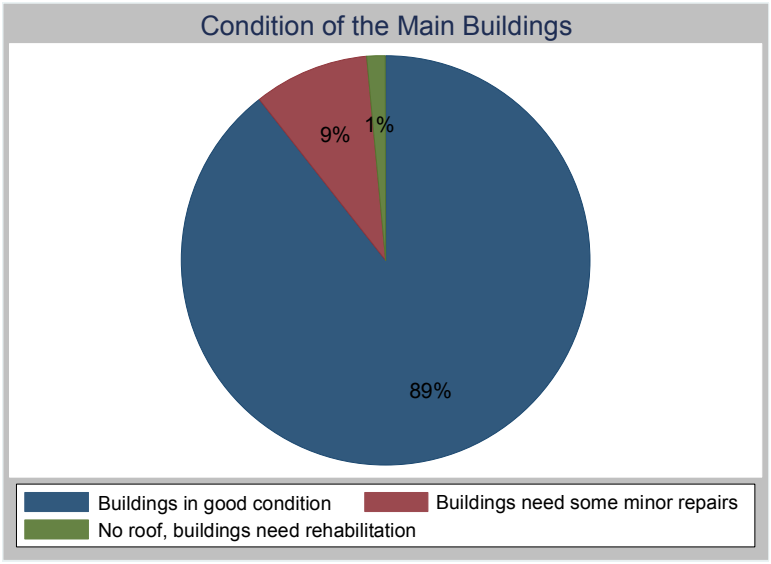
A. Facilities

The head teacher was the target respondent for questions regarding the school environment. However, the head teachers were present in only 57% of schools. The main reason for this heavy absenteeism is because the period of the survey partially overlapped with the grade 9 examination and the head teachers were often away on duty to conduct that examination. However, in 88% of cases either the head teacher of the deputy head teacher responded to the questionnaire. (In 10% of cases a senior teacher responded, and in the remaining 2% another teacher responded.)

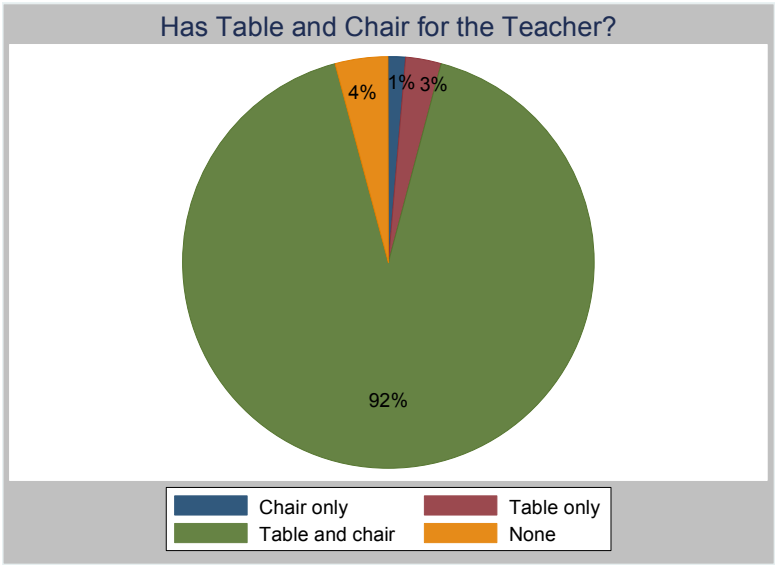
The great majority of the schools reported that they collect some fees per student, either per annum or per semester. These fees are reported to be very often small (5 dalasi in some cases) and the students are not dismissed for non-payment of the fee.



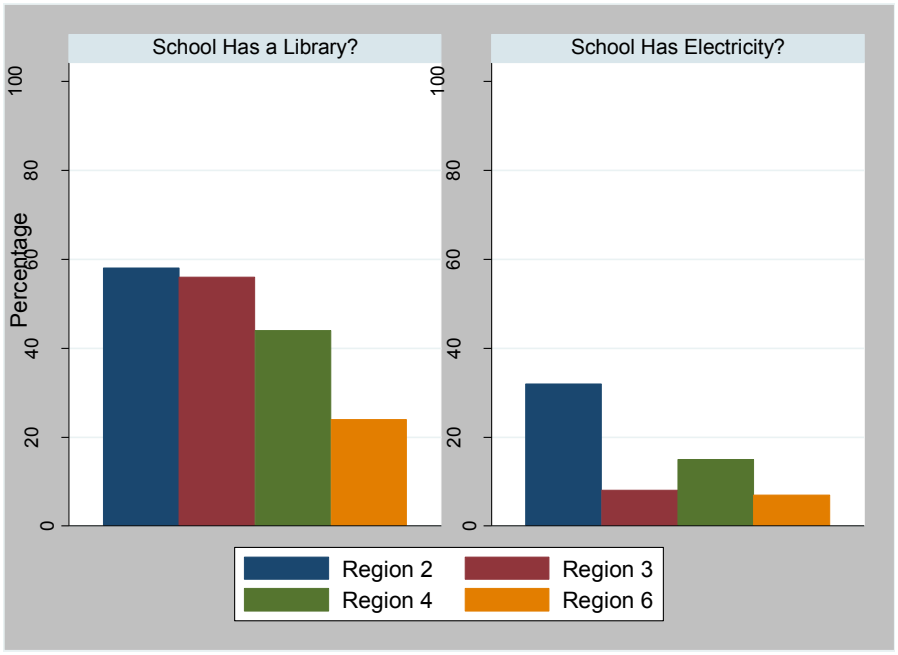
The main buildings (classrooms and staff headquarter) are overall in good condition throughout the four regions. Of the 273 schools visited, 9% require some minor repairs for the walls, roofs, floors etc. One percent of the schools was in very bad condition and needed total rehabilitation; these schools were all located in region 4. Schools in region 2 are the most in need of minor repairs (15% of the schools).



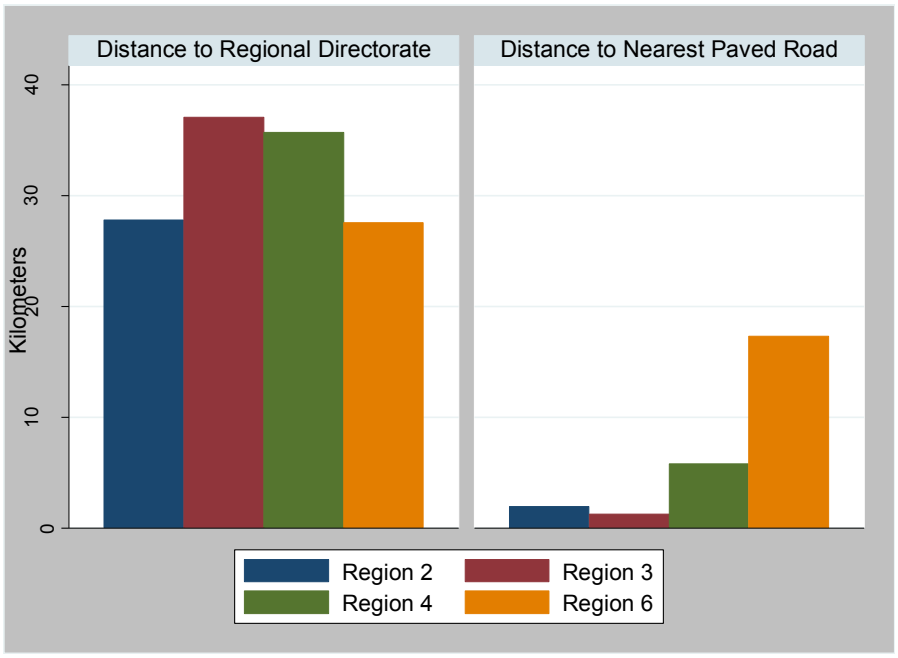
In 97% of the 526 classrooms visited, most of the students were seated on a chair with a table. The teaching areas were equipped with a chair and a table in 92% of the classrooms visited. Three quarters of the instances where the teaching area has no chair and no table were encountered in region 6.



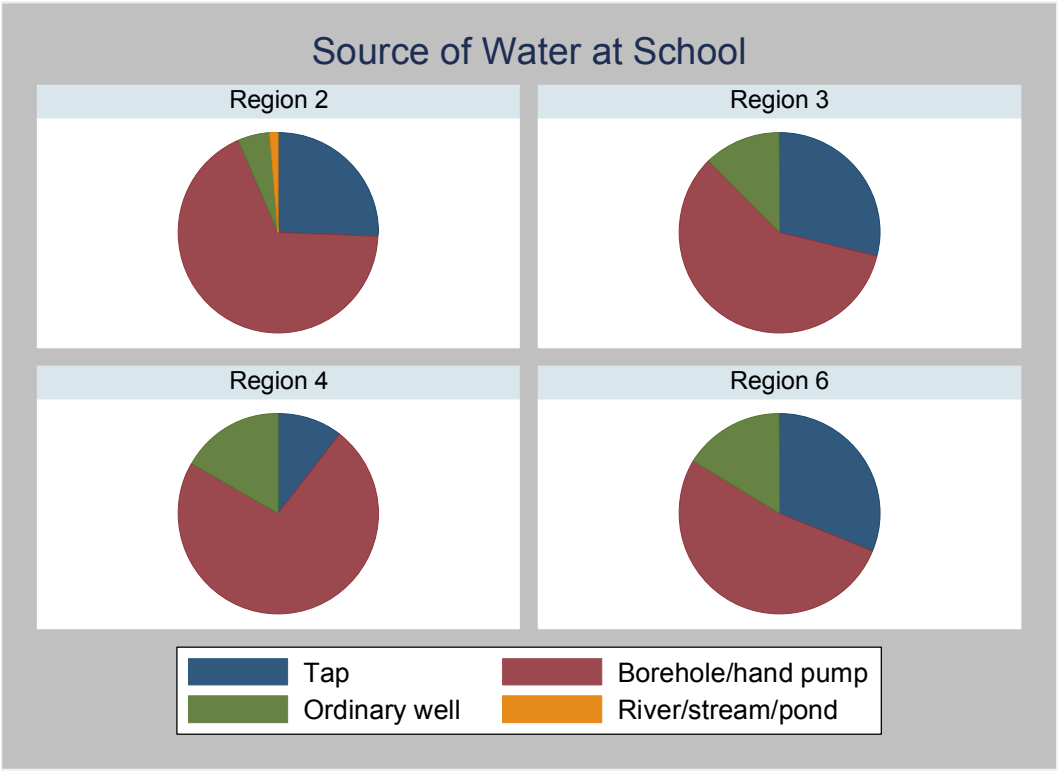
Schools in regions 2 and 3 were the most equipped with libraries, with nearly 60% of the schools possessing a library. (A library was defined broadly as a storage location for books that can be borrowed; it did not require necessarily a librarian or a separate room.) A total of 8% of schools had functioning electricity at the time of the interview.



The survey collected two measures of accessibility of the schools: The distance to the nearest regional directorate and the distance to the nearest paved road. The average reported distance to the nearest directorate is comparable across regions: 32 km. However, on average the schools in regions 4 were farther from a paved road than were schools in the other regions. In terms of communities' access to the primary schools, MoBSE reported that no community is more than 5 km away from a lower basic school.

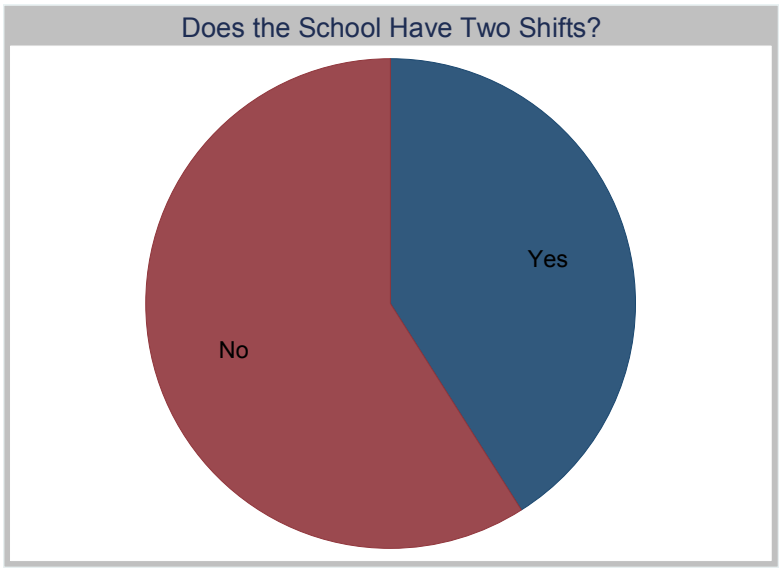


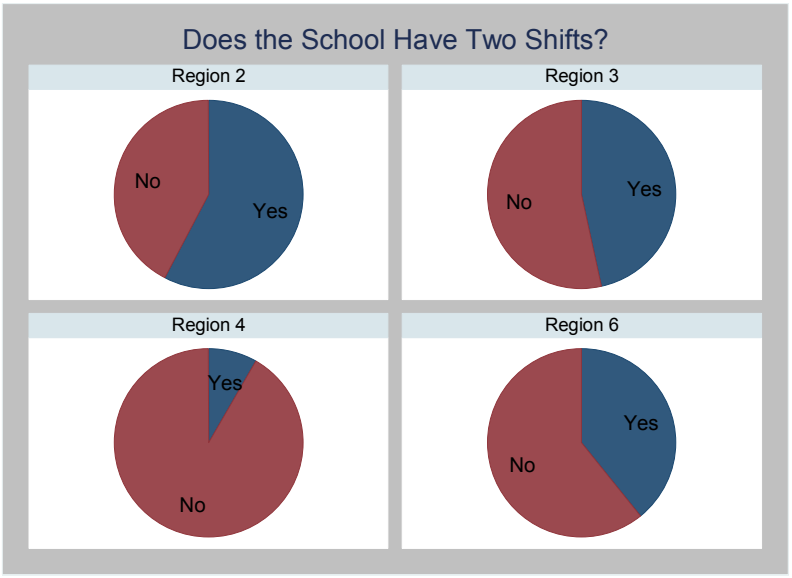
The main source of drinking water in the schools across the four regions was boreholes or hand pumps (i.e., protected or covered wells) followed by tap water. Most of the hand pumps are considered safe for drinking along with the tap.



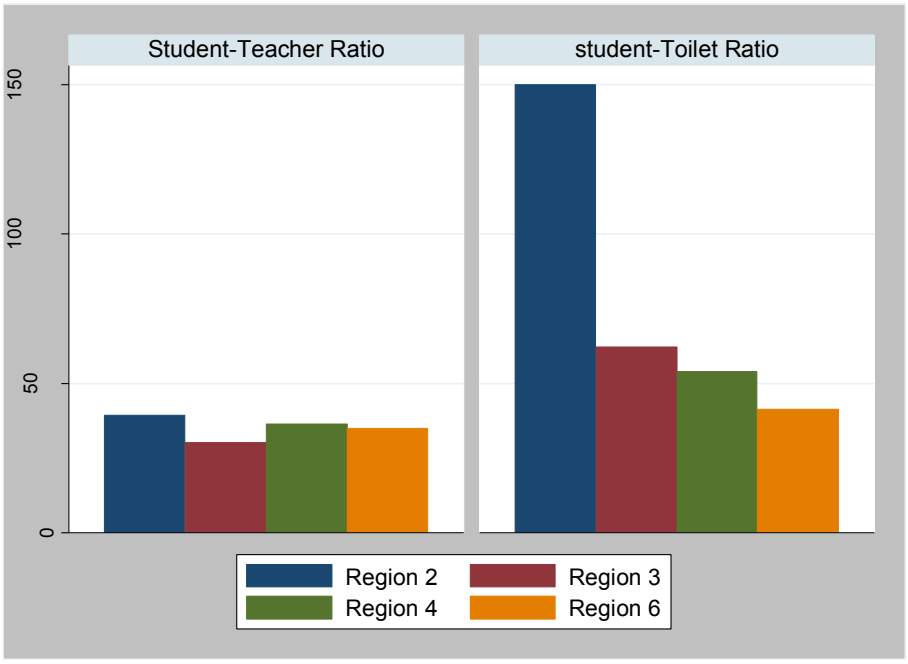
B. Multiple Shifts, School Enrollment, and School, Teacher, and Student Characteristics

One of the measures taken in schools to provide access to more students with the same infrastructure very often with the same staff is to introduce double shifts, where one group of students comes only in the morning and another group only in the afternoon. Double-shift schools are widespread in region 2 (one of the most populated regions) and occur least in region 4.





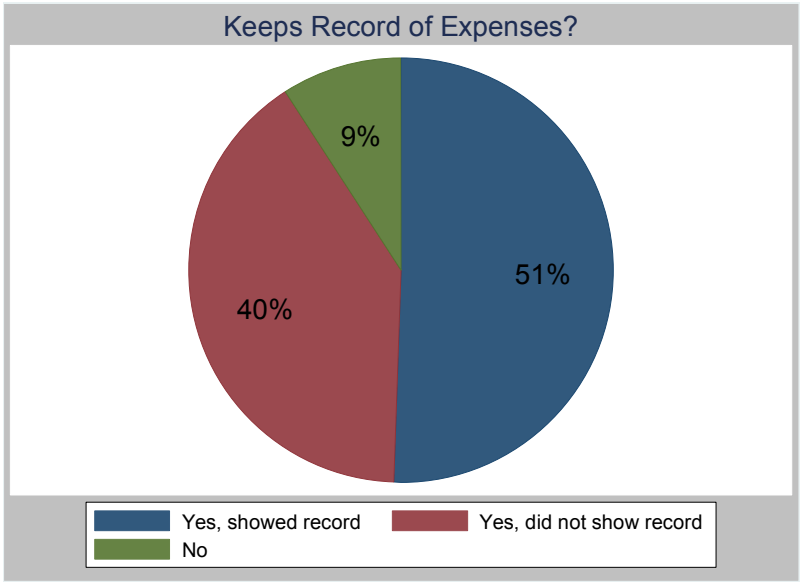
Student-teacher ratios are similar across regions at about 40 students per teacher. Region 2 is has the highest number of students per sanitary facility with an average of 150 students per latrines compared an average of about 50 students per latrine in the other regions.

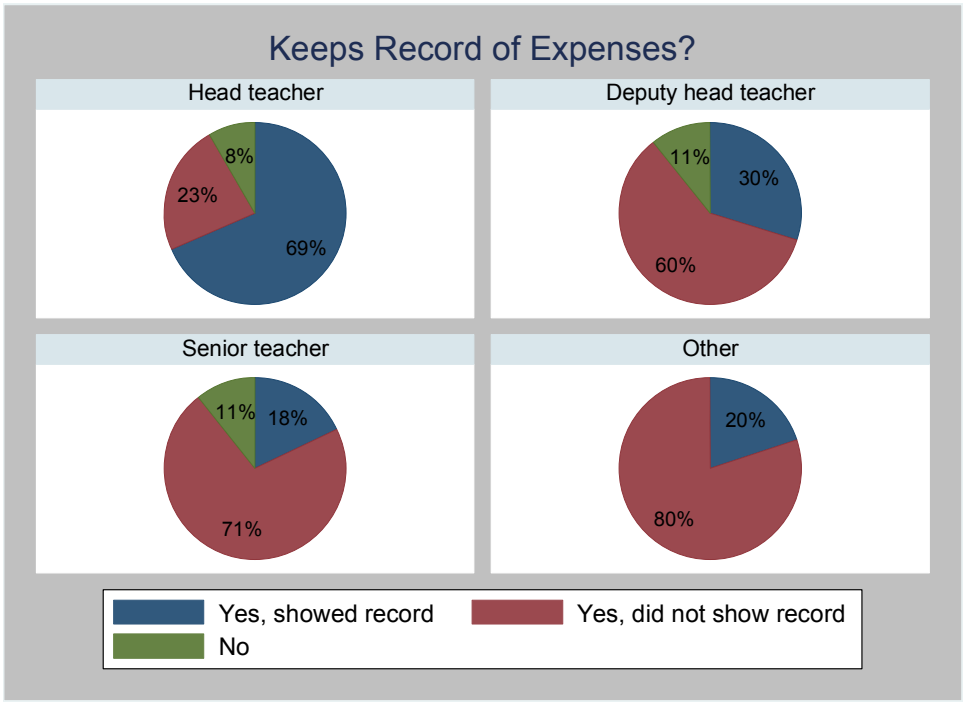

Student-Teacher Ratio
student-Toilet Ratio
150
100
50
0
Region 2
Region 3
Region 4
Region 6

III. School Management

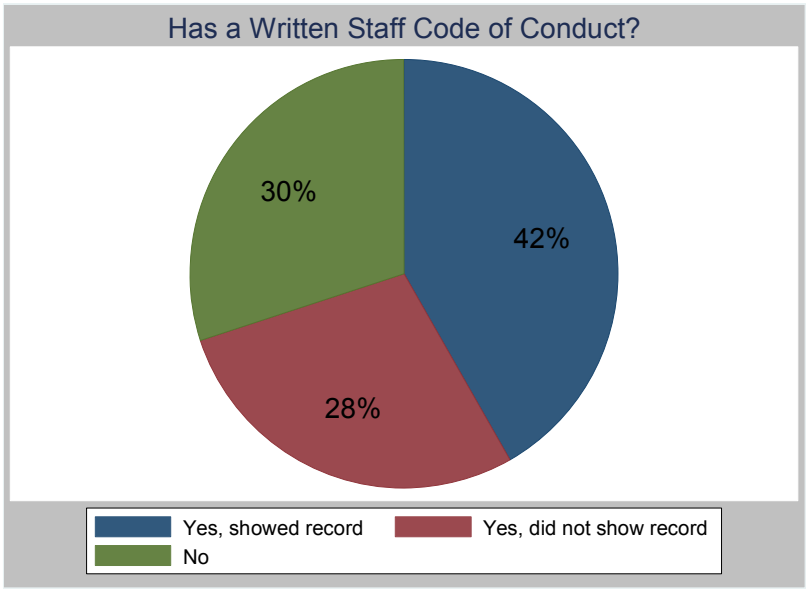
A. Record Keeping

An essential element of school management is keeping accurate records, both for the benefit of ongoing school leadership and for new leadership, especially given the degree of teacher transfers that occur in The Gambia. About 51% of the respondents kept record of the school finances and were able to show them. However, the response to this question depends significantly on the type of respondent. As mentioned earlier, only 57% of the head teachers were present and responded to the questions. When the head teacher was the actual respondent, 69% of them reported keeping finance records *and were able to show them*. When the deputy head teachers responded, only 30% of them reported that the school kept records of finances and were able to show them. This suggests that school managers aside from the head teacher had little knowledge of or access to financial record keeping, which likely proves problematic in the context of head teacher transfers.

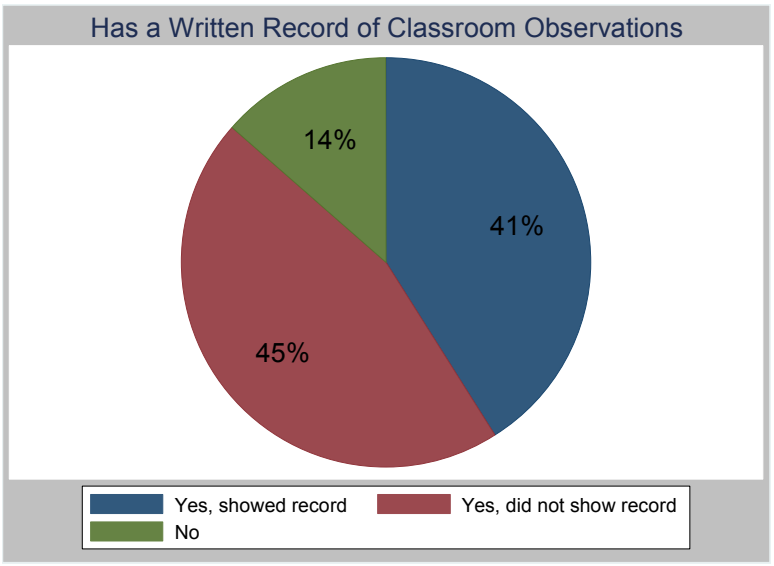


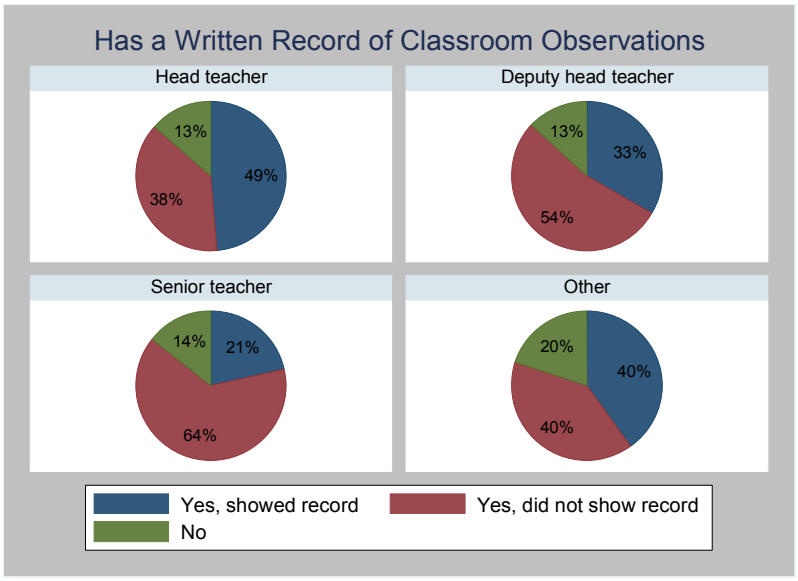


In 42% of the schools, the respondents were able to show the written *staff code of conduct*. Most often it was a half-page to one-page document displayed on the wall inside the head teacher's office.



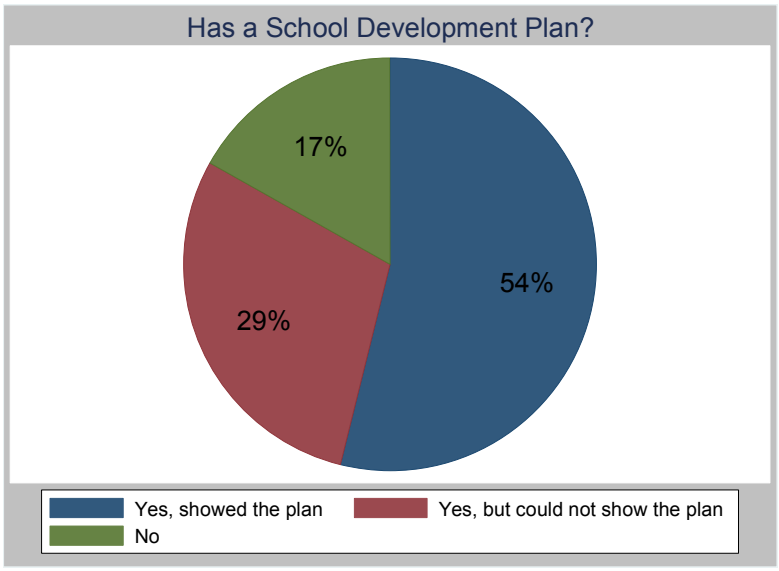
Forty-one percent of schools conducted classroom observation to ensure the quality of the teaching and were able to show the records of such activity. That number is still only 49% when the head teacher was the respondent. Another 45% claimed to conduct classroom observation but had no written report.



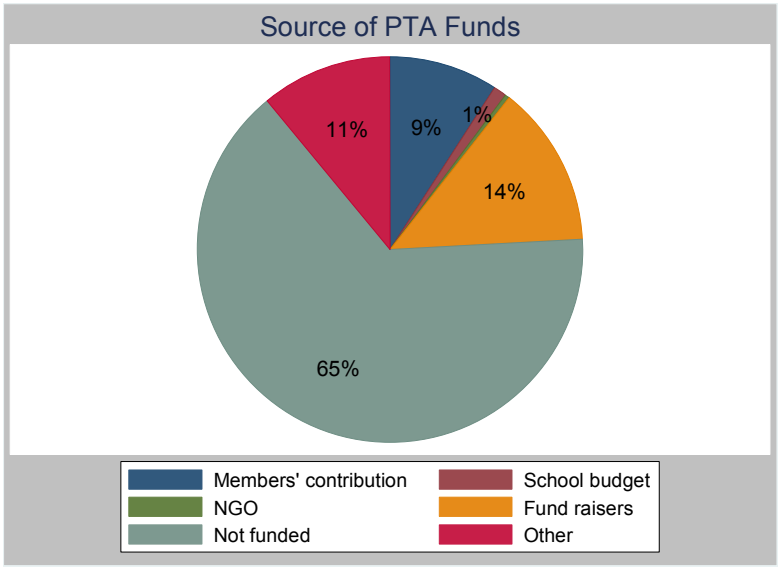


B. School Development and Community Participation

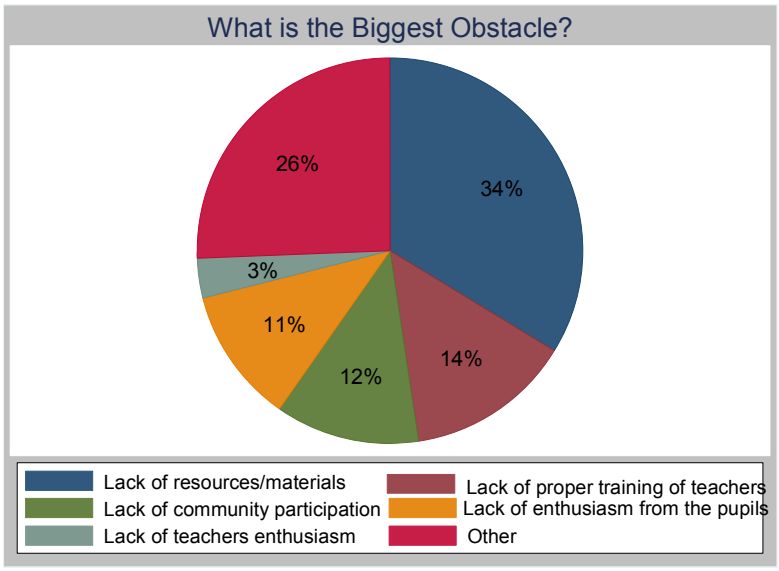
A majority (54%)of the schools have a school development plan. The plan is usually displayed in the head teacher's office. Often the development plans merely comprises of a list of objectives rather than an actual plan on how to reach those objectives.



All the schools reported to have some form of *Parent-Teacher Association*. However, 65% of them have no clear source of funding.

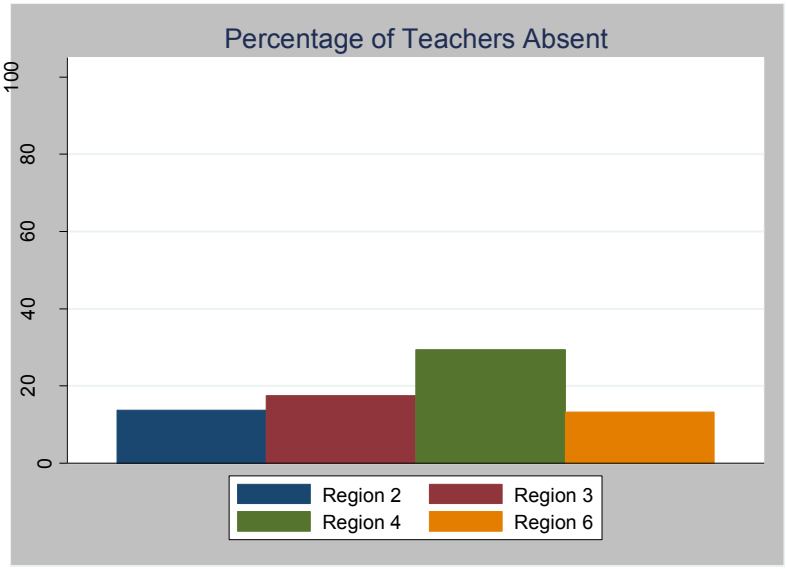


Head teachers were asked to report the most important challenge that the school faces in its effort to provide proper education to the student. The most recurrent responses were the lack of resources (34%) and the lack of proper teacher training (14%).

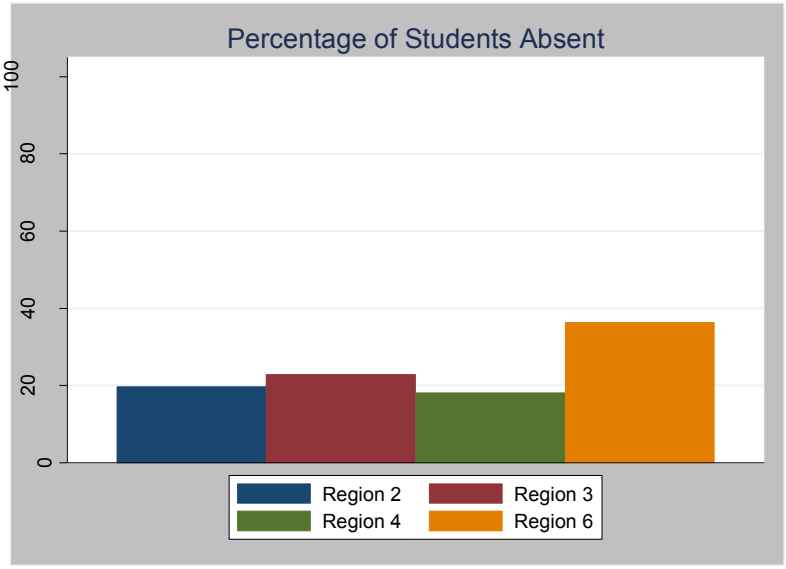


C. Students and Teacher Absenteeism

Within the surveyed schools, teacher absenteeism ranged from about 12% of teachers absent on the day of the survey in regions 2 and 6 to about 30% in region 4. In addition, during the classroom visits, 32% of the teachers reported having missed at least one day of class during the previous week.



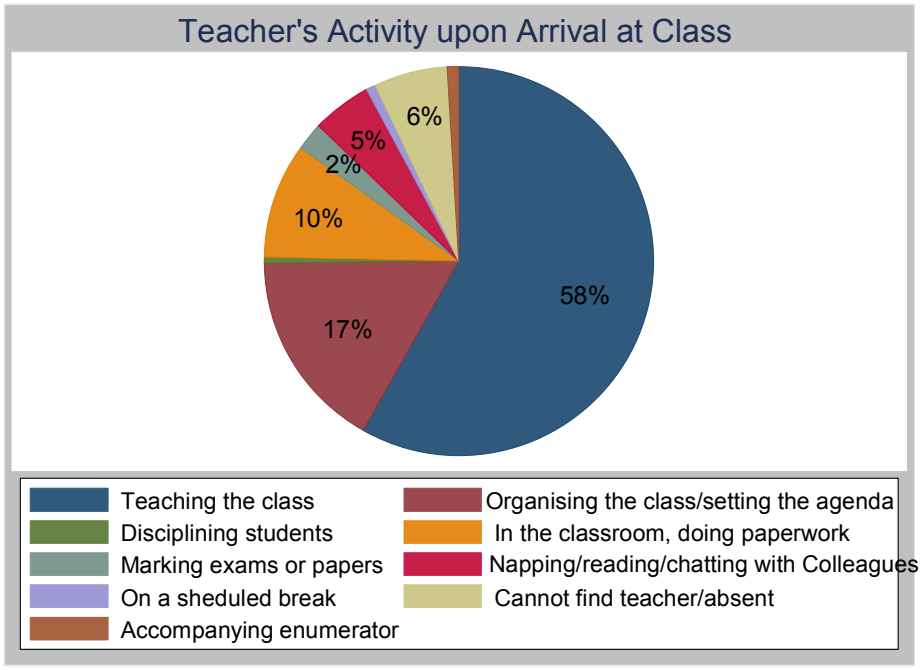
Student absenteeism is measured as the percentage of the class that is absent on the day of the survey in two randomly selected classes in each school: specifically a randomly selected classroom of classes 4 and 6 where possible; where not possible, a randomly selected other class. Student absenteeism is high as observed in the 526 classroom visits. It ranges from about 20% of the total number of students enrolled in regions 2, 3, and 4 to nearly 40% in region 4.



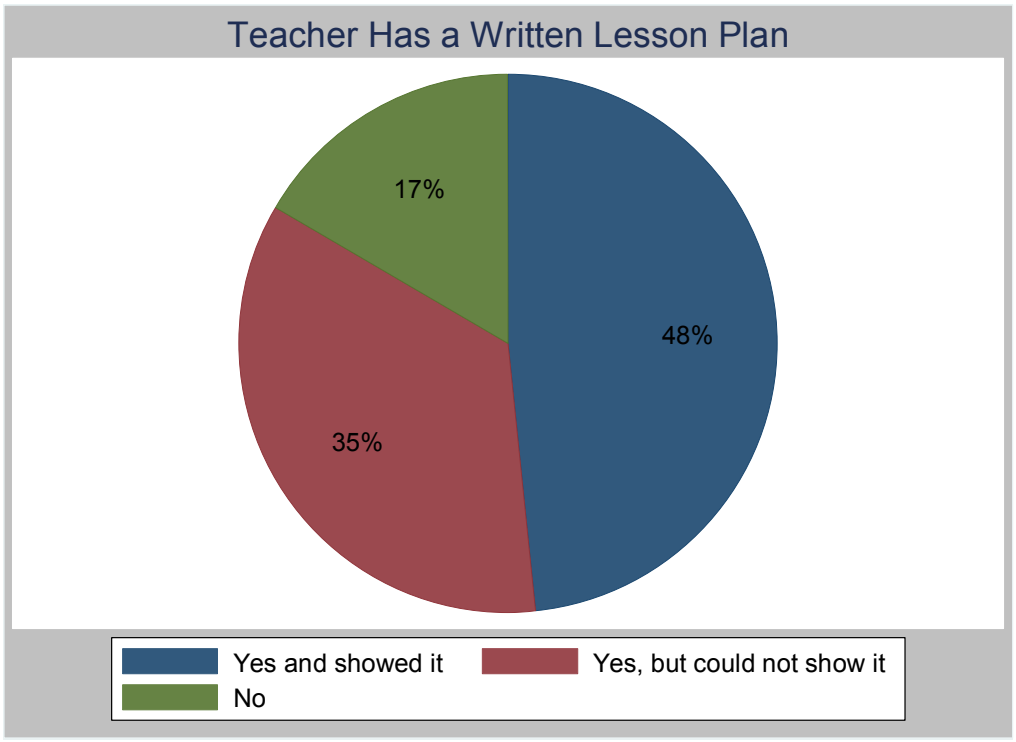
IV. Classroom Activities

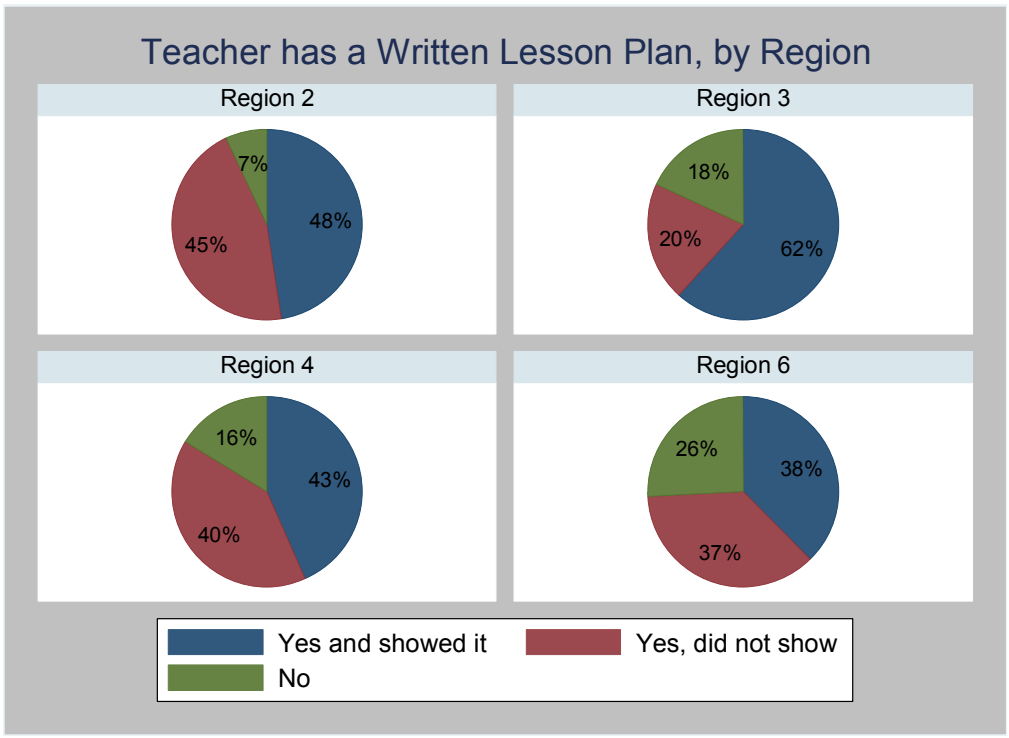
A. Teacher Activities

When enumerators arrived in the classroom to observe the class for 15 minutes, 58% of teachers were teaching, 17% of teachers were organizing the class and 10% of teachers were doing paperwork. These results may be biased because teachers knew that enumerators were at the school and so might have been less likely to engage in behavior such as chatting with colleagues.

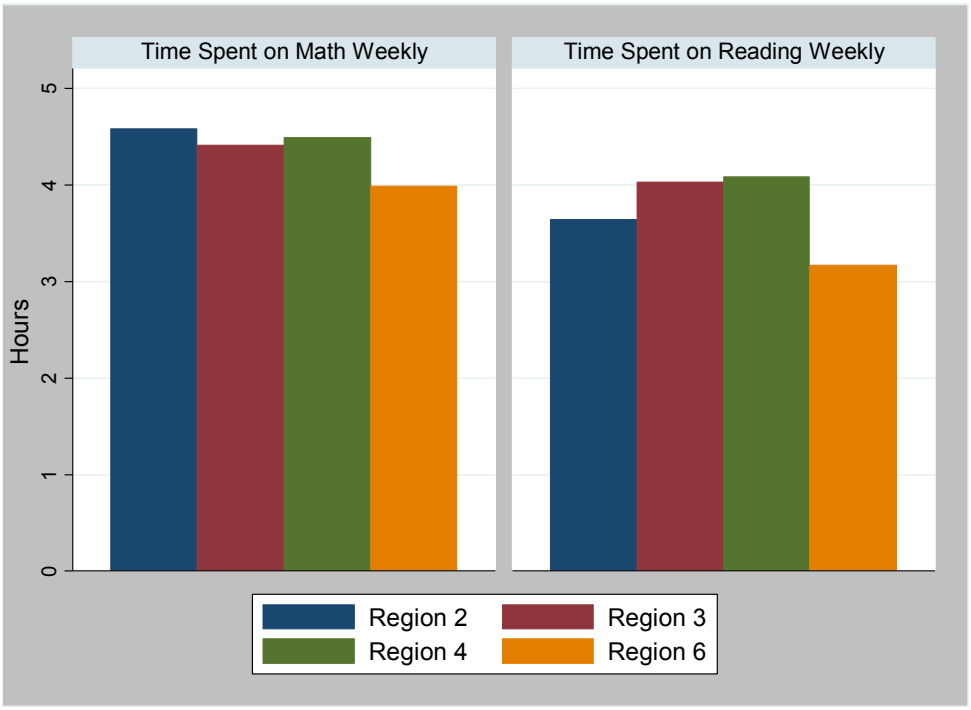


Forty-eight percent of teachers had a written lesson plan. Region 6 had the greatest number of teachers with a lesson plan. In Region 6, 62% of teachers had a written lesson plan.



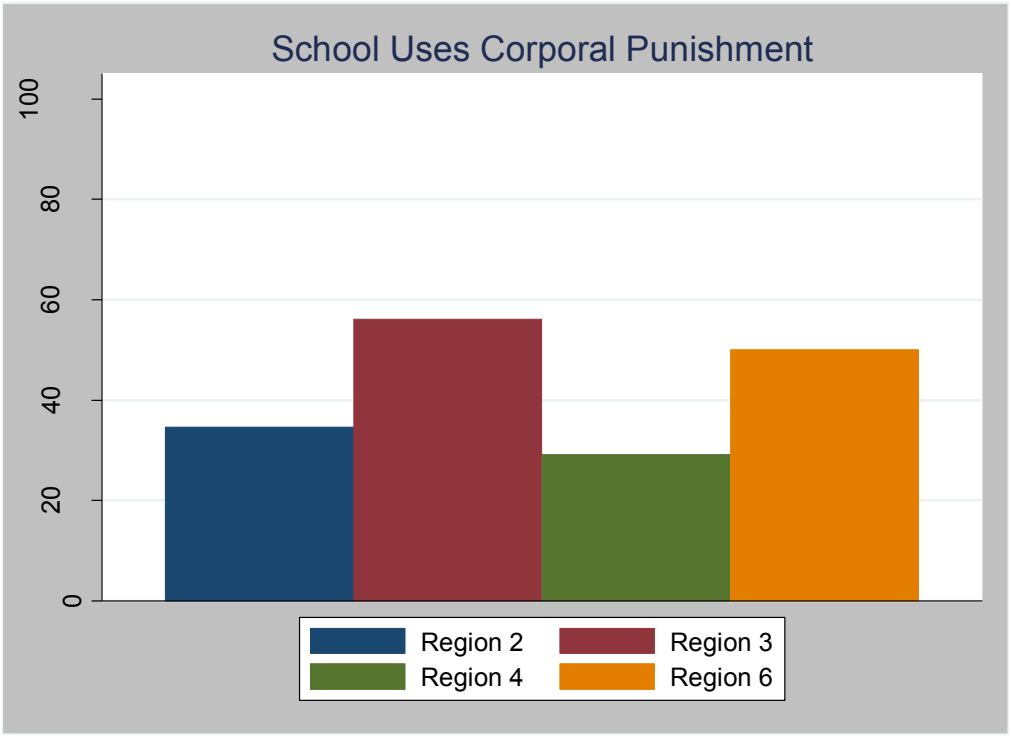


Teachers in Region 2 spent the most time teaching math weekly and teachers in Region 4 spent the most time teaching reading weekly. Teachers in Region 6 reported fewer hours spent weekly teaching math and reading. (Because the survey did not gather detailed time-use data, we do not observe what the alternative use of time was.)

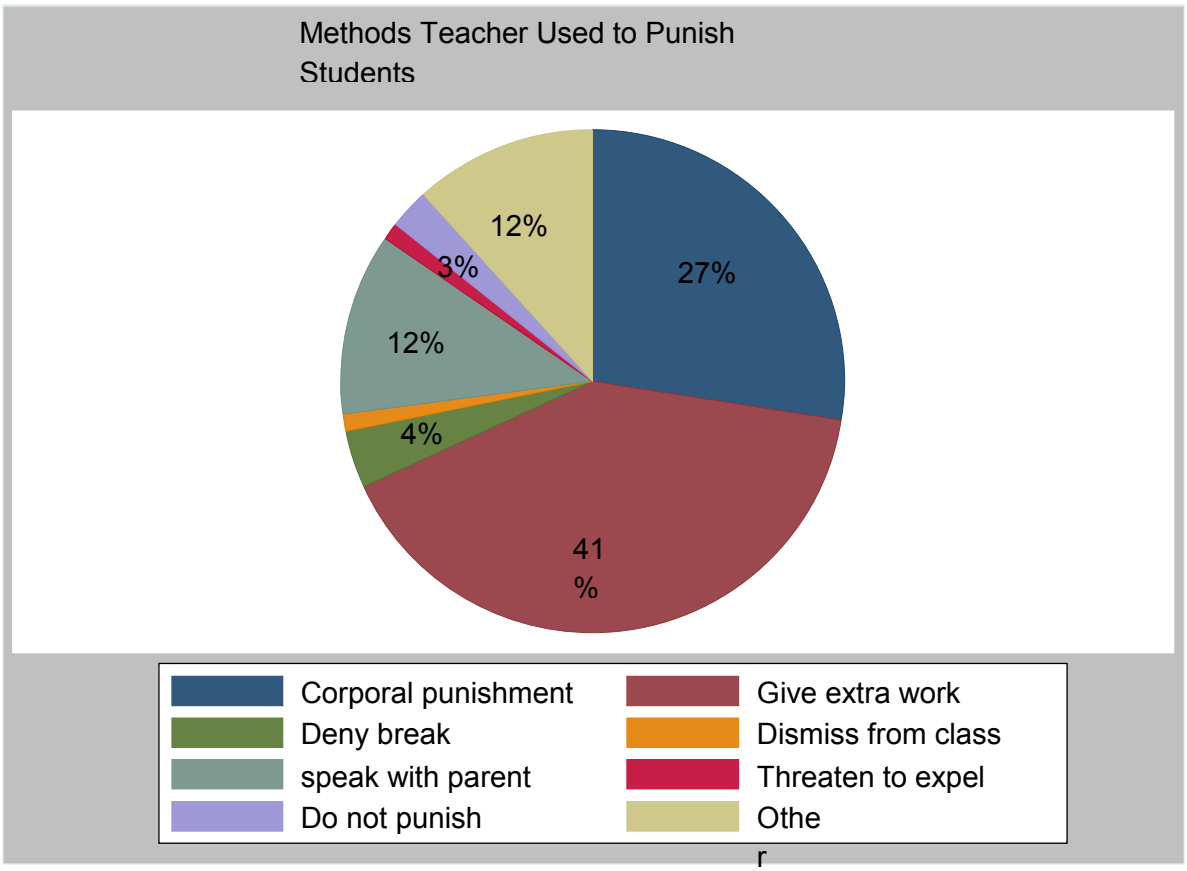


B. Corporal Punishment

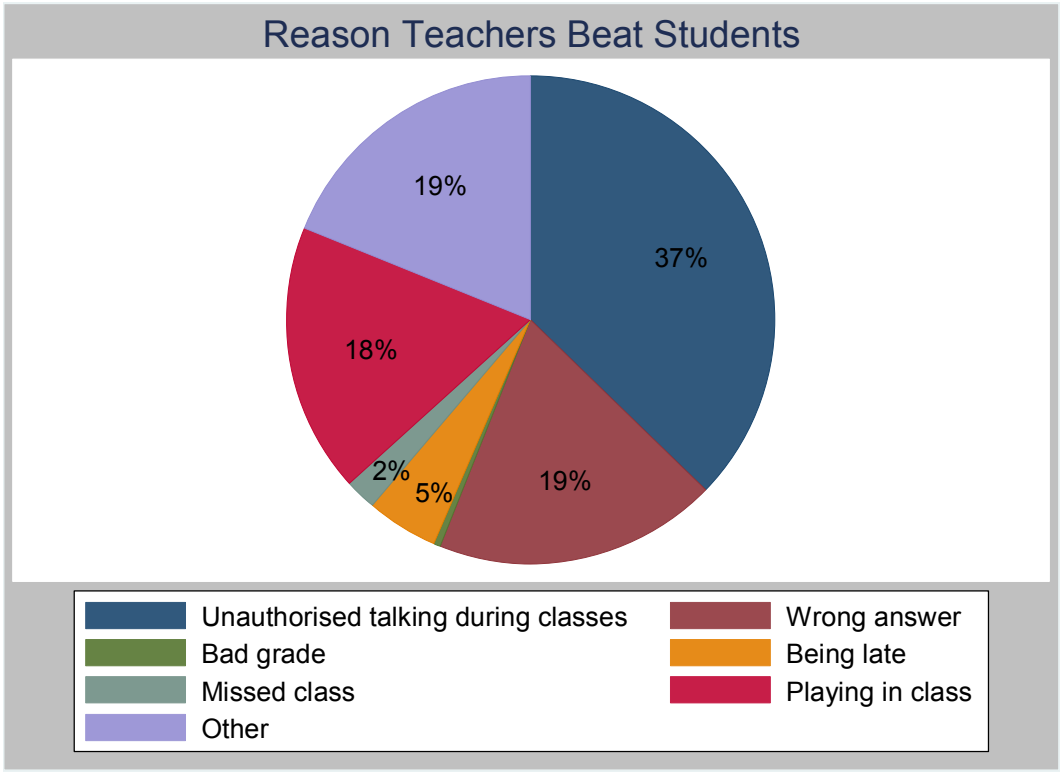
A greater percentage of schools in Region 3 use corporal punishment followed by schools in Region 6 than the other regions.

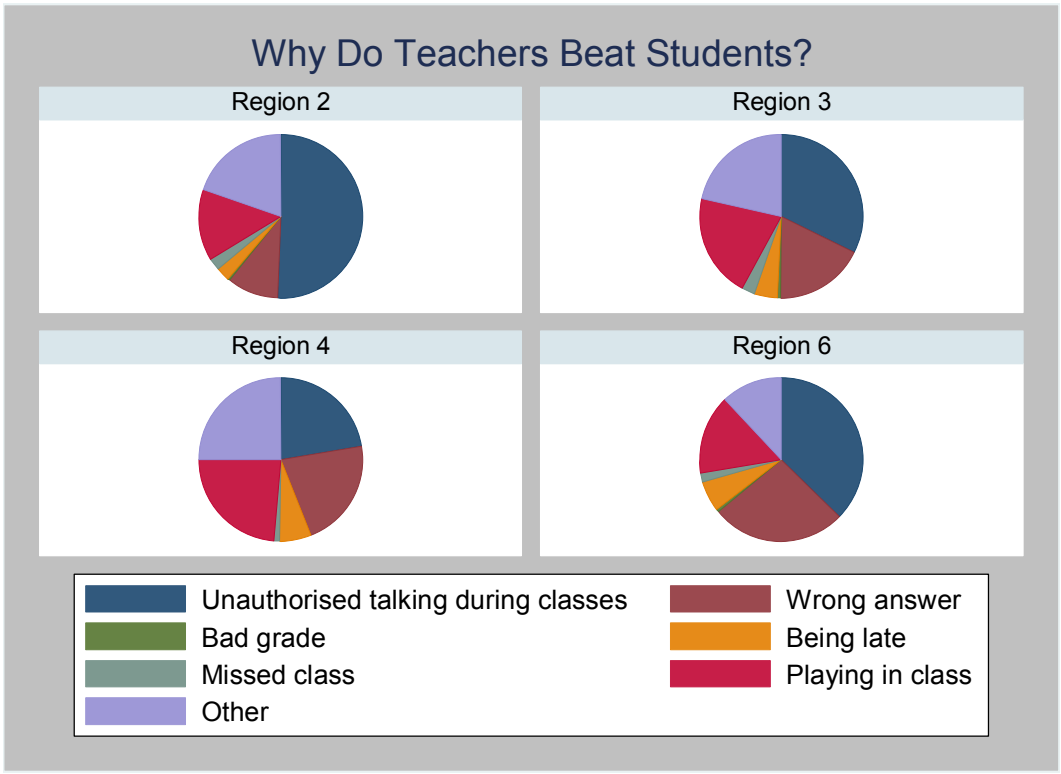


Forty-one percent of teachers reported punishing students by assigning extra work. 20% of teachers reported punishing students using corporal punishment.



Thirty-seven percent of students reported they were beaten for unauthorized talking during class. 19% of students interviewed reported they were beaten for giving the wrong answer to a question and 18% of students surveyed reported they were beaten for playing in class. In Region 2, more than half of students reported they were beaten for unauthorized talking during class. In Region 6, more students interviewed reported being beaten for giving the wrong answer to a question.


Reason Teachers Beat Students
19%
37%
18%
2%
5%
19%
Unauthorised talking during classes
Bad grade
Missed class
Other
Wrong answer
Being late
Playing in class


Why Do Teachers Beat Students?
Region 2
Region 3
Region 4
Region 6
Unauthorised talking during classes
Bad grade
Missed class
Other
Wrong answer
Being late
Playing in class

V. Student Characteristics and Performance

A. Socioeconomic Characteristics of Students

Students were surveyed in third and fifth grade. Students were randomly selected from among the students present on the day that the enumerators arrived at the school. The average age of third graders is 10 years and 12 years for fifth graders. There were slightly more girls than boys in those grades: 50.4% versus 49.7%.

	Obs	Average	Std Dev	Minimum age observed	Maximum age observed
Age Grade 3	1355	10	1.70	6	20
Age Grade 5	1333	12	1.76	7	20

The students surveyed had a variety of assets in their households. Sixty percent of the students surveyed lived in homes with cement floors, 78% in homes with a corrugated roof, and 61% in homes with mud or mud brick walls. Half of the students live in homes with improved latrines. Only 20% of the students reported having electricity. Ninety percent of students had a radio at home, 82% of households owned a telephone, and 69% owned a bicycle.

Asset	Number of Students Interviewed	% of Households with This Asset
Cement floor	2,685	59
Corrugated roof	2,683	78
Mud/mud bricks walls	2,684	61
Improved latrine	2,686	51
Electricity	2689	20
Radio	2684	90
Telephone	2687	83
Bicycle	2690	69

B. Student Test Performance

Two sub-samples of students in third and fifth grade was tested in literacy and in arithmetic skills. A large sub-sample (as many as could fit comfortably into one classroom) was tested in reading and arithmetic skills with a written test instrument. A significantly smaller sub-sample, approximately 5 children per grade, was tested in reading skills using an orally administered test instrument, which yields more nuanced results but requires greater resources to administer as it must be one-on-one.

1. Oral Test of Literacy and Listening Comprehension

In the first component of the test, they were shown a page of letters and asked to read as many of them aloud as they could in one minute's time. (A sample page of letters is available in Appendix 3.) The enumerator verified the number of letters that a student was able to read correctly. In the second component of the test, students were given a passage from a primary school reader and were asked to read as much of the passage as possible. The enumerator again counted the number of words the student read correctly. Students were then asked a few questions about the passage to gauge comprehension of what they had read. (The passage and comprehension questions are in Appendix 4.) Finally, students listened to a short passage and were asked a few questions to measure listening comprehension. (This passage and questions are available in Appendix 5.)

As would be expected, the fifth grade students performed better than third grade students on every test. Less expected but also consistent result, male students performed better than female students in both grades and on each test.

Letter Name Recognition

The average percent of correct letters read per minute was 39% for the third grade students and 58% for the fifth grade students. In the third grade, male students performed 7.8% better than the female students. In the fifth grade, male students performed 8% better than the female students.

Letters Read Per Minute: Percent Correct			
	Obs	**Mean**	**Std Dev**
Grade 3	1354	**38.7**	24.5
Male	695	**42.5**	25.2
Female	659	**34.7**	23.0
Grade 5	1327	**58.1**	24.4
Male	636	**62.3**	23.8

Female	691	**54.3**	24.4

Passage Reading

For the third grade students, the average percent of correct words read per minute was 18%. For the fifth grade students, the average percent of correct words read per minute answers was 44%. In the third grade, male students performed 5.4 % better than female students. In the fifth grade, male students performed 8.7% better than female students.

Words Read Per Minute % Correct			
Group	**Obs**	**Mean**	**Std Dev**
Grade 3	1342	**17.6**	27.9
Male	690	**20.2**	30.1
Female	652	**14.8**	25.1
Grade 5	1324	**44.1**	38.2
Male	636	**48.6**	39.0
Female	688	**39.9**	37.1

The average percent of correct reading passage comprehension answers was 40% for the third grade students. For the fifth grade students, the average percent of correct answers was 55%. In the third grade, male students performed 3% better than the female students. In the fifth grade, male students performed 5.7% better than the female students.

Comprehension Questions % Correct			
Group	**Obs**	**Mean**	**Std Dev**
Grade 3	678	**39.9**	29.8
Male	374	**41.3**	30.2
Female	304	**38.2**	29.2
Grade 5	1090	**54.6**	29.6
Male	539	**57.5**	28.4
Female	551	**51.8**	30.5

Listening Comprehension

For third grade students, the average percent of correct listening comprehension answers was 60% and 77% for the fifth grade students. The third grade male students performed 5.8% better than the female students did and the fifth grade male students performed 6.5% better than the female students.

Listening Comprehension % Correct			
Group	**Obs**	**Mean**	**Std Dev**
Grade 3	1346	**59.7**	36.1
Male	692	**62.5**	35.5
Female	654	**56.7**	36.5
Grade 5	1329	**74.0**	29.9
Male	637	**77.4**	28.2
Female	692	**70.9**	31.2

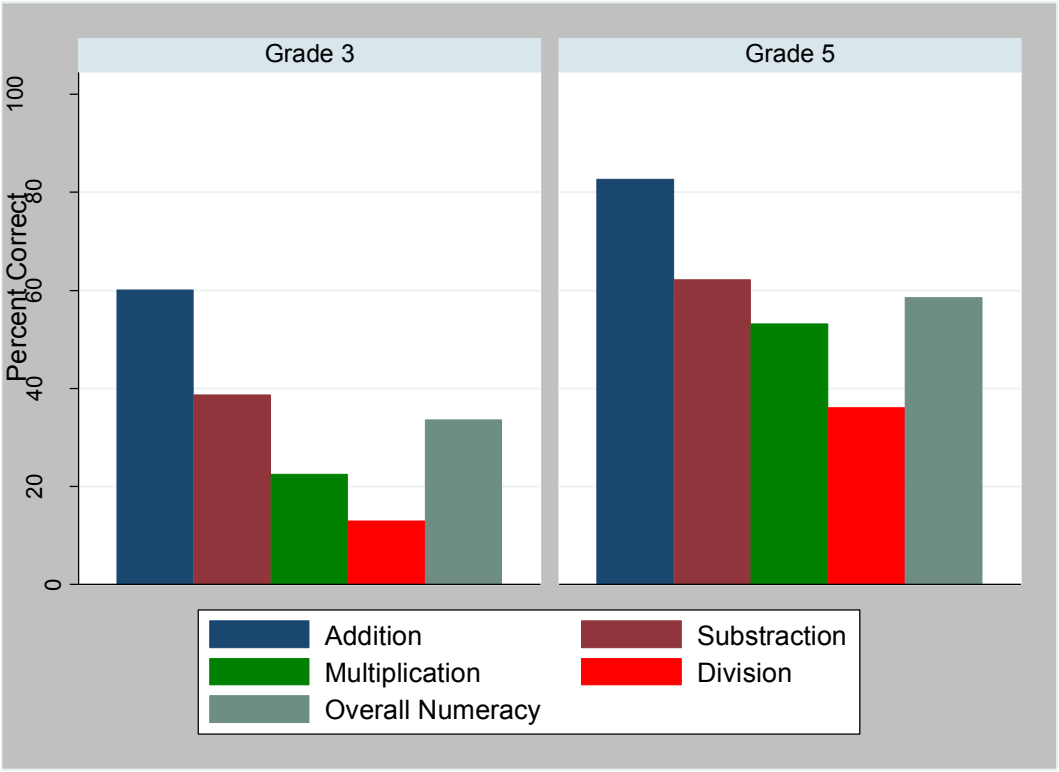
2. Written Numeracy & Literacy

Students also took an exam on written numeracy skills which ranged from the most basic of problems (2+3) to the more challenging (203 ÷ 3). For third grade students, the average percent of correct answers was 33%. The minimum percent correct was 0% and the maximum percent correct was 94%. For fifth grade students, the average percent of correct answers was 56%. The minimum percent correct was 0% and the maximum percent correct was 97%. In both grades males performed above the average. In the third grade, male students performed 4.6% better than the female students did. In the fifth grade, male students performed 5.4% better than the female students did.

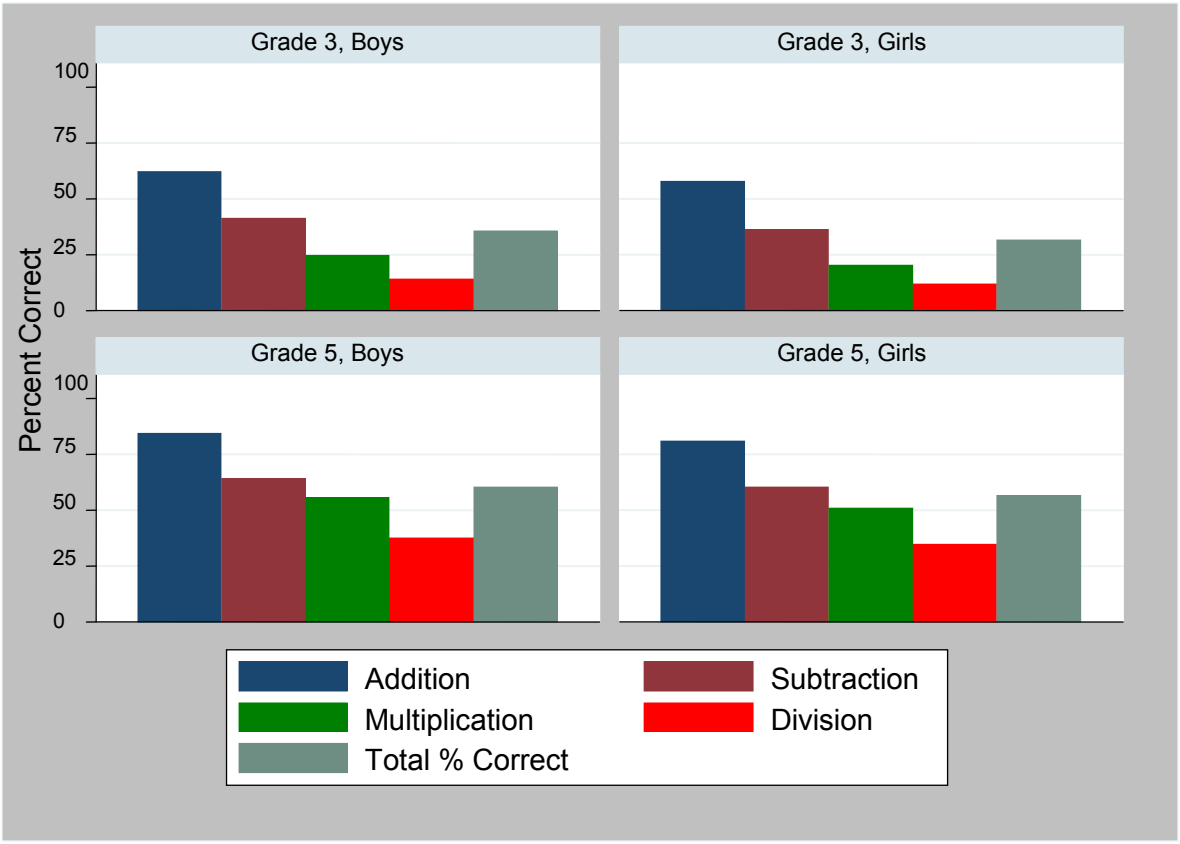
Numeracy % Correct			
Group	**Obs**	**Mean**	**Std Dev**
Grade 3	1347	**33.1**	21.6
Male	685	**35.3**	21.9
Female	662	**30.7**	21.1
Grade 5	1332	**55.7**	23.0
Male	645	**58.5**	21.6
Female	687	**53.1**	23.9

The following graphs demonstrate the breakdown by grade and gender of performance of different arithmetic competencies. Within grades students performed best on the basic arithmetic skills, math and subtraction. Between gender male students performed slightly better than female students on the basic arithmetic skills.

Percent of Written Numeracy Questions Correct by Grade



Percent of Written Numeracy Questions Correct by Gender



Written Literacy

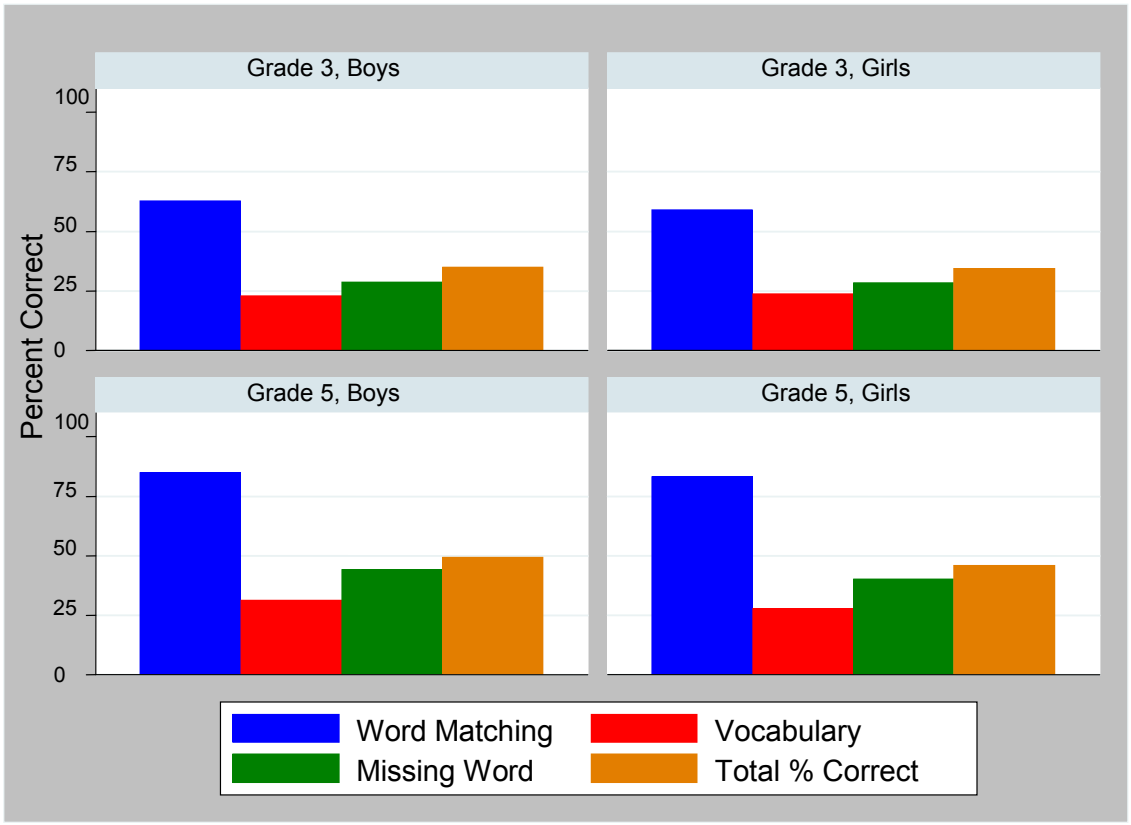
Finally, students took a multiple choice test designed to test literacy skills. The test comprised three sections: Word Match, Vocabulary, and Missing Word. In Word Match, for a given word, students had to select which of four choices was the same word. In other words, they were presented with the word "be" and had to select which of these choices is the same word: de, be, eb, ve. This is more a pre-literacy skill than a literacy skill per se. In Vocabulary, students read a simple sentence and selected which of four choices was the closest synonym for an underlined word in the sentence. And in Missing Word, students read a simple sentence with one word removed and selected which of four choices was the best fit to fill the blank space.

For third grade students, the average percent of correct answers was 35%. The minimum percent correct was 0% and the maximum percent correct was 89%. For fifth grade students, the average percent of correct answers was 49%. The minimum percent correct was 0% and the maximum percent correct was 98%. In both grades males performed above the average. In the third grade, male students performed 1.2% better than the female students did. In the fifth grade, male students performed 4% better than the female students did.

Literacy % Correct			
Group	**Obs**	**Mean**	**Std Dev**
Grade 3	1347	**34.8**	12.7
Male	685	**35.4**	13.2
Female	662	**34.2**	12.2
Grade 5	1332	**49.3**	17.3
Male	645	**51.4**	17.5
Female	687	**47.4**	16.8

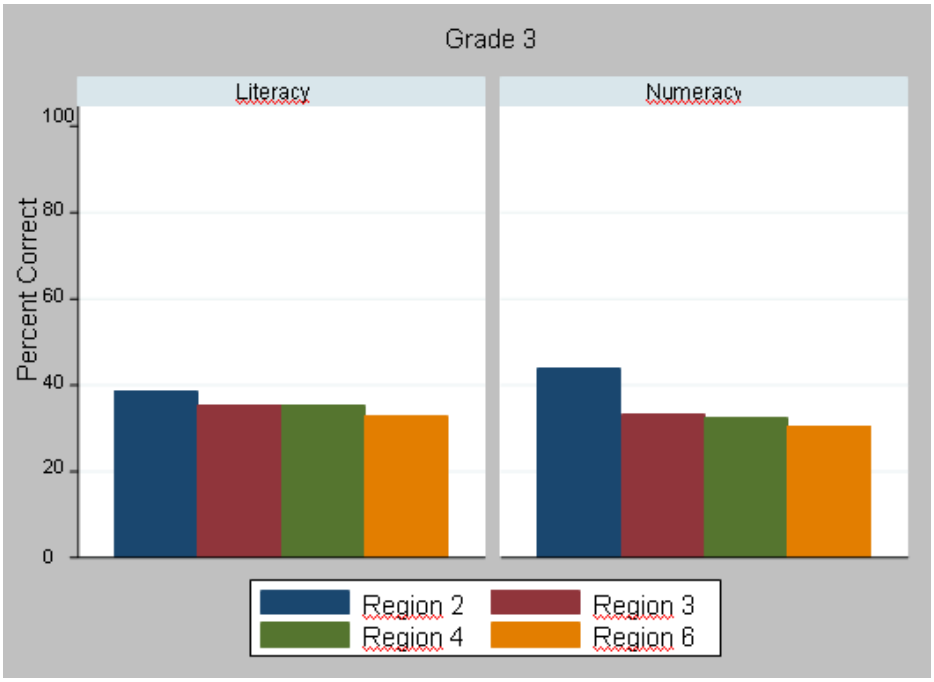
In both grades student performed best on the word match section. Male students performed slightly better than female students on the various sections.

Percent of Written Literacy Questions Correct by Gender

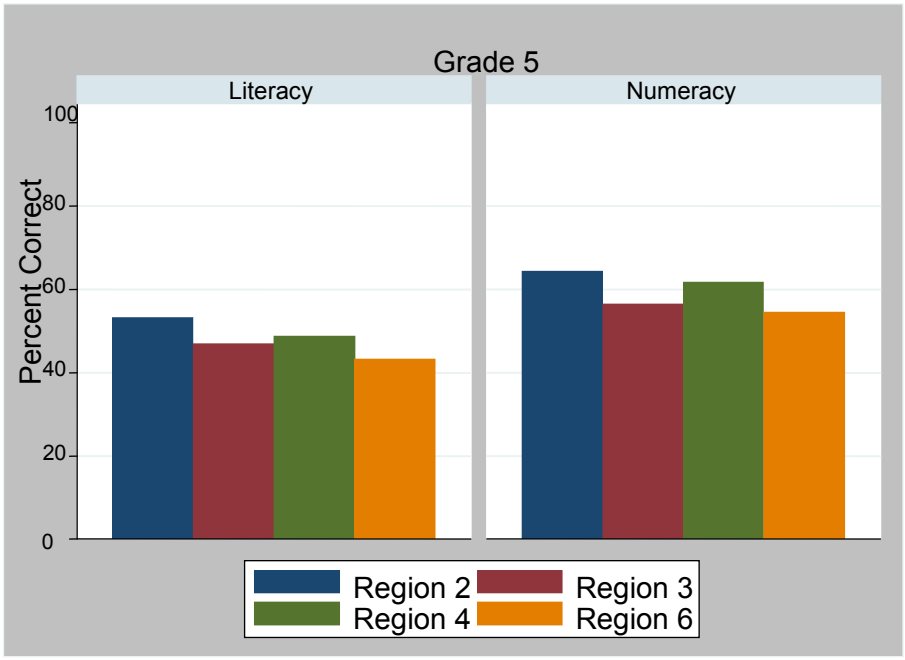


In grades three and five, students in Region 2 performed the on both the literacy and numeracy test, although cross-regional differences were not stark.

Percent of Literacy and Numeracy Questions Correct for Students in Grade 3 by Region



Percent of Literacy and Numeracy Questions Correct for Students in Grade 5 by Region



VI. Impact Evaluation Sampling

The targeted population consists of 273 lower basic schools in Regions 2, 3, 4, and 6. The distribution of the schools by region included in this analysis is detailed in the table below:

Region	Number of Schools	% of Sample
Region 2 (Western Division)	77	28.4%
Region 3 (North Bank Division)	73	26.9%
Region 4 (Lower River Division)	48	17.7%
Region 6 (Upper River Division)	73	26.9%
Total	**273**	**100%**

A. Sampling Methodology

Randomization was done in groups of two to three schools in close proximity. The sample for the baseline school survey includes 88 schools which will receive the WSD treatment, 94 schools which will receive the school grant treatment, and 89 schools which will not receive any treatment. The distribution of the schools by treatment received is detailed in the table below:

Treatment Received	Number of Schools	% of Sample
Whole School Development	88	32.5%
School Grant	94	34.7%
Control	89	32.8%
Total	**273**	**100%**

A questionnaire was administered to the head teacher of each school. The enumerators were able to find the head teachers at school only 57% of the time. The main reason is because the period of the survey partially overlapped with the grade nine examination and the head teachers were away on duty for that examination. The head teacher survey gathered information on school facilities, finances, management, and community participation.

From each school two classrooms were randomly selected to observe and the teacher interviewed, with 175 classrooms in the WSD treatment group, 180 classrooms in the school grant treatment group, and 173 classrooms in the control group. The enumerator conducted a 15-minute lesson observation in each classroom and recorded teaching activities, classroom environment, and student activities. The teacher questionnaire collected information on lesson preparedness, teacher attendance, and instructional time.

In each school, enumerators administered a numeracy and literacy test to a randomly selected sample of 20 third grade students 20 fifth grade students. The numeracy test consisted of 32 questions on basic arithmetic. The literacy test consisted of 55 questions covering word match, vocabulary, and sentence completion. Since the test was administered by enumerators with no pre-existing relationship to the school, there was no manipulation of results by teachers and administrators. From the 40 students that completed the numeracy and literacy test, 10 students were randomly selected to complete a questionnaire, producing a total sample of 2,676 students. Data were gathered from 867 students in the WSD treatment group, 941 students in the school grant treatment group, and 868 students in the control group. The student questionnaire gathered information on student demographics, household characteristics, and past academic performance.

B. Comparison across Impact Evaluation Groups

In an impact evaluation, the goal of employing random assignment to allocate participation in the program is achieve a situation in which – in advance of the program – each of the groups has similar characteristics. If the treatment and control groups are balanced at the baseline, then differences in teaching activities and students' learning outcomes between the groups in the follow up survey can be attributed to the WSD and schools grant programs, rather than to some pre-existing difference between the groups. Using the data from the baseline survey, we have examined basic characteristics across the difference groups, as demonstrated below. A more detailed list of indicators and their means across groups are included in Appendix 6.

The baseline survey explored a host of school characteristics, as described in earlier sections. This section shows, across a few select school characteristics, how schools in each impact evaluation group compare. Balance is not perfect across all characteristics; indeed, given the array of characteristics that describe each school, it is statistically unlikely that three groups would be perfectly identical. However, we observe no systematic differences across the groups. For example, the condition of the main school building is comparable across the different groups, at 91%, 89%, and 88%. However, WSD schools – on average – have close to five school buildings whereas the other two groups have closer to four. (This difference is mildly statistically significant.) While that might indicate greater affluence among WSD schools, we find that WSD schools are not exceptionally high in their access to a tap for drinking water (24% of WSD schools versus 20% of grant-only schools and 33% of control schools) neither in their access to electricity from the national grid (4.6% versus 4.3% and 6.7%). Across an array of other characteristics, there are no apparent systematic differences across the treatment groups.

Characteristic	*WSD group*	*Grant only group*	*Control group*
Nearest paved road (km)	5.8	6.8	7.0
Main school building in good condition	91%	89%	88%
Number of school buildings	4.8	4.1	4.1
School has grid electricity	4.6%	4.3%	6.7%
Schools has tap as main source of drinking water	24%	20%	33%

Likewise, for student characteristics the students are comparable across the groups. The below differences are not statistically significant with the exception of the fact that more students from the control group have tap water in their homes. However, those homes do not seem wealthier in any other indicators, suggesting that they are not systematically better off.

Characteristic	*WSD group*	*Grant only group*	*Control group*
Have repeated a grade	7.7	7.6	7.2
Corrugated roof material at home	78%	77%	78%
Tap water at home	32%	34%	45%
Electricity at home	7%	9%	9%
Father works in agriculture	49%	46%	48%

VII.Concluding Remarks

This report illustrates that there are both significant strengths and considerable scope for improvement in education quality and education service delivery in the Gambia. In an analysis of Grades 1 through 6 in 273 lower basic schools across four regions of the country, a mixed picture emerges with regard to school facilities, school management and student performance.

A large majority of the schools appear to have good infrastructure in terms of main buildings, provision of basic furniture, and provision of safe drinking water. However, many schools do not have school libraries, and a very small percentage of schools (8%) have access to electricity. The provision of sanitary facilities in schools in Region 2 is much lower than in other regions. In terms of school access, the

Gambia has made good progress. For a large section of the sample, distances from school were reasonable. Additionally, the average student teacher ratio across the regions was around 40:1. There is also considerable prevalence of double-shifting schools in the sample. However, this distribution is not uniform across regions. A brief analysis of the demographic characteristics of students shows that a majority of them come from households with access to basic infrastructure (like corrugated roofs, mud/mud and brick walls) and some consumer goods (like radio, television, bicycles). Hence, the question of the extent to which poor households access schooling needs further investigation. It was encouraging to note that the gender ratio among students is more or less balanced in the Gambia.

Schools in the sample demonstrate room for improvement in terms of school management. A majority of the schools either do not have financial record keeping or the knowledge of these records is not common among school management. A majority of the schools also do not have staff codes of conduct or clear school development plans. Funding for and role of Parent Teacher Associations are also unclear in most schools.

There is some scope for improvement in teacher absenteeism rates in the Gambia, although they are comparable to those found in other developing countries. The problem of student absenteeism was very pronounced in Region 4 and merits further investigation. A majority of schools in the sample appeared to be doing reasonably well in terms of actual classroom activities by teachers, however it was disturbing to note that in some regions corporal punishment is still being widely practiced despite being prohibited by the Ministry.

An important part of this report has been to analyze student performance in Grades 3 and 5 in the Gambia. These results are difficult to interpret definitively due to the lack of internationally benchmarked standards for learning outcomes. However, it was found that in terms of both literacy and numeracy, student performance is lower than expected in Grade 3 but improves substantially by Grade 5, indicating that students are learning. There was considerable heterogeneity in student performance within each grade, particularly in math skills. It is also important to note that in almost all types of tests girls under-performed compared to boys. This phenomenon needs to be explored further.

On the whole, the report presents a mixed picture of both school inputs and school outputs at the primary level in The Gambia. There are several indications that the education system in country has come a long way, particularly by developing country standards. However, it is also clear that there is a long way to go, particularly in improving school management and student learning outcomes. Whole School Development and provision of school grants are two potential instruments, and the current study will help to identify the ways in which they are most effective. Other programs, such as programs tailored specifically to improving reading, are also likely to be essential as the Gambia continues its efforts to strengthen educational outcomes for its children.

VIII. Appendixes

Appendix 1: Description of Survey Instruments

The instruments for the data collection are not included in the present reports. However, they are available upon request to the authors. The following is the list of the instruments and a brief description of each of them.

i) Head Teacher Questionnaire

The head teacher questionnaire is designed to collect broad characteristics of the schools as a whole. The main sections of this questionnaire include the examination of the school facilities (main buildings, sanitary, water provision etc), enrollment and staffs, school management (leadership, involvement of the local community, records keeping etc.). The main respondent to this questionnaire is the head teacher. However, in the event of his absence, the deputy head teacher or a senior teacher answers the questions.

ii) Classroom Observation

The classroom observation is intended to collect valuable information about the classroom activities and teaching practices. In each of the two classrooms randomly selected per school, the enumerator seats in the back of the class for 15 to 20 minutes and takes note of the teaching activities such as the students participation, teacher control over the class, etc. At the end of the observation, the teacher is asked a few questions about the school and his or her teaching such as lesson plans and lesson notes.

iii) Written Numeracy and Literacy Test

The written numeracy and literacy test is made by experts in the field of testing to assess the overall performance of the students in classes 3 and 5. The test has 4 sections:

- The math section with 32 basic arithmetic questions (addition, subtraction, multiplication, division)
- A word match section with 13 questions where students are given a word (20 questions in total) and they are to identify that word among a list of 4 words

- A vocabulary section where student are given a sentence with an underlined word and they are to identify the synonym of the underlined word among a list of 4 word

- A missing word section (11 questions) where a word is removed from a sentence and the students are to find the correct word that fits the blank among a list of 4 words.

iv) Pupils' Questionnaire & Oral Literacy Test

The pupils' questionnaire is designed to collect some background information about the students and to give then an oral literacy test. This questionnaire collects information about the students' socio-demographic information, performance and progress, and welfare. In addition, the student are given an oral literacy test that has the following components:

- Letter name knowledge: The student are given a panel of 100 letters and are asked to read as many as they could in 60 seconds.

- Reading: The students are to read a small passage of 60 words and then they are asked a few questions about the content of the passage.

- Listening and comprehension: Here the enumerator reads a small passage aloud and then asks a few questions about the passage to the students.

Appendix 2: Sampling and Survey Procedures

The initial sample was made of all the 276 public schools and government aided/supported schools in regions 2, 3, 4, and 6. Two regions were excluded:

- Region 1 was excluded on the basis that it was too urban compare to the others.
- Region 5 was excluded because of its prior exposition to a variant of the WSD.

Of the 276 schools, 3 schools were excluded from the samples because they were new schools and had only grade 1 and 2 or were close during the time of the survey. Of the 273 remaining schools 90 schools were assigned to the WSD treatment, 94 schools to the grant only treatment, and 89 schools served as control group.

The schools were clustered in groups of 2 or 3 schools on the basis of proximity for the randomization. This was done mainly to limit contamination while allowing useful exchange/cooperation between/among close schools. The randomization was further stratified by the size of the schools and their hardship [1] status.

The following procedures were observed at the school level:

- Head teacher questionnaire

- Responded by the head teacher of the school
- The deputy head teacher can respond only if the head teacher is not present.
- A senior teacher is allowed to respond in case either deputy or head teacher are not present.

- Selection of classes for the classroom visit

- The enumerator gets the list of all the classes and selects two classrooms other than the ones participating in the written test.
- 528 classes were visited, 175 are WSD; 180 are grant only; and 173 are control schools.

- Selection of students for the written test

[1] Some schools receive hardship grants from the government on the basis of their accessibility, which defines their hardship status.

One grade 3 class and one grade 5 class were selected randomly in each school. In each of the classes, 20 students were selected randomly. The gender parity was observed throughout. In total 8959 students were tested and about a third were selected in each treatment group.

- Selection of students for the pupils' questionnaire

- 10 students (5 from grade 3 and 5 from grade 5) are randomly selected among the 40 who took the written test to respond to the questionnaire.
- In total 2696 students were interviewed of which, 879 are WSD; 920 are grant only; and 897 are from the control schools.

Appendix 3: Letter Recognition Testing Instrument

V	i	h	g	S	y	Z	W	L	N	/10
i	K	T	D	K	T	q	d	z	w	/20
h	w	z	m	U	r	j	G	X	u	/30
g	R	B	Q	i	f	J	Z	s	r	/40
S	n	C	B	p	Y	F	c	a	E	/50
y	s	Q	P	M	v	O	t	n	P	/60
Z	A	e	x	f	F	h	u	A	t	/70
W	G	H	b	S	i	g	m	i	L	/80
L	i	o	O	X	N	E	Y	p	x	/90
N	k	c	D	d	y	b	j	R	v	/100

Appendix 4: Oral Reading Test Instrument

Good Morning. My name is Lamin.	**6**
I am seven years old. My brother is Musa.	**15**
He is five years old. I also have a sister.	**25**
Her name is Binta. We live in Basse.	**33**
We go to school from Monday to Friday.	**41**
We like to read. My father is a farmer.	**50**
My mother sells fish at the market near the tree.	**60**

Where does Lamin live? [Basse] ☐Correct ☐Incorrect

What is Lamin's brother's name? [Musa] ☐Correct ☐Incorrect

How many children are in Lamin's family? [3] ☐Correct ☐Incorrect

What do Lamin and his brother and sister like to do? [To Read] ☐Correct ☐Incorrect

What does Lamin's mother do? [Sells fish/Sells at market/Sell] ☐Correct ☐Incorrect

Appendix 5: Listening Comprehension Instrument

On Saturday, Lamin and his family stay at home. Mother works in the compound. Father drinks tea with his friend. Binta reads a book. Lamin studies with his friend, Adama.

Does Lamin stay at home on Saturday?	[YES]	☐ Correct	☐ Incorrect
Does Binta play football?	[NO]	☐ Correct	☐ Incorrect
Does Lamin study OR does he play football?	[He studies]	☐ Correct	☐ Incorrect

Appendix 6: Detailed Comparison of Means across Impact Evaluation Groups

Variable	WSD Means (%)	Control Means (%)	p-value	School Grant Means (%)	Control Means (%)	p-value
Main school building in good condition	90.9	87.6	0.482	89.4	87.6	0.715
Number of school buildings	4.83	4.07	0.073	4.11	4.07	0.909
Number of classrooms	10.3	10.1	0.870	9.43	10.1	0.509
Number of working latrines	8.65	8.46	0.817	9.48	8.46	0.188
Tap main source of drinking water	23.9	32.6	0.198	20.2	32.6	0.057
School Collects Fees	78.4	88.8	0.063	84.0	88.8	0.353
School Keeps Record of Expenses	37.5	53.9	0.067	37.5	53.9	0.714
Record Teachers Attendance	96.6	97.8	0.641	98.9	97.8	0.529
Number of PTA Meetings	4.35	3.61	0.045	3.70	3.61	0.782
Number of Observations	**88**	**89**		**94**	**89**	
Teacher encourages the children to participate in class discussions and ask questions	72.3	71.7	0.903	73.9	71.7	0.651
Teacher address questions to the children during class	86.1	81.9	0.305	81.8	81.9	0.979
Children used textbooks during the class	52.9	55.0	0.694	62.8	55.0	0.141
Number of students enrolled	31.8	31.8	0.976	31.3	31.8	0.715
Number of Observations	**175**	**173**		**180**	**173**	
Corrugated roof material of house	77.8	78.3	0.128	77.3	78.3	0.385
Mud/mud brick walls of house	63.5	59.9	0.313	60.0	59.9	0.966
Improved latrine toilet facility household uses	52.0	50.0	0.087	49.6	50.0	0.749
Electricity in home	19.4	22.43	0.121	19.3	22.43	0.102

Radio in home	89.34	90.53	0.410	90.48	90.53	0.971
Fridge in home	7.39	9.26	0.159	8.53	9.26	0.586
Number of Observations	**867**	**868**		**941**	**868**	

Difference in Means Tests on Key Indicators between Treatment and Control Schools