REPORT

FINAL REPORT

Niger NECS Impact Evaluation Baseline Report

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Emilie Bagby

Alyson Burnett

Anca Dumitrescu

Kristine Johnston

Cara Orfield

Matt Sloan

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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

To address some of the education-related challenges facing Niger, the Government of Niger (GoN), the United States Agency for International Development (USAID), and the Millennium Challenge Corporation (MCC) developed the Niger Education and Community Strengthening (NECS) project. The project's goal is to improve educational opportunities available to children while strengthening links between local communities and state structures. Plan International and Aide et Action are implementing the project.[1] NECS involves a variety of activities targeted at raising learning outcomes, engaging the community, and encouraging families to enroll and keep their children in school. In the course of all these activities, NECS places special emphasis on girls and literacy.

MCC chose Mathematica to lead a rigorous evaluation to estimate the impact of the NECS project, which involved two rounds of clustered random assignment. This report is a baseline report for that evaluation, documenting baseline measures of village, household, and child characteristics in NECS-only and control villages. Analyses in this report also assess the extent to which villages in the two research groups are similar. At the same time, NECS is being implemented in villages that had previously received the IMAGINE project.[2] We do not present information in this baseline report about villages that are receiving both projects, because we would expect baseline differences (as documented in Bagby et al. 2014a); instead, we focus on the NECS-only and control group villages (or those that were not part of IMAGINE).[3]

In this baseline report, we find equivalence between NECS-only and control group villages on many but not all measures. We did not find any differences between the study groups in baseline village characteristics, but we did find some small differences in baseline household-level characteristics. We also find statistically significant differences in baseline child-level enrollment and absenteeism between study groups. On the measures in which we document significant differences, control group villages tend to be better off than NECS-only villages. We did not find differences in learning as measured through test scores in French, local-language, and mathematics assessments.

We explore potential reasons for the differences we observe in the data, including early intervention effects, lack of adherence to random assignment, and chance. Findings suggest that differences are likely due to chance. These baseline data will therefore be used to inform the future impact evaluation analyses in two ways. First, their use will improve statistical precision. Second, they will allow us to control for initial differences between treatment and control groups to ensure that impacts found are a due to the NECS intervention activities and not due to initial differences.

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[1] VIE Kande ni Bayra, a local NGO, was involved early in the NECS project, but did not stay involved throughout.

[2] IMAGINE's official name is "IMprove the educAtion of Girls In NigEr."

[3] For long-term evaluation results of the IMAGINE program, see the IMAGINE report (Bagby et al. 2014a).

A. Overview of the NECS project

The NECS project is a follow-up to previous efforts to improve the educational outcomes of girls in Niger under a project called IMAGINE, implemented by Plan International, Aide et Action, and Volontaires pour L'Integration Educative (VIE) Kande Ni Bayra, in collaboration with USAID as part of MCC's three-year Threshold Program in Niger (NTP), which began in 2008. The IMAGINE project set out to construct 68 primary schools featuring high quality infrastructure and to implement a set of complementary interventions designed to increase girls' enrollment and completion rates. The NTP, including IMAGINE, was suspended in December 2009 because of a constitutional crisis in Niger. At the termination of project activities, after nine months of implementation, 62 of the 68 IMAGINE schools had been constructed; however, due to the short duration, the majority of the complementary activities had not been implemented. Mathematica Policy Research, an independent research contractor, conducted a rigorous evaluation of the IMAGINE project using data collected in February and March 2011, one year after the completion of school construction (Dumitrescu et al. 2011), and in October and November 2013, three years after the completion of school construction (Bagby et al. 2014a). One year after schools were constructed, small positive impacts on enrollment, driven by effects for girls, were found, with no impacts found on other child educational outcomes of interest. Three years after schools were constructed, impacts on enrollment more than doubled, and impacts were found for attendance, and math test scores. These impacts were larger for girls than for boys.

Following a return to democratic rule, the GoN and MCC agreed to introduce a second phase of NTP to implement the complementary activities interrupted under the original IMAGINE project. NTP was reinstated in 2011 and, with joint support from USAID, funded the NECS project in 2012 to include a revised set of complementary, quality-based activities. As of 2013, NECS activities were undergoing implementation in 150 of the 201 villages eligible to receive IMAGINE.

The NECS project activities, which are being implemented as a package in targeted villages, have been designed to address two strategic objectives: to increase *access to quality education* and to increase *student reading achievement*. Activities related to the first objective of *increasing access to quality education*, include borehole construction and maintenance and promotion of gender-equitable classrooms and student leadership activities. Furthermore, NECS is working to engage the community by supporting school management committees and developing a student mentoring program to foster a healthy school environment and motivate parents to keep their children in school. In addition, NECS is working to provide basic support for deworming and general hygiene campaigns within schools. Activities related to the second objective of *increasing student reading achievement* involve implementation of an ambitious early grade reading curriculum, which consists of training and supporting teachers in new methods of teaching reading in early grades as well as developing reading materials in four local languages. Implementation of the curriculum in grade 1 started during the 2013–2014 school year and will begin in grade 2 during the 2014–2015 school year. The project also aims to promote a culture of reading by establishing community support for reading.

B. Evaluation type, questions, methodology

1. Evaluation type

The evaluation design of NECS builds on the random assignment conducted for the IMAGINE evaluation. Specifically, the NECS evaluation design involves two rounds of clustered random assignment. The first round, conducted in 2008 for the IMAGINE evaluation, involved the random selection of IMAGINE treatment villages from a pool of potential recipient villages identified by Niger's Ministry of Primary Education (MEP) according to specified criteria (the remaining villages became the IMAGINE control villages). The criteria were that villages needed to have a high number of primary age girls not enrolled in school, a sufficient number of additional pre-primary age girls who could enter primary school over the life of the project, a large disparity between the girls' and boys' completion rates, evidence of community interest/engagement, no other donor interventions, a potential water source, and easy access (community is close to a road). All IMAGINE recipient villages are receiving the NECS intervention. The second round of random assignment, conducted in November 2012, involved the random selection of some of the IMAGINE control villages to receive NECS. For the impact evaluation of the NECS project, we will estimate the impacts of NECS as well as the impacts of the combination of NECS and IMAGINE on key educational outcomes.

2. Research questions

The impact evaluation will aim to answer the following research questions: (1) What is the impact of NECS intervention activities alone and of NECS in combination with IMAGINE on enrollment, attendance, and learning as measured by test scores? (2) Do impacts differ for girls and for boys? and (3) Do impacts differ for children from households with different asset levels? The evaluation will also conduct cost analyses to determine if the NECS project investment was justified from a cost perspective.

3. Methodology

To be compatible with the first round of random assignment for the IMAGINE evaluation, which involved assignment of villages within communes, Mathematica and the project's funders and implementing partners conducted the second round of random assignment of villages within communes as well. That is, we randomly selected a number of villages from the IMAGINE control villages in each commune to receive NECS (together with all the IMAGINE treatment villages in that commune).

With random assignment, the basic method for estimating impacts compares the mean outcomes of the various research groups at endline. We intend to use regression models to estimate impacts because doing so offers several advantages: the models provide greater analytic flexibility, account for design characteristics such as stratification by commune, improve statistical precision through the inclusion of control variables, and allow us to control for any observable differences between research groups at baseline. During endline data collection, we will investigate whether any additional education-related interventions are being implemented in both control and treatment villages.

The purpose of this report is to document baseline measures of village, household, and child characteristics, and identify if there are any differences between NECS-only and control group

villages. We use data that were collected prior to the roll-out of the full NECS intervention package of activities in 87 villages that are receiving only the NECS project and 54 control villages[4], although some NECS activities had already begun.[5] CIERPA, a professional data collection firm located in Niger, collected data in October and November 2013, approximately five years after random selection for IMAGINE took place and approximately one year after random assignment for NECS occurred. The main sources of data were a household survey of randomly selected families with school-age children; the results of mathematics and French tests administered to children living in households interviewed in the household survey; a village survey regarding the school administered to a village leader and direct observation of school infrastructure of the primary school in the village; and a village-level census used to select households with school-aged children.

C. Summary of descriptive statistics

1. Village characteristics

On all village-level characteristics measured, NECS-only and control group villages look broadly similar. We see similarities in terms of the total number of eligible households, the total number of people, the number of children (girls and boys), and the percentage of households with school-age children (Table ES.1). We see only one significant difference—in the percentage of household in the village with school-age boys—and it is small and only significant at the 10 percent level. On all measures related to the sample population and demographics, the two groups of villages again look broadly similar, and we found no statistically significant differences. Across all 14 comparisons, only 1 difference was found at the 10 percent level, which approximately what would be expected due to chance.

2. Household and child characteristics

Household and child characteristics are generally similar between the NECS-only and control group villages (Table ES.2). Although we do see some statistically significant differences, they are practically quite small in magnitude. The household size, assets, main source of water during the rainy season, and average number of meals per day are similar between NECS-only and control villages. We see some significant differences between the two types of villages in terms of the household dwelling construction materials; however, again, the practical differences are relatively small. Characteristics of the household head are similar between the two groups. Child-level characteristics, such as gender, age, and languages are generally similar. The only statistically significant difference for child-level characteristics is whether children speak Fulfulde, with treatment villages showing only a 3 percentage point higher likelihood (at a 10 percent level) than control villages.

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[4] The 62 villages that received IMAGINE and are also receiving NECS are not included in this report.

[5] The activities that had already begun included the training of inspectors, teachers, and community governance structures related to gender and student recruitment efforts. Activities related to early grade reading did not start until after the completion of data collection.

Table ES.1. Comparison between characteristics of NECS-only and control group villages

	NECS-only group	Control group
Village population and demographics		
Number of eligible households in village	115.8	105.7
Number of people in village	639.6	639.6
Number of children in village	291.4	289.2
Number of girls	139.6	144.7
Number of boys	151.7	144.5
Percent of households in village with:		
School-age children	71.8	71.8
School-age girls	58.9	57.7
School-age boys	59.3*	56.8
Sample population and demographics		
Number of households	37.9	38.0
Number of children	83.1	83.0
Number of girls	39.8	40.1
Number of boys	43.2	42.9
Percent of households with:		
Girls age 5 through 14	67.9	69.2
Boys age 5 through 14	72.3	71.0
Sample size:		
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey

Note: Differences between group means were tested by using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

Table ES.2. Comparison between household and child characteristics of NECS-only and control group villages

	NECS-only group	Control group
Household		
Household size	7.6	7.5
Floor constructed mainly of natural material (%)	96.5**	94.2
Floor constructed mainly of rudimentary material (%)	1.9	1.6
Floor constructed mainly of finished material (%)	1.4***	4.0
Assets (%)		
Radio	47.1	46.7
Telephone (mobile or fixed)	53.6	51.7
Watch	30.8	29.4
Bicycle	11.5	10.8
Animal-drawn cart	29.1	31.9
Cattle	35.4	34.3
Main source of water during rainy season (%)		
Piped water	18.5	15.5
Tube well or borehole	29.5	35.0
Covered well	20.4	21.2
Traditional well	28.0	27.5
Average number of meals per day	2.4	2.4
Household head		
Female (%)	9.1	8.0
Average age	45.5	45.0
Completed primary school (%)	20.7	22.2
Completed secondary school (%)	7.1	8.4
Literate (%)	29.6	30.4
Children		
Female (%)	47.9	48.3
Average age	8.8	8.7
Speaks Hausa (%)	60.4	60.0
Speaks Zarma (%)	23.0	22.6
Speaks Kanuri (%)	4.2	4.2
Speaks Tamasheq (%)	-1.8	2.1
Speaks Fulfulde (%)	14.0*	10.9
Sample size		
Number of villages	87	54
Number of households	3,342	2,049
Number of children	7,464	4,480

Source: NECS Wave 1 data collection, October and November 2013, household survey

Note: Differences between group means were tested by using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects, weights, and account for clustering within villages.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

3. Primary outcomes of interest

Significant differences exist in our primary measures of enrollment and attendance, but not in our primary measures of learning. For enrollment, children in control group villages are significantly more likely to report enrollment in school during the previous (SY 2012–2013) school year (58.8 compared to 53.8 percent, significant at the 5 percent level) (Table ES.3). Children in control group villages are less likely to report absences of more than two consecutive weeks during the last school year (48.3 compared to 52.0 percent, significant at the 10 percent level).

Table ES.3. Primary measures of child enrollment, attendance, and test scores

	NECS-only group	Control group
Child enrolled during previous school year (SY 2012-2013)	53.8**	58.8
Child absent more than 2 consecutive weeks during previous school year (SY 2012-2013)	52.0*	48.3
French score – normalized (standard deviations)	0.0	0.0
Local language score – normalized (standard deviations)	0.0	0.0
Sample size:		
Number of children	7,464	4,480
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey

Note: Differences between group means were tested by using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Children that were not enrolled in school during the previous school year were considered to be absent. Normalized scores take child age into account. Sample sizes shown are for the largest sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

D.   Baseline equivalence and internal validity

In this baseline report, we find equivalence between the NECS-only and control groups on many but not all measures. Some of the potential sources of the observed differences could arise from exposure to some NECS intervention activities, preexisting differences in households and children in the sample that resulted from the sample drawn at baseline, implementation not respecting random assignment, or uneven distribution of observable characteristics in random assignment. While it is not possible to be certain of the source of the observed differences, we do have evidence that chance is the most likely factor. We use data from 2011 that we had collected for the one-year evaluation of the IMAGINE project to compare NECS-only and control villages, and we find similar differences in child enrollment (Table ES.4).

Table ES.4. Comparison of measures of child enrollment, attendance, and test scores using the 2011 IMAGINE data

	NECS-only group	Control group
Enrollment according to household (%)	62.8**	66.6
Enrollment according to school records (%)	61.1**	65.5
Present at school on the day of data collection (school records) (%)	57.9**	61.7
French score – normalized (standard deviations)	0.0	0.0
Sample size:		
Number of children	6,997	4,202
Number of villages	76	46

Source: 2011 IMAGINE data.

Note: Differences between group means were tested by using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Normalized scores take child age into account. Sample sizes shown are for the full sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

In this report, we explore the possible explanations for these differences, and conclude that it is most likely due to chance at random assignment. Regardless of the cause, our impact analysis will control for any initial differences in the estimation of intervention impacts to ensure that the estimated impacts reflect the effect of the intervention and not the effect of any initial differences between research groups. We will use measures from baseline to control for these initial differences in the estimate of impacts of NECS activities.

I. INTRODUCTION

To address some of the education-related challenges facing Niger, the Government of Niger (GoN), the United States Agency for International Development (USAID), and the Millennium Challenge Corporation (MCC) developed the Niger Education and Community Strengthening (NECS) project. The project's goal is to improve educational opportunities available to children while strengthening links between local communities and state structures. The project involves a variety of activities targeted at raising learning outcomes, engaging the community, and encouraging families to enroll and keep their children in school. In the course of all these activities, NECS places a special emphasis on girls and literacy.

The NECS project is a follow-up to previous efforts to improve the educational outcomes of girls in Niger under a project called IMAGINE,[6] implemented by Plan International and its implementing partners Aide et Action and Volontaires pour L'Integration Educative (VIE) Kande Ni Bayra, in collaboration with USAID as part of MCC's three-year Threshold Program in Niger (NTP), which began in 2008.[7] The IMAGINE project set out to construct 68 primary schools featuring high quality infrastructure and to implement a set of complementary interventions designed to increase girls' enrollment and completion rates. The complementary interventions were intended to include the design and dissemination of training modules for teachers, the promotion of extracurricular activities, the provision of teacher incentive awards, and the implementation of a mobilization campaign in support of girls' education. The NTP, including IMAGINE, was suspended in December 2009 because of a constitutional crisis in Niger. At the termination of project activities after nine months of implementation, 62 of the 68 IMAGINE schools had been constructed; however, due to the short duration, the majority of the complementary activities had not been implemented. Mathematica Policy Research conducted a rigorous evaluation of the IMAGINE project using data collected in February and March 2011, one year after the completion of school construction (Dumitrescu et al. 2011), and another using data from October and November 2013, three years after completion of the school construction (Bagby et al. 2014a). One year after schools were constructed, small positive impacts on enrollment, driven by effects for girls, were found, with no impacts on other child educational outcomes of interest.[8] However, three years after schools were constructed, impacts on enrollment more than doubled, and impacts were found for attendance, and math test scores. These impacts were larger for girls than for boys.

Following a return to democratic rule, the GoN and MCC agreed to introduce a second phase of NTP to implement the complementary activities interrupted under the original IMAGINE project. NTP was reinstated in 2011 and, with joint support from USAID, funded the NECS project in 2012 to include a revised set of complementary, quality-based activities. As of 2013, NECS activities are undergoing implementation in 150 of the 201 villages that were eligible to receive IMAGINE.

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[6] IMAGINE's official name is "IMprove the educAtion of Girls In NigEr."

[7] VIE Kande ni Bayra, a local NGO, was involved early in the NECS project, but did not stay involved throughout.

[8] There were no statistically significant effects of the project for boys.

The NECS project activities, which are being implemented as a package in targeted villages, have been designed to address two strategic objectives: increase *access to quality education* and increase *student reading achievement*. Activities related to the first objective to increase *access to quality education* include borehole construction and maintenance, support for de-worming and general hygiene campaigns by mobilizing school governance structures to promote these initiatives, and promotion of gender-equitable classrooms and student leadership activities. Furthermore, NECS is working to engage the community by supporting school management committees and developing a student mentoring program to foster a healthy school environment and motivate parents to keep their children in school. Activities related to the second objective of *increasing student reading achievement* involve implementation of an ambitious early grade reading curriculum, which consists of training and supporting teachers in new methods of teaching reading in early grades as well as developing reading materials in four local languages. Implementation of this curriculum in 1st grade started during the 2013-2014 school year, and will begin in 2nd grade during the 2014-2015 school year. The project also aims to promote a culture of reading by establishing community support for reading and an adult literacy program.

MCC chose Mathematica to lead a rigorous evaluation to estimate the impact of the NECS project. The evaluation design builds on the random assignment conducted for the IMAGINE evaluation. Specifically, the NECS evaluation design involves two rounds of clustered random assignment. The first round, conducted in 2008 for the IMAGINE evaluation, involved the random selection of IMAGINE treatment villages from a pool of potential recipient villages identified by Niger's Ministry of Primary Education (MEP) according to specified criteria (the remaining villages became the IMAGINE control villages).[9] The criteria were that villages needed to have a high number of primary age girls not enrolled in school, a sufficient number of additional pre-primary age girls who could enter primary school over the life of the project, a large disparity between the girls' and boys' completion rates, evidence of community interest/engagement, no other donor interventions, a potential water source, and easy access (community is close to a road). All IMAGINE recipient villages are receiving the NECS intervention. The second round of random assignment, conducted in November 2012, involved the random selection of 88 of the IMAGINE control villages that would receive NECS. For the impact evaluation of the NECS project, we will estimate the impacts of NECS as well as the impacts of the combination of NECS and IMAGINE on key educational outcomes. We will conduct two rounds of data collection across all villages: a first wave before full implementation of the NECS activities and an endline after implementation (henceforth referred to as "Wave 1" and "Wave 2").[10]

This report is a baseline report for the NECS evaluation.[11] Given that the IMAGINE intervention has already occurred, the Wave 1 data do not function as baseline data for the NECS plus IMAGINE research group; instead, they permit us to check for equivalence between the NECS-only and NECS control groups and provide early information about the study population. In addition, because reading is an outcome of particular importance related to this intervention, we incorporate two independent analyses of the reading assessment data in the appendices of this report. In the first

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[9] See Chapter III for further details.

[10] The timing of endline data collection remains to be determined.

[11] For long-term evaluation results of the IMAGINE program, see the IMAGINE report (Bagby et al. 2014a).

(Appendix E), we use item response theory to investigate the relationship between the tests in the different local languages. In the second (Appendix F), we describe reading skills in detail for children that had been enrolled in first or second grade during the prior school year.[12]

A. Primary schooling context in Niger

School enrollment and completion rates in Niger are among the lowest in the world, despite a concerted government effort that has produced substantial gains in primary education in the past decade. Niger experienced an increase in gross enrollment from 32 percent in 2000 to 71 percent in 2010; however, the country's education success is tempered by a persistent gender gap in enrollment and school completion rates (Table I.1).[13] During the same period, gross enrollment for males increased from 38 to 77 percent, whereas female enrollment rose from 26 to 65 percent. More telling, the completion rate of primary education in 2012 was only 49 percent, with a completion rate of 55 percent for boys and 43 percent for girls. Even with improvements, Niger's primary school enrollment rate is one of the lowest in West Africa (Table I.2). In addition, the national figures do not highlight the large disparities between rural and urban areas.

Table I.1. Evolution of primary education indicators: Niger 1975–2012

| Academic year | Gross enrollment ratio— primary education (percent) | | | Completion of primary education (percent) | | |
| | Primary | | | Gross intake ratio to the last grade of primary | | |
	All	Males	Females	All	Males	Females
2012	71	77	65	49	55	43
2005	49	57	41	29	35	23
2000	32	38	26	18	21	14
1995	28	34	21	13	17	10
1990	26	32	19	16	20	11
1985	22	28	16	19	25	14
1980	22	27	16	14	16	11
1975	15	19	11	7	9	5

Source: UNESCO Institute for Statistics, 2014.

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[12] This analysis is similar to that which we presented in the NECS EGRA Descriptive Study Round 1 report (Bagby et al. 2014b).

[13] The gross enrollment rate is the total enrollment in a specific level of education, regardless of age, expressed as a percentage of the eligible official age group corresponding to the same level of education in a given school year. For primary education, it is calculated by expressing the number of students enrolled in primary levels of education, regardless of age, as a percentage of the actual, official primary school-age population. As a result, the proportion may exceed 100 percent when more students are enrolled in a primary school than there are children in this age group because of early or late entrants or repeaters.

Table I.2. Gross enrollment rates in primary education: West Africa 2012

Country	2012 gross enrollment rate (percent)
Benin	123
Burkina Faso	85
Chad	95
Mali	88
Niger	**71**

Source: UNESCO Institute for Statistics, 2014.

Before implementation of the IMAGINE project, under a program called PDDE (Programme Décennal pour le Développement de l'Éducation), the GoN had already launched several initiatives aimed at both improving access to schooling and promoting girls' education. In particular, Niger undertook widespread school construction. Between 2002 and 2008 (when NTP began), the number of schools (primary and secondary combined) doubled, increasing from 5,975 to 10,162 (Figure I.1). School construction continued to increase after 2008, and the number of schools rose to 14,631 in 2012. During the same period, the percentage of classrooms constructed of durable material and in good repair remained relatively stable near 50 percent (Figure I.2). The number of students per textbook decreased significantly in this period as well. For reading, there were 2.5 students per textbook in 2003–2004 compared to 1.5 students per textbook in 2011–2012. For mathematics, there were 3 students per textbook in 2003–2004 compared to 1.6 students per textbook in 2011–2012 (Ministere de l'Education Nationale, Annuaire 2011–2012).

Figure I.1. Number of schools in Niger, 2002–2012
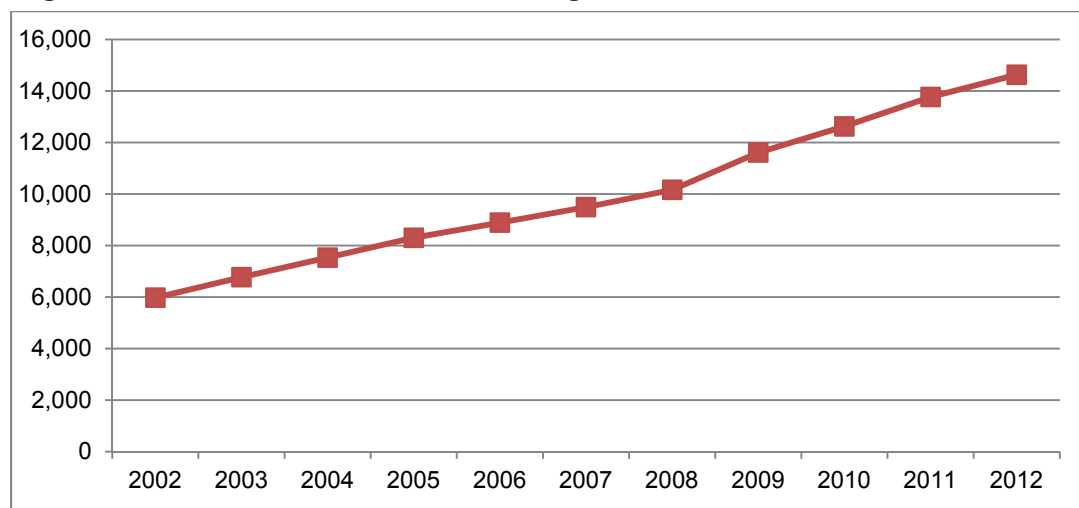
Source: Ministere de l'Education Nationale, Annuaire 2011–2012.

Figure I.2. Average percent of existing classrooms constructed of durable material in Niger, 2002–2012
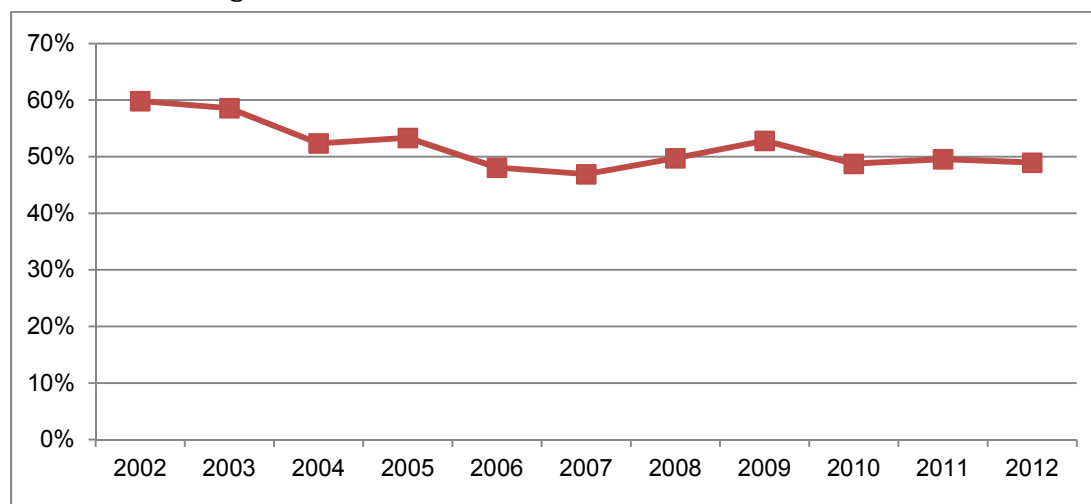
Source: Ministere de l'Education Nationale, Annuaire 2011–2012.

Households in Niger may enroll their children in primary school at no charge, although in practice they are often asked to support some school-related expenditures in addition to the opportunity costs of their children's time. Primary education lasts for six years and leads to the Certificat de fin d'Etudes du premier Degré (CFEPD). School is officially compulsory between the ages of 7 and 12. Due to various factors, including an inadequate number of schools and resistance by parents, the GoN has not enforced the law, especially in rural areas.

B. Overview of the impacts of IMAGINE

The impact evaluation of IMAGINE was designed to take into account and control for improvements in Niger's general environment for education. Accordingly, any impacts associated with the project reflect the net change in communities compared to what would have happened in the absence of IMAGINE. The initial impact evaluation, conducted one year after construction of the new schools, found no effect on the availability of or number of schools in a village; however, the project did have a positive effect on the number of classrooms available to children in villages where it was implemented. It also improved the quality of school infrastructure. In particular, IMAGINE schools had more classrooms, more usable classrooms, and more classrooms with blackboards than non-IMAGINE schools. IMAGINE schools were also significantly more likely to incorporate a water supply, separate latrines for boys and girls, a preschool facility, and teacher housing.

Overall, after one year, IMAGINE had a 4.3 percentage point positive impact on primary school enrollment, no impact on attendance, and no impact on mathematics and French test scores, as shown in Table I.3. The enrollment and attendance impacts were larger for girls than for boys. For girls, the project had an 8.1 percentage point positive impact on enrollment and a 5.4 percentage point impact on attendance. No significant impacts were detected for boys' enrollment or attendance. The project had no impact on girls' mathematics scores, though suggestive evidence points to the possibility of a positive impact of 0.09 standard deviations on

girls' French test scores. No significant impacts were detected for boys on test scores. Finally, impacts were larger for younger children (ages 7 through 10) than for those ages 11 and 12.

Table I.3. One-year impacts versus four-year impacts of IMAGINE on key child education outcomes

	One-year impacts[a]	Four-year impacts
School enrollment (percentage points)	4.3**	7.8***
School attendance (percentage points)	1.7	n/a
Absenteeism (percentage points)	n/a	7.9***
Mathematics test scores (standard deviations)	0.03	0.13**
French test scores (standard deviations)	0.04	0.07
Sample size:		
Number of villages	**178**	**178**
Number of children	**16,351**	**13,069**

Source: Household Survey (Mathematica 2013), Village Survey (Mathematica 2013), Household Survey (Mathematica 2011), School Survey (Mathematica 2011)

Note: Child sample sizes may be smaller depending upon the outcome of interest

[a] The first follow-up estimates are at the village level and may include villages with more than one school. Of the 178 villages in the first follow-up IMAGINE data, 28 villages had two schools surveyed and 9 villages had three schools surveyed.

The trends in enrollment rates (Table I.1) and school construction (Figures I.1 and I.2), along with the results of the PDDE, are of particular importance for interpreting the results from the IMAGINE one year evaluation. They suggest, even in the absence of IMAGINE, that some schools would have been constructed and that enrollment rates would have increased. In addition, the first evaluation report details several other possible explanations for IMAGINE's small impacts observed one year after the suspension of project activities. First, the intervention as a whole was not fully implemented. Second, the MEP's village selection process did not involve an application process, perhaps indicating that households in villages receiving IMAGINE activities may not have viewed the construction of a new girl-friendly school as an important priority for the village. We do not know whether such is the case; indeed, it is possible the villages did view school construction as an important priority but did not have a way to voice their preference. Third, it is possible that a one-year exposure period to the new schools may have been insufficient to change the outcomes of interest.

The recent long-term evaluation of the project, completed three years after the conclusion of school construction, has shown more promising results (Table I.3). The positive effect on the presence, quality, and functionality of school infrastructure has been largely sustained after three years (Bagby et al. 2014a). IMAGINE schools had greater numbers of classrooms and greater numbers of finished classrooms than non-IMAGINE schools. In fact, on every measure of school infrastructure quality for which data were collected, including water source, toilet facilities, preschools, presence of a playground, and teacher lodging, IMAGINE schools were of higher quality than non-IMAGINE schools. These findings have important implications for the interpretation of the impact estimates. They suggest that the counterfactual in this evaluation is not the absence of a school in control villages but rather the presence of lower quality schools.

After three years, the IMAGINE project had positive impacts on primary school enrollment and attendance for children ages 6 to 14. Children living in IMAGINE villages were 8.3 percentage points more likely to report enrollment in school during the last school year (2012–2013) and 7.9 percentage points less likely to report absences of more than two consecutive weeks during the last school year (both significant at the 1 percent level). On average, children in treatment villages scored 0.13 standard deviations higher on the mathematics assessment than children in control villages (significant at the 5 percent level). Test scores in French for children in IMAGINE villages were higher than in control villages, but not statistically significant.

IMAGINE had a large and significant impact on girls' enrollment, attendance, and test scores after three years. The intervention increased female enrollment from 60.3 percent in control villages to 72.1 percent in treatment villages (an 11.8 percentage point impact, significant at the 1 percent level), whereas it increased male enrollment from 70.0 percent in control villages to 75.0 percent in treatment villages (a 5.0 percentage point impact, significant at the 10 percent level). Females achieved relatively large and statistically significant impacts on test scores, whereas the impacts for males were smaller and not statistically significant.

Overall, impacts after three years were larger and more statistically significant than those after one year. Several reasons may explain the differences in impact. First, the high quality infrastructure has largely remained present in intervention villages and functional, and few non-IMAGINE schools seem to have developed similar types of infrastructure. The higher quality schools may drive parents to enroll their children in school at a higher rate and to encourage more consistent attendance. Second, viewed through the lens of the larger impacts for girls, it appears that there is indeed a "girl friendliness" about these schools—such as separate latrines for boys and girls or the availability of housing for female teachers (potentially leading to more female teachers). Third, the results suggest that it may take more than one year of schooling in Niger for an improvement in learning to manifest itself. Given that children stay in school longer in IMAGINE villages than in non-IMAGINE villages, they have a greater chance to learn, perhaps explaining the improvement in test scores after three years versus no improvement after one year.

C. NECS project – baseline findings

NECS is being implemented in all villages that received IMAGINE schools as well as in randomly selected villages from the IMAGINE control group. Findings from the impact evaluation will contribute to knowledge about the interplay between infrastructure investments in schools and complementary "soft" activities in villages and schools.

This report presents findings from a household survey, village questionnaire, and village census in villages that were eligible to receive the NECS intervention alone, without the IMAGINE schools. This report focuses on describing the sample prior to the full roll-out of some of the key activities in the NECS intervention aimed at children in recipient villages, just after the beginning of the official school year, prior to the actual opening of many schools. It was not feasible to measure baseline student outcomes prior to random assignment in late 2012. Originally, data collection was scheduled to occur at the end of the 2012/2013 school year, before NECS activities had begun in recipient villages. However, due to logistical reasons, Wave 1 data collection was delayed and began in October and November 2013. At the time of data collection, the NECS project had begun project activities in treatment villages. The activities

include the training of inspectors, teachers, and community governance structures related to gender training and student recruitment efforts. However, activities related to early grade reading did not start until after the completion of Wave 1 data collection. We therefore refer to this as the baseline data collection effort for the NECS-Only impact evaluation.

The children's education outcomes and skills described in this report represent baseline measures after a few months of potential exposure to some training activities. If growth in impacts on outcomes is slow at the beginning of project implementation, particularly when project roll-out takes some time as is the case in this situation, including a baseline that was not administered before the start of the intervention will still be useful for testing hypotheses about the impact of interventions (Schochet 2010).

The analysis of the baseline data presented in this report has several goals:

1. Place the study in context by describing the children and households sampled for the study in Niger
2. Establish a "late baseline" that can be used to control for any group differences across study groups when conducting impact analyses to make sure that the estimated impacts show the effects of the intervention and not the effects of any baseline differences
3. Assess the degree to which random assignment produced equivalent groups based on measurable characteristics
4. Draw out any implications for the study design and protocol of the implementation study that can be pursued in subsequent data collection

II. OVERVIEW OF NECS

The original NTP was signed in March 2008, and USAID selected a consortium led by Plan International to implement the girls' education component. The IMAGINE project was planned to be implemented in 20 communes within 11 departments located in every region of Niger except Niamey (Figure II.1). Within these communes, 68 villages were to receive a variety of IMAGINE interventions for promoting girls' education.

Figure II.1. Implementation of IMAGINE and NECS projects by department
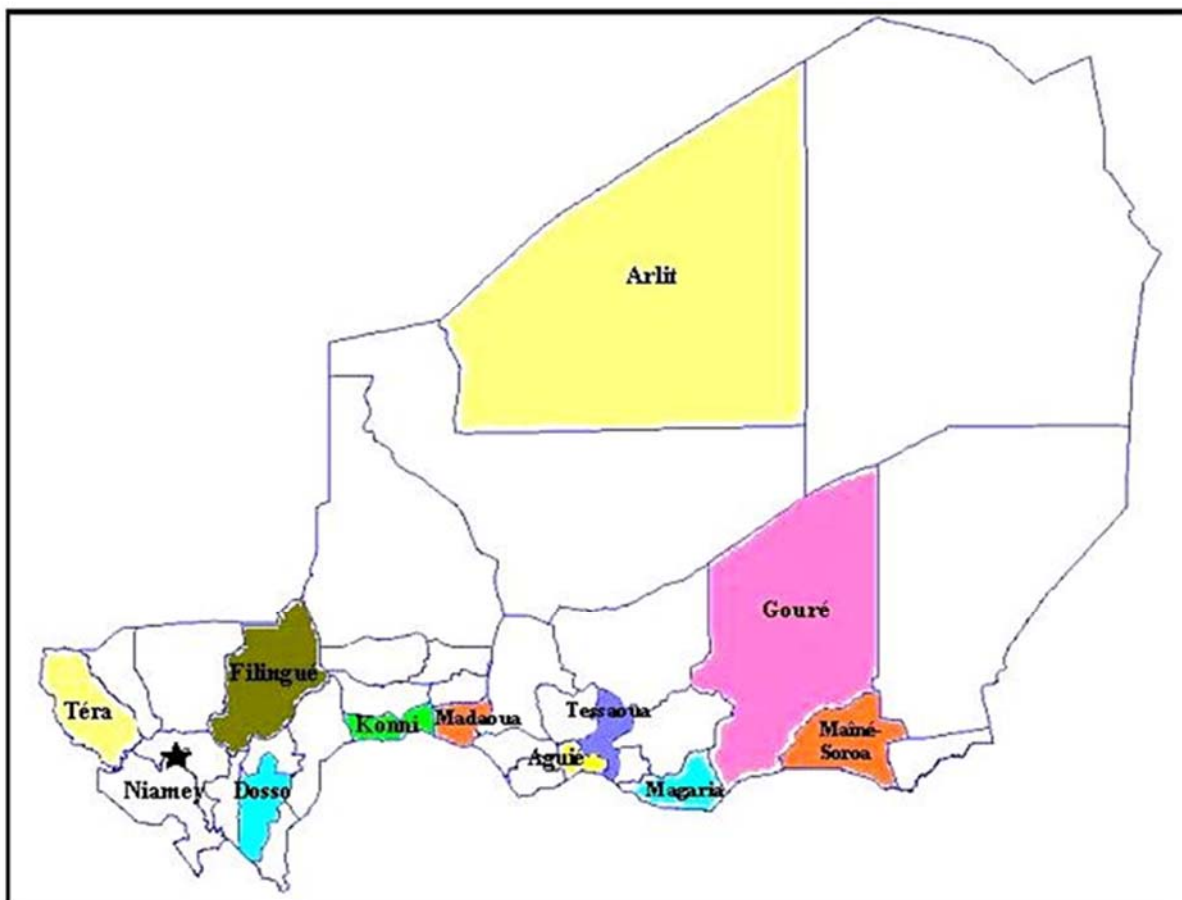
Source: Dumitrescu et al., 2011.

The GoN selected the villages—clustered within region, department, and commune—deemed eligible for IMAGINE. Across all seven regions of Niger, the GoN selected 20 eligible communes. Within each of the 20 communes selected, the GoN identified 10 villages as eligible according to certain criteria such as the number of school-age girls in the village, access to water within the village, and proximity to a transportation route. Mathematica together with the MEP conducted random assignment of villages within each commune, with different numbers of villages within each commune assigned to treatment.

The IMAGINE intervention included two components designed to increase girls' school enrollment, attendance, and completion rates: girl-friendly school construction and a series of complementary activities to improve the quality of teaching and children's academic

performance while building community support for girls' education. Activities involved school construction (hard interventions) as well as on public awareness and training activities (soft interventions). The design of the new schools followed a prototype used by Plan International that called for three classrooms, housing for three female teachers, a preschool, and separate latrines for boys and girls that were equipped with hand-washing stations. In addition, schools were deliberately located near a water source and were designed to take advantage of a water point constructed expressly for the school. Due to suspension of the NTP in late 2009, the majority of the soft interventions were not rolled out to recipient villages, and thus the school construction was the main component that was implemented by IMAGINE.

After reinstatement of the NTP, the NECS project activities have been designed to incorporate and build upon the soft interventions that were terminated under the IMAGINE project. The NECS project activities are being implemented as a package in the selected villages, and address two strategic objectives. The first objective is to increase access to high quality education. The activities associated with the first objective include borehole construction and maintenance, mobilizing school governance structures to promote joint initiatives with communities, and promotion of gender-equitable classrooms and student leadership activities. Furthermore, NECS is working to engage the community by supporting school management committees and developing a student mentoring program to foster a healthy school environment and motivate parents to keep their children in school. The second objective is to increase student reading achievement by implementing an ambitious early grade reading curriculum, which trains and supports teachers in new methods of teaching reading in early grades and develops reading materials in local languages. The curriculum was implemented in grade 1 starting in January of the 2013–2014 school year, and the grade 2 curriculum will begin during the 2015-2016 school year.[14] NECS also aims to promote a culture of reading by establishing community support for reading and an adult literacy program.

A. Program logic

In Table II.1, we present a logic model that shows how the NECS interventions might affect various targeted groups and outcomes of interest. The interventions are listed in the left-hand column, followed by columns showing the groups targeted by each intervention and the potentially improved outcomes. The interventions implemented by NECS target a variety of groups in the community, including children, teachers, parents and other adults, and school management committees. In combination, the interventions are intended to contribute to improved enrollment, attendance, and learning in the short term but may also improve other outcomes; in the long run, they are expected to contribute to improvements in employment and income.

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[14] The materials required for implementation in Zarma, Hausa, Tamasheq, Fulfulde, and Kanuri language schools are under simultaneous development and were introduced in schools in January 2014.

Table II.1. NECS and IMAGINE intervention activities and outcomes

Activity	Group directly affected	Outcomes		
		Short term	Medium term	Long term
New girl-friendly schools**	Girls	Enrollment, attendance, learning	Academic performance	Employment and income
Textbooks**	Students	Access to textbooks, learning		
Early grade rapid reading in local languages	Teachers, students	Teaching techniques in early grade reading in local languages, reading ability, learning		
Reading materials in local languages	Students, adults in community	Access to local-language reading materials, reading ability, learning		
Mentoring program	Students	Enrollment, attendance, drop-out rate, completion, learning		
Promotion of gender-equitable classrooms	Teachers, school management committees	Girls' enrollment and attendance, girls' learning		
Promotion of leadership training for student government	Students	Student/teacher relations, student autonomy, self-esteem	Attendance, student engagement, academic performance	
Support of school management committees	School management committees	Community participation in education	Quality of education, support for education	
Adult literacy program	Parents and adults in community	Adult literacy, culture of reading	Children's enrollment, attendance, academic performance	
New boreholes*	Students	Safer drinking water	Illness, attendance, retention	General health, employment, and income
Facilitating general hygiene and sanitation		Hand washing		
Supporting deworming		Deworming treatments		

Key Assumptions
- Schools sufficiently functional (for example, in terms of infrastructure and management) to support program interventions
- Adequate supply of teachers with the training and motivation to implement the early grade reading curriculum
- Adequate support from MEP inspectors and pedagogic supervisors to monitor implementation of the early grade reading curriculum
- Sufficient participation and interest in other project interventions by other key target groups (for example, adults in the community and school management committees)
- No major disruptive events in the targeted villages (for example, famine or political unrest)

Note: No asterisk indicates the activity is part of NECS. One asterisk, *, indicates activities that were implemented as part of IMAGINE and are being completed as part of NECS. Two asterisks, **, indicate activities that were implemented as part of IMAGINE only.

B. Implementation summary

Selection of the IMAGINE treatment villages via random assignment occurred in February 2009, and construction of the IMAGINE schools began in March 2009. Despite suspension of the NTP in December 2009, after which Plan International used its own funds to complete most of the planned construction before halting all project activities in April 2010: 62 functional, girl-friendly schools consisting of three classrooms, teacher lodging, and latrines. However, due to the suspension of the project, most of the complementary activities were not implemented.[15]

Random assignment for the NECS project occurred in November 2012, and initial rollout of some project activities began during summer 2013. The activities included the training of inspectors and community leaders. Most NECS activities, specifically those focused on learning outcomes and the early grade reading curriculum, were slated to begin in the 2013–2014 school year. In Figure II.3, we provide a broad overview of the timing of the key activities related to the implementation and evaluations of the IMAGINE and NECS projects.

Figure II.3. NTP evaluation timeline: IMAGINE and NECS
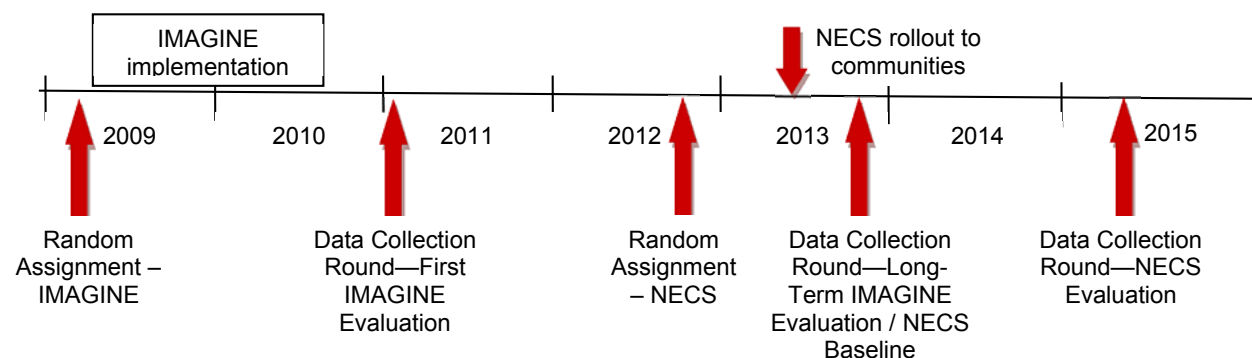
At the time of data collection in October and November 2013, the NECS project had begun to introduce some project activities in NECS treatment villages, which include all IMAGINE villages. The activities include the training of inspectors, teachers, and community governance structures related to gender, as well as some school recruitment activities. However, activities directly related to learning outcomes did not start until after the completion of wave 1 data collection.

As a part of the final impact evaluation, we will combine the impacts of NECS on shorter-term outcomes with information about project costs in order to conduct cost analyses. We will determine the project's effects on a per dollar basis (cost- effectiveness), compare potential benefits to costs in monetary terms (cost-benefit analysis), and compute a single summary statistic of the project's economic merits (the economic rate of return, or ERR).

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[15] Details about the full implementation of each activity are available in the first IMAGINE impact evaluation report (Dumitrescu et al. 2011) and in the final report produced by Plan International (2010).

III. EVIDENCE GAPS FILLED BY THE CURRENT EVALUATION

The goal of the NECS project is to improve educational opportunities available to children while strengthening links between local communities and state structures; it includes a variety of activities targeted at raising learning outcomes, engaging the community, and encouraging families to enroll and keep their children in school. Throughout all of these activities, NECS places a special emphasis on girls and early-grade literacy. The NECS evaluation will contribute to a growing body of literature on what works to improve access to quality education and to enhance actual learning.

A. Access to schooling

Much of the literature identifying the effects of projects related to school infrastructure on child enrollment looks at the effect of improving access to education, such as building new schools in locations where previously there were none. The BRIGHT I evaluation in Burkina Faso, which studied the effects of a project similar to the IMAGINE project, found enrollment impacts on the order of 15 to 20 percentage points, with girls reporting an impact 4.6 percentage points higher than that of boys (Kazianga et al. 2013).[16]

A key aspect of the IMAGINE project's quality initiative was the girl-friendly nature of the schools, including characteristics such as separate bathrooms for boys and girls, increased presence of female teachers, and gender sensitivity programs. A study of the role of new latrines in schools in India shows that they improved enrollment as a consequence of upgraded hygiene and reduced anxiety (Adukia 2013). Other studies document the impacts of school characteristics on the relative participation of girls. A randomized evaluation in northwestern Afghanistan found that the construction of village-based schools (as compared to regional schools serving several villages) increased enrollment for girls by 52 percentage points, a 17 percentage point gain over enrollment gains for boys (Burde and Linden 2013). A study of publicly funded private primary schools in rural Pakistan found significant increases in child enrollment and a reduction in gender disparities after the introduction of a new school in a village (Barrera-Osorio et al. 2013). The presence of a village-based school virtually eliminated the gender disparity in treatment villages. Both evaluations of the IMAGINE project in Niger found impacts, although their magnitudes were smaller compared to that of some similar interventions. After four years, IMAGINE improved overall enrollment by 8.1 percentage points and improved girls' enrollment by 6.8 more percentage points than that for boys (Bagby et al. 2014a).

Studies looking at education production have identified additional aspects of school quality that have an effect on school enrollment and test scores. A literature review examining 79 studies published between 1990 and 2010 (43 of which were deemed "high quality") investigated which school and teacher characteristics, if any, appear to have strong positive impacts on learning and time in school (Glewwe et al. 2011). The estimated impacts of most school and teacher characteristics on time in school and learning were statistically insignificant, especially when limiting the evidence to high quality studies. The few variables that did have significant effects included the availability of desks, teacher knowledge of the subjects taught, and teacher absence. Similarly, the literature review by Murnane and Ganimian (2014) concludes that more resources

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[16] The IMAGINE girl-friendly school prototype is similar to that which was used in the BRIGHT program.

provided to schools lead to improvements in achievement only when children's daily experiences in school undergo a change, primarily through the quality of instruction received.

B. Literacy and local-language instruction

Increasingly, governments in developing countries and development organizations are recognizing the importance of local-language instruction in improving reading outcomes. A 2008 UNESCO report conducted a thorough literature review of studies on local- (or maternal-) language instruction in developing countries (Smits et al. 2008). The studies found that the benefits of maternal-language teaching are numerous: children are less likely to drop out or repeat grades, and they perform better, even in the second language. However, most of the evidence supporting these conclusions is derived from case studies. In their own research, the authors used data from 26 countries representing 160 languages to conduct regression analyses. They found that local-language instruction increases school attendance, even when controlling for socioeconomic characteristics and urban/rural status. The impact is especially large in rural areas, typically characterized by lower attendance and performance outcomes.

Abadzi (2006) reviewed the rationale for local-language instruction, highlighting the fact that children can effectively learn a second language only once they have achieved a certain level of proficiency in their maternal tongue. The evidence shows that students' level in their home language is an important determinant of their reading performance in a second language. In Mali, some schools have adopted a "pedagogie convergente" in which students begin their schooling by learning mostly their maternal language and gradually transition to French. In those schools, students are five times less likely to repeat a grade and three times less likely to drop out (Bender 2005). A UNICEF study in Vietnam found that preschool students taught in their local language scored higher on several basic comprehension tasks conducted in Vietnamese (UNICEF 2011).

The Early Grade Reading Assessment (EGRA), developed by USAID's EdData II, has become a commonly used tool for measuring early literacy skills in both local and national languages in developing countries. Its primary function has been to inform project and policy design by providing detailed and accurate data on children's reading levels and to evaluate the effectiveness of reading interventions (RTI International 2011). Across Africa, reading levels have been shown to be incredibly low, prompting a focus on the quality of as well as access to education. EGRA has been used to evaluate several bundled reading improvement programs in Africa.

In Liberia, researchers conducted a randomized control trial to examine the impact of a full treatment group (schools in which reading assessments were conducted, teachers were trained and provided with materials and support, and parents were informed about students' performance) and a light treatment group (schools in which the community was informed about reading achievement in the school based on both EGRA results and teachers' assessments) compared to a control group. They found that reading skills increased significantly for the full treatment group, with an overall effect of 0.79 standard deviations across all tasks (Piper and Korda 2010).

In Egypt, another randomized control trial estimated the effect of a phonics intervention in which teachers administered an early grade reading package of activities comprised of manuals, trainings, resources, and lesson plans. Teachers were also coached and received feedback from classroom observations for six months. At the end of the school year, students in the intervention

schools could read three times as many syllables per minute, twice as many familiar words, and almost twice as many words in a passage as students in the control schools (USAID Egypt 2011).

A randomized control trial in Kenya estimated impacts from a three-year program that created and disseminated new teaching and classroom materials, provided professional development training to teachers, and implemented innovative teaching methods. The study found large, significant improvements in literacy skills as measured through EGRA and in the percentage of students reading at the benchmark level in both Kiswahili and English (RTI International 2014).

C. The NECS evaluation

The NECS evaluation will add to the body of literature described above by evaluating whether a bundled intervention of "soft activities," including adult literacy, community engagement, gender training, an early grade reading curriculum, and local language instruction, improves enrollment, attendance, and learning in mathematics and reading. By testing children in both a local language and French, this evaluation will assess the extent to which local-language instruction, bundled with additional "soft" activities in recipient villages, affects early-grade reading skills in the students' maternal languages as well as their second language. In addition, as an extension of the IMAGINE evaluation, the NECS evaluation will provide new evidence on the enrollment and learning effects generated by combining school infrastructure improvements with community- and classroom-level "soft" activities.

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IV. IMPACT EVALUATION DESIGN

The design of the NECS evaluation is a variant of the basic random assignment design that builds on the random assignment conducted for the IMAGINE evaluation. Specifically, the NECS evaluation design involves two rounds of clustered random assignment. The first round, conducted at the end of 2008 for the IMAGINE evaluation, involved randomly selecting IMAGINE treatment villages from a pool of potential recipient villages identified by the MEP based on specified criteria (the remaining villages became the IMAGINE control villages). [17] The second round of random assignment, conducted in November 2012, involved randomly selecting some of the IMAGINE control villages to receive NECS. The design took into account the planned program implementation, which calls for implementing NECS in all of the IMAGINE treatment villages as well as in an additional group of villages selected from the IMAGINE control villages. Given that we selected this additional group by using random assignment, we can conduct a rigorous evaluation of NECS as described below.

The two rounds of random assignment yielded three groups of villages, defined by IMAGINE treatment status and NECS treatment status (Table IV.1), as follows:

- Group A villages receive IMAGINE plus NECS

- Group B villages receive NECS-only

- Group C villages serve as the control group (receiving neither IMAGINE nor NECS)

Table IV.1. Groups of villages under the NECS evaluation design

		NECS treatment group	NECS control group
IMAGINE treatment group	A	62 villages	
IMAGINE control group	B	88 villages[a]	C 54 villages

[a] Group B (NECS-only) consists of 88 villages, but we have dropped one village from the evaluation for logistical and security reasons (Section C.2.); the impact evaluation therefore includes only 87 villages in this group.

The three groups of villages are equivalent as a result of the two rounds of random assignment, except for the effects of IMAGINE and/or NECS.[18] The first round involved randomly selecting villages for IMAGINE, so that group A (IMAGINE treatment villages) is equivalent to the combined groups B and C (all IMAGINE control villages). The second round involved

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[17] Specifically, the MEP identified the pool of potential recipient villages in several steps. First, it selected two regions (Tillabéri and Zinder). Then, within each region, it selected two departments and two communes within each department. (The criteria used to select the regions, departments, and communes are unclear.) Then, within each commune, 10 villages were identified that met set criteria, including the number of school-age girls in the village, access to water within the village, and proximity to a transportation route. The program was later expanded to additional regions: in each region, departments and communes were selected and eligible villages identified according to the same criteria as before.

[18] However, because the MEP purposefully identified eligible villages according to certain criteria, they are not necessarily comparable to other villages in Niger.

randomly selecting villages from the IMAGINE control villages for NECS, so that groups B and C are equivalent to one another while retaining the original equivalence to group A. [19]

Given that the three groups are equivalent, comparisons of the outcomes for individuals in the groups will provide credible and rigorous estimates of project impacts. Comparisons of outcomes for groups A and C will provide an estimate of the combined impact of NECS and IMAGINE (research question 1, as noted below). Comparisons of outcomes for groups B and C will provide an estimate of the impact of NECS alone (research question 2, as noted below).

Because the NECS interventions are being implemented as a package in all villages, the design will enable us to evaluate only the impact of the combined package of NECS interventions rather than that of individual components. Therefore, we will measure outcomes for a representative sample of households with children ages 5 to 14 from the villages and compare them across treatment and control groups at endline.

A. Evaluation questions

The impact evaluation of the NECS project will address five key research questions and related subquestions. For the cost analysis, we have grouped the questions by question type, with one key research and related subquestions.

Impact on key outcomes

1. What is the impact of the NECS project in combination with the IMAGINE project on key educational outcomes?

   a. What is the impact on primary education enrollment?
   b. What is the impact on learning as measured by test scores?
   c. What is the impact on attendance rates?
   d. What is the impact on other measures of education quality, including completion, drop-out, repetition, and transition rates?

2. What is the impact of the NECS project alone on these key educational outcomes?

Impact for different subgroups

3. Do the impacts differ for girls versus boys?

4. Do the impacts differ for children from households with different asset levels?

Cost analyses

5. Was the NECS project investment justified from a cost perspective?

   a. What was the project's cost-effectiveness?
   b. What was the project's cost-benefit?
   c. What was the project's ERR?

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[19] There is a subtle distinction in the time point at which the groups may be considered equivalent. Groups B and C are equivalent through 2012; their equivalence relies only on the second round of random assignment. Groups A and C are equivalent only through 2008 because their equivalence relies on both rounds of random assignment, the first of which took place at the end of 2008.

The first two research questions are intended to assess the effects of NECS on key educational outcomes. They follow directly from the hypothesis that, by tackling some of the major obstacles to education in the targeted communities, the NECS project will affect both the quantity and quality of education experienced by children in the affected communities. The evaluation will enable us to evaluate the impacts of NECS both in combination with the improved infrastructure introduced to the IMAGINE schools in the first NTP (question 1) and as a stand-alone project in schools with existing infrastructure (question 2). Evaluating the impacts separately will provide useful evidence for MCC, the MEP, Plan International, and other stakeholders on the extent to which improved infrastructure—which can be extremely costly—combines with the impact of quality-based interventions.

The third and fourth research questions are intended to explore differences in impacts by subgroups defined by gender and levels of household assets. Given that obstacles to education may be more severe for girls than for boys, girls in Niger typically experience worse educational outcomes than boys. Improving girls' outcomes is therefore a policy priority for the GoN, and for the NECS project. Some components of the NECS project, such as the promotion of gender-equitable classrooms and girl-friendly schools, specifically address barriers faced by girls. Similarly, obstacles to education may be more severe for children from households with greater poverty levels (as proxied by household assets). We will therefore explore differences in project impacts along both of these dimensions.

We will conduct a detailed cost analysis to determine whether the NECS project was economically justified (question 5). The analysis will determine the project's effects on a per dollar basis (cost-effectiveness), compare potential benefits to costs in monetary terms (cost-benefit analysis), and compute a single summary statistic of the project's economic merits (ERR). We will describe the cost analysis in the follow-up report the end of the project.

Table IV.2 shows the data type and data source used for each of these evaluation questions.

Table IV.2. Data Source by Evaluation Question

Evaluation Questions	Data type	Data source
Impact of NECS-plus-IMAGINE on key educational outcomes		
Enrollment	Quantitative	Household Questionnaire and School Records
Learning	Quantitative	Household Questionnaire
Attendance	Quantitative	Household Questionnaire and School Records
Other measures of education quality (completion, dropout, repetition, and transition)	Quantitative	Household Questionnaire
Impact of NECS-only on key educational outcomes	Quantitative	Household Questionnaire and School Records
Impacts by gender subgroups	Quantitative	Household Questionnaire and School Records
Impacts by household asset level subgroups	Quantitative	Household Questionnaire and School Records
Cost justification		
Cost-effectiveness	Quantitative	Administrative Data
Cost benefit	Quantitative	Administrative Data
Economic rate of return	Quantitative	Administrative Data

B. Methodology

The NECS evaluation builds on the random assignment conducted for the IMAGINE evaluation in 2008. Based on the results of the first round of random assignment, all villages that

received IMAGINE are receiving the NECS intervention. The second round of random assignment, conducted in November 2012, involved randomly selecting some of the IMAGINE control villages to receive NECS. For the evaluation of the NECS project, we will estimate the impacts of NECS as well as the combined impacts of NECS and IMAGINE on key educational outcomes.

To be compatible with the first round of random assignment for the IMAGINE evaluation, which involved assignment of villages within communes, Mathematica and the project's funders and implementing partners conducted the second round of random assignment of villages within communes as well. That is, we randomly selected a number of villages from the IMAGINE control villages in each commune to receive the NECS project (together with all the IMAGINE treatment villages in that commune).

1.   Random assignment

We completed the NECS random assignment per the following steps:

- **Finalize the list of villages for NECS random assignment.** The villages included in the NECS evaluation are the same 204 villages (in 20 communes) identified by the MEP as eligible for the original IMAGINE project in 2008 per the approach described above. Drawing on Plan International's data, we identified the villages that were the recipients of an IMAGINE school in each commune and removed them from consideration for random assignment.[20] These 62 villages, spread across 20 communes, are receiving NECS and form group A (IMAGINE plus NECS). The remaining 142 villages, again spread across all 20 communes, were included in the random assignment process that determined groups B (NECS-only) and C (control).

- **Allocate the number of NECS-only villages across communes.** The NECS project is being implemented in 150 villages, of which 62 automatically received NECS by virtue of the presence of an IMAGINE school. The implication is that, to meet project targets, we had to select a further 88 villages (out of the 142 non-IMAGINE villages available) by using the NECS random assignment procedure. With random assignment intended to take place within communes, we had to allocate the 88 NECS-only villages across communes before conducting the draw.

    In making the allocations, we had to satisfy several criteria. First, we had to ensure that the total number of NECS villages (including IMAGINE plus NECS and NECS-only) met the implementation targets of Plan International and Aide et Action—78 villages in the 11 Plan International communes and 72 villages in the 9 Aide et Action communes. Second, per the MEP's request, we wanted to ensure fairness and perceived fairness in the allocations across communes. Third, we wanted to protect the design against the possibility of attrition by

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[20] We identified the villages based on their actual IMAGINE status (whether an IMAGINE school was constructed) rather than on their original IMAGINE random assignment status because USAID wanted to ensure that all actual IMAGINE villages received NECS. Ideally, we would have preferred to identify these villages based on their IMAGINE random assignment status because random assignment is what guarantees group equivalence. In practice, the difference affected the categorization of 13 of the 204 villages and has some implications for the analysis, as discussed in Section C.5.

ensuring that our proposed allocation, which satisfied the first two criteria, also included at least two of each type of village per commune.[21]

To meet the criteria, we decided to allocate the 88 NECS-only villages across communes by using the overall fraction of villages to be randomly selected for each implementing partner. Specifically, 74 villages were eligible for random assignment in the 11 Plan International communes, of which 42 (57 percent) were to be selected. We therefore allocated approximately 57 percent of eligible villages in each Plan International commune to receive NECS. We conducted a similar allocation for the Aide et Action communes, allocating 68 percent of villages eligible for random assignment to receive NECS in each commune. Finally, we made minor adjustments to the final allocations to ensure that the totals were correct after rounding and that we attained the minimum of 2 villages of each type per commune (Table IV.3).

Table IV.3. Allocation of villages to research groups by commune

Region	Commune ID	IMAGINE plus NECS villages	NECS-only villages	Control villages	Total villages	Implementing partner
Agadez	1	2	2	6	10	Plan International
Diffa	2	2	5	3	10	Aide et Action
Dosso	3	2	5	3	10	Plan International
	19	2	5	3	10	Plan International
Maradi	4	2	6	2	10	Aide et Action
	5	2	7	3	12	Aide et Action
	6	2	7	3	12	Aide et Action
	7	2	5	3	10	Aide et Action
Tahoua	8	2	5	3	10	Plan International
	9	2	5	3	10	Plan International
	10	2	5	3	10	Plan International
	11	2	5	3	10	Plan International
Tillaberi	12	6	2	2	10	Plan International
	13	5	3	2	10	Plan International
	14	6	2	2	10	Plan International
	15	5	3	2	10	Plan International
Zinder	20	3	5	2	10	Aide et Action
	18	2	6	2	10	Aide et Action
	16	6	2	2	10	Aide et Action
	17	5	3	2	10	Aide et Action
Total		62	88	54	204	

- **Conduct random assignment.** Mathematica and the project's funders and implementing partners conducted the second round of random assignment at a public meeting in Niamey in November 2012. All key stakeholders, including MEP representatives and implementing partners, attended the meeting. For each commune, we listed the name of each village eligible for random assignment on its own sheet of paper and drew the names of villages

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[21] If we had (for example) only one control village in a commune and for some reason were unable to collect data in that village, we would have to exclude the entire commune from any comparisons involving the control group. The reason is that the design relies on within-commune assignment, and there would be no control village in that commune.

randomly out of a bag. The first few villages drawn in each commune were assigned to receive NECS, with the exact number depending on the number of NECS villages allocated to that commune (Table IV.3).

- **Adjustments to the final list.** After random assignment, one of the selected NECS-only villages (in commune number 1) was dropped from the NECS project for logistical and security reasons. It was replaced by a village from outside the original list of eligible villages (in commune number 12). We include neither the original nor the replacement village in the evaluation, although we collected data in the replacement village for monitoring purposes. The number of NECS-only villages included in the impact evaluation therefore totals 87 rather than 88.

2. Impact estimation strategy

Given the use of random assignment, the basic method for estimating impacts compares the mean outcomes of the various research groups at endline. However, we intend to use regression models to estimate impacts because the models offer several advantages: they provide greater analytic flexibility, account for design characteristics such as stratification by commune, and improve statistical precision through the inclusion of control variables.

We will estimate the impact of the package of NECS interventions alone by estimating the following ordinary least squares model (OLS) model for the sample of NECS-only villages and control villages:

$$Y_{ihj,post} = \alpha + \beta NECS_j + \delta_k + \pi Y_{ihj,pre} + \lambda X_{ihj} + \varepsilon_{ihj} \tag{1}$$

where $Y_{ihj,post}$ is the outcome for child i in household h in village j at endline; $NECS_j$ is a binary indicator that is 1 if j is a group B (NECS-Only) village and 0 if it is a group C (control) village; δ_k is a vector of binary indicators, one for each commune k; $Y_{ihj,pre}$ is the baseline measure of the outcome of interest, X_{ihj} is a vector of control variables that could be correlated with outcomes (the controls could be at the individual, household, or village level); and ε_{ihj} is a random error term. The parameter of interest in equation (1) is β, which gives the estimated average impact of NECS on the outcome of interest. The model explicitly controls for the baseline outcome, $Y_{ihj,pre}$, as one of the control variables, to increase statistical power and to control for any differences between groups that might exist despite random assignment.

Our estimates must account for the fact that outcomes among individuals in the same village—which is the level of random assignment—are likely to be correlated because they experience many of the same conditions (such as the same teachers and school environment). We account for the correlation statistically by clustering the regression error terms at the village level to adjust the standard errors. In addition, because the fraction of group A and group C villages varies by commune, we will weight villages by the inverse of their probability of selection. Otherwise, treatment status could be correlated with commune, which could lead to biased estimates. We will combine the village-level weights with sampling weights that we compute for villages and children within villages.

Similarly, we will estimate the impact of NECS plus IMAGINE by estimating the following OLS for the sample of group A (IMAGINE plus NECS) and group C (control) villages:[22]

$$Y_{ihj,post} = \alpha + \beta IMAGINE\_NECS_j + \delta_k + \lambda X_{ihj} + \varepsilon_{ihj} \qquad (2)$$

The model is almost identical to equation (1), with two main differences. Equation (2) involves a follow-up comparison of groups A and C that assumes equivalence at the time of the NECS random assignment (in 2012) and captures the effects of any differences between the groups that have arisen since 2012 in response to the NECS project. Equation (2) implies that villages in group B will not be included in this part of the analysis. Once again, we will cluster the standard errors by village and estimate appropriate weights for the analysis. The parameter of interest in equation (2) is again β, which gives the estimated average impact of the package of NECS interventions as well as the IMAGINE infrastructure on the outcome of interest.[23] More specifically, given that group A villages had experienced three years of IMAGINE schools at the start of the NECS project, the parameter β may be interpreted as the impact of three years of IMAGINE alone, plus two years of IMAGINE combined with the package of NECS interventions.

The exclusion of the NECS baseline outcome in equation (2) is the main reason that we estimate the impacts of IMAGINE plus NECS and NECS-only separately rather than in a single model. It is not legitimate to control for the baseline outcomes in the comparison of groups A (IMAGINE plus NECS) and C (control) in equation (2) under the randomized control trial (RCT) design because the two groups in that model are equivalent only at the original IMAGINE randomization in 2008, and we do not have data from that time period to control for any differences that may have existed then. We must therefore separately estimate the impacts of IMAGINE plus NECS and NECS-only if we want to include the NECS baseline as a control in the RCT analysis and benefit from improved statistical power.

Weights. Because the fraction of treatment villages varies by commune, we will weight villages by the inverse of their probability of selection. Otherwise, treatment status could be correlated with commune, which could lead to biased estimates. Also, because the number of villages varies across communes in the sample, we will incorporate weights to absorb these differences so that larger communes do not contribute more to conclusions from the study than smaller communes. In addition, because sample sizes vary across villages, we will incorporate household or child level weights. Under such a weighting scheme, larger communes or villages do not carry more weight in the analysis than smaller communes or villages.

For village-level analysis we use village weights, for household analysis you use household weights that also incorporate village weights, and for child-level analysis you use child weights

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[22] Some of the outcomes of interest, such as enrollment, are binary in nature. However, we still prefer to conduct estimation by using a linear probability (OLS) model because of ease of interpretation. Nevertheless, we will investigate the sensitivity of our results to a logit or probit model that accounts for the binary nature of these outcomes.

[23] In our analysis of each outcome for the NECS-only versus control and NECS plus IMAGINE versus control comparisons, we will assess whether our results are robust to correcting for several comparisons. We will ensure that statistically significant impacts for a particular outcome are not simply statistically significant by chance because of two comparisons for that outcome (this is known as the multiple comparisons problem; see Schochet 2009).

that also incorporate village weights. We construct three weights as follows: village-level, household-level and child-level:

- **Village weights.** Every village receives a weight that reflects the probability of selection into the treatment group in each commune and the overall number of villages in the commune. First, we incorporate the inverse of the probability of selection into the research group (treatment or control). For example, in commune number 2, where 5 treatment and 3 control villages were selected, each treatment village received a weight of 8/5 and each control village a weight of 8/3, thereby ensuring that treatment status is not correlated with commune. Second, we incorporate the number of villages in each commune relative to the overall number of villages. For example, in commune number 2, with 8 villages in the sample, each village would receive a weight of 141/8 (141 total villages), whereas in commune number 15, each village would receive a weight of 141/5 (5 villages in the sample).

- **Household weights.** The number of households in the sample for each village varies. Therefore, each household in a given village receives a weight of the inverse of the number of the households in that village.

- **Child weights.** The number of child in the sample for each village varies. Therefore, each child in a given village receives a weight of the inverse of the number of the children in that village.

    Village-level inferences using weights. By interacting the village weights with the household weights, and the village weights with the child weights, we account for the probability that a village was selected into its research group, we ensure that each village contributes equally to the impact estimates. Therefore, the estimates allow us to make statements about the average village. In doing so, the research question becomes: are treatment villages on average the same as control villages?

    Unweighted. We also present estimates without using any type of weighting scheme as a robustness check.

3. Sampling strategy and power calculations

Our sampling strategy calls for a representative sample of school-age children in every village in the sample, including both in-school and out-of-school children. We randomly sampled eligible households with children of school age (ages 5 through 14) in each community and select all school-age children within those households. Children in Niger typically first enroll in school at age 6 or 7, and, if they complete primary school, they are likely to do so at age 12 or 13. We include 14-year-old children because they, too, were exposed to the IMAGINE project for several years and may still be in primary school.

To determine the size of the effects that we will be able to detect given our sample size, we computed minimum detectable impacts (MDI)—the smallest impacts that our design will be able to distinguish statistically from 0. The MDIs depend critically on the sample size (both the number of villages and the number of respondents within each village), assumptions about key parameters (such as the intracluster correlation coefficient and the regression R-squared), the power with which we would like to detect effects (typically 80 percent), and the variance of the outcome (which, for binary outcomes, depends crucially on the baseline level of the outcome). In Table IV.4, we present MDIs for several of the key outcomes of interest. To the extent possible, we calculated the MDIs by using parameter estimates obtained from the IMAGINE evaluation.

The MDI for the impact of NECS-only on the school enrollment rate is 6.0 percentage points (8.1 percent of the expected baseline mean), and that for the attendance rate is 6.4 percentage points (9.4 percent of the expected baseline mean). This suggests that we will be able to reliably detect only relatively large impacts on the enrollment and attendance outcomes. For test scores—which will make use of the full sample, with scores normalized by age group—we will be able to detect an impact of approximately 0.11 standard deviations—within the range of test score impacts typically expected for a relatively successful educational intervention.

The MDIs for the impact of NECS-plus-IMAGINE are higher than the corresponding impacts for NECS-only for two reasons. First, the number of villages contributing to the NECS-only estimates is larger. Second, the estimates for NECS-plus-IMAGINE will not include as an explanatory variable the baseline level of the outcome, which will likely result in a substantial increase in the amount of variation in the outcome that is explained by control variables (the regression R-squared in Table IV.4). The MDIs for the impact of NECS-plus-IMAGINE are 8.6 percentage points (11.7 percent of the mean) for school enrollment and 9.2 percentage points (13.5percent of the mean) for attendance. For test scores, the MDI is approximately 0.16 standard deviations, again larger than the corresponding MDI for NECS-only.

As mentioned, we are also interested in separately analyzing impacts for certain subgroups—for example, those defined by gender and household asset levels. Although the individual sample sizes for such subgroup analyses will be lower than that for the full sample, we expect to have only slightly lower power for these analyses (Table IV.3). The reason is that the correlation of within-village outcomes implies that the number of villages and not the number of individuals is more important in determining power. For example, for a subgroup comprising one-half of the full sample (such as girls), the MDIs are only about 3 to 4 percent higher than for the full sample. For a smaller subgroup comprising one-fifth of the full sample (such as children between ages 5 and 6 at baseline), the MDIs are about 10 to 15 percent higher than for the full sample.

Table IV.4. Minimum detectable impacts for the NECS evaluation design

	Number of villages (number of children)		Minimum detectable impacts (as percentage of baseline mean)		
	Treatment	Control	Enrollment (percentage points)	Attendance (percentage points)	Test scores (standard deviations)
NECS-only					
Research group	B	C			
Full sample	87 (7,300)	54 (4,500)	5.5 (10.1%)	5.5 (10.7%)	0.11
Subgroup (50 percent)	87 (3,650)	54 (2,250)	5.8 (10.6%)	5.8 (11.3%)	0.12
NECS-plus-IMAGINE					
Research group	A	C			
Full sample	62 (5,000)	54 (4,500)	7.7 (13.0%)	7.8 (16.1%)	0.17
Subgroup (50 percent)	62 (2,500)	54 (2,250)	8.1 (13.7%)	8.2 (17.0%)	0.18

Source: Authors' calculations using data from the NECS data to estimate key parameters where possible.

Note: MDIs are for a two-tailed test with 80 percent power and a 95 percent level of significance, computed by using the following formula:

$$MDI = 2.8 * \sqrt{\rho(1-R_v^2)*\left(\frac{1}{N_T}+\frac{1}{N_C}\right)+(1-\rho)(1-R_i^2)*\left(\frac{1}{rnN_T}+\frac{1}{rnN_C}\right)} * \sqrt{\sigma^2}$$

where ρ is the intracluster correlation coefficient (assumed to be 0.2 for test scores and 0.1 for other outcomes based on these data); R_v^2 and R_i^2 are the regression R-squared values that indicate the amount of variation explained by controls at the village level and individual level, respectively (both assumed to be 0.5 for the impact of NECS-only and 0.1 for the impact of NECS plus IMAGINE); N_T and N_C are the village sample sizes for the treatment and control groups; n is the child sample size per village (84, based on these data); and r is the survey response rate (assumed to be 100 percent). The term σ^2 is the variation in the outcome, which is 1 for normalized test scores and equal to p(1-p) for a binary outcome with baseline rate p (assumed to be 25 percentage points for enrollment and attendance).

4.   Baseline analysis

In this report, we used baseline data collected in 2013 to assess differences between NECS-only and control groups in measurable characteristics of villages, households, children and schools. We ran regression analyses following equation (1) except for excluding the additional control variables, X_{ihj}, that could be correlated with outcomes. We looked at the baseline value of the outcome variable, $Y_{ihj,pre}$, as the independent variable, and we control for the stratification of villages within communes at random assignment by using commune fixed effects. We clustered the standard errors by village and estimate appropriate weights for the analysis.

V. DATA SOURCES AND OUTCOME DEFINITIONS

To assess the baseline equivalence of the NECS-only and control group villages, we collected data from households in all villages. In this chapter, we describe the baseline data collection effort including instrumentation (Section A), the data collection itself (Section B), the data cleaning (Section C), and definitions of the outcomes used in the analysis (Section D).

A. Baseline data collection

Mathematica oversaw the collection of data from rural households and schools in Niger. Centre International d'Etudes et de Recherches Sur Les Populations Africaines (CIERPA), a professional data collection firm located in Niger, carried out data collection activities in the field.

CIERPA interviewers visited all 204 villages for the NECS study during October and November 2013.[24] Upon arriving in a village, interviewers conducted a census of all households in the village and then used the census (1) to identify the households eligible for the sample as well as the associated school-age children (ages 5 through 14) and (2) to obtain the village's population characteristics. Using their census information, CIERPA interviewers then randomly selected 40 eligible households from the village for the sample. In villages with fewer than 40 eligible households, the interviewers selected all eligible households for the sample. More information regarding selection procedures is available in the Niger Wave 1 User's Manual.

1. Questionnaire design

Mathematica developed two questionnaires for baseline data collection: a household questionnaire and a village questionnaire, along with the village census discussed above. The household questionnaire includes questions related to household characteristics, demographic characteristics, parents' attitudes toward education, and children's educational outcomes (enrollment and attendance) as well as assessments administered directly to the children in sample households, including assessments in mathematics, French, and local languages. The village questionnaires gathered information about schools in each village, including school characteristics and infrastructure. The census form is available in Appendix A, and full versions of the final questionnaires and assessments are available in Appendices B, C, and D.

The household questionnaire consists of the following modules:

- **Household characteristics.** This module collects information about the head of household, demographic characteristics, education, and participation in literacy or parents' groups. It also collects information about the house and the household, including location, construction materials used in the house, available water sources, and proxies for wealth, such as cattle, telephone, or radio.

- **Household listing form.** In this module, the respondent provides a complete list of all children between the ages of 5 and 14 residing in the household. Basic information collected about the children includes relationship to the head of household, gender, age, school

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[24] Data collection was conducted in 203 villages eligible for random assignment, plus the village that received the NECS intervention that replaced one of the original eligible villages.

enrollment, and reports of absences from school over two weeks for the 2012–2013 school year. Questions also ask if the child was working and inquire about parental attitudes toward the education of the child.

- **Education module.** Interviewers administered this module for the household respondent about all children ages 5 to 14 who attended school at any time during the 2012–2013 school year. Questions address access to textbooks, distance to school, and attendance for both teacher and child. The module also collects information about the school attended, including interventions such as separate latrines, participation in feeding programs, and reasons the parents sent the child to school. In addition, children answered questions about their experiences with school if they were enrolled during the previous year and if they are interested in attending school the following year.

- **Local-language assessment.** Interviewers administered this module to all children ages 5 through 14 regardless of their school enrollment status. The children participated in receptive and expressive oral assessments as well as in an oral reading comprehension assessment based on a short story. The interviewers then show the children preprinted cards and ask them to identify letters, read basic words, and perform simple passage reading and comprehension. The language of the test—Hausa, Zarma, Kanuri, and two other local languages—was the principal language of reading instruction in the village school. Below, we detail development of the local-language assessment.

- **French assessment.** Interviewers administer this module to all children ages 5 through 14 regardless of school enrollment status. The French assessment is an equivalent test to the local- language assessments and includes the same modules. It was administered after the test in the local language. Below, we detail development of the French assessment.

- **Mathematics assessment.** The interviewers administer this module to all children ages 5 through 14 regardless of school enrollment status. The interviewers ask children to count and then show them preprinted cards and asked them to identify numbers, count items, indicate the greater of a pair of numbers, identify geometric form, and perform simple addition, subtraction, multiplication, and division. The assessment also includes two oral problem-solving questions. The mathematics assessment was administered last.

The village and school infrastructure questionnaire consists of the following modules:

- **Village school.** This module collects general information about the schools in the village, such as name, region, commune, respondent, number of schools in the village, and languages spoken in the village and school.

- **School general information.** In this module, interviewers collected information about the school director, type of school (public or private), languages of instruction, interventions at the school, and teacher housing for the village's main public school.

- **School physical structure.** This module includes information about the main public school's infrastructure that was directly observable by the enumerator, such as number of classrooms, construction material type, presence of water supply, type of latrines, existence of a preschool, and existence of a playground.

2. Local-language and French assessments

Several outcomes related to reading ability lend themselves to measurement for an evaluation; however, researchers have identified a handful of skills that are the most accurate predictors of reading ability and are therefore particularly useful to measure. Given that reading skills can be expected to improve as children grow older and receive additional reading instruction, the appropriate skills that are subject to measurement are a function of a child's age and schooling level. For example, if a child is young and unable to read fully, oral language is a strong predictor of future reading ability and an appropriate area for measurement; for older children, measuring reading comprehension may be appropriate.

Mathematica created reading assessments that focus on predictive skills such as oral language, letter recognition, word reading, oral reading fluency, and reading comprehension. The assessments were developed based on the Early Grade Reading Assessment (EGRA). In addition, given the context of education in Niger and to mitigate against floor effects, we included receptive and expressive oral vocabulary skills. We worked with local education experts throughout the assessment development process, and used grade-specific Nigerien schoolbooks and teaching tools to ensure an appropriate level of difficulty and provide examples. All materials were reviewed by the MEP and relevant stakeholders to verify the appropriateness of the questions within the Nigerien context.

The MEP and relevant stakeholders verified the appropriateness of the questions within the Nigerien context. The questionnaires and assessments were thoroughly vetted and piloted by Mathematica and CIERPA, providing a high level of confidence in their face validity and reliability, as discussed below. The assessments are sufficiently short to limit respondent burden, tightly linked to the NECS reading intervention, and allow for sufficient variation in overall test scores. In Table V.1, we show the reading outcomes that were measured as part of the wave 1 data collection of the NECS impact evaluation.

Within each subtask, the enumerators mark the correct number of responses in each line or section of the task, as well as the time remaining (in seconds) and the total number of correct. Enumerators are directed to mark an "autostop" if the child is unable to correctly answer an item in the first row or section of the task. This is consistent with EGRA procedure and is also sometimes referred to as an "early stop rule." Making each of the first four tasks time-limited is standard for EGRA, as it makes the assessment shorter and helps with assessing how automatic responses are (RTI 2009).

Table V.1. Reading assessments in French and local languages

Early reading domain	Early reading subtask (outcome)	Description of questions in NECS survey
Oral language	Receptive oral vocabulary knowledge	The child is given simple instructions to be followed.
	Expressive oral vocabulary knowledge	The child is asked to identify parts of the body and objects in the environment that the administrator points out.
	Listening comprehension	A text is read aloud to the child, and questions about the text are posed afterwards.
Letter recognition	Timed letter identification	The child is given 60 seconds to identify letter names and/or the sounds.
Familiar word reading	Timed familiar word reading	The child is given 60 seconds to read simple common words.
Oral reading fluency	Read connected text accurately (number of words read correctly) and at a sufficient rate (number of words read correctly in 60 seconds)	The child is given 60 seconds to read words in connected text.
Reading comprehension	Respond to questions about the text just read	The test administrator asks the child reading comprehension questions for the text the child just read.

1. *Language assessment internal consistency reliability*

Cronbach's alpha is one of the most widely used measures of internal consistency reliability for multi-item tests. It calculates the inter-correlation between test items: the higher the coefficient, the more the items measure a given concept in the same way (Tavakol and Dennick 2011). Scores range from 0 (items within the test are completely uncorrelated) to 1 (items are perfectly correlated). The literature on Cronbach's alpha cites 0.7 to 0.95 as an acceptable range for establishing internal consistency within the test items (Tavakol and Dennick 2011). Bland and Altman (1997) specify that an alpha of 0.7 to 0.8 is sufficient when comparing groups, whereas an alpha above 0.9 is critical in clinical settings. For this reason and in accordance with previous early-grade reading studies, we consider 0.7 or higher an acceptable alpha; that is, it reflects a high degree of internal consistency across the test items.

Nonetheless, the use of Cronbach's alpha as a measure of internal consistency reliability involves some drawbacks. The value of alpha is affected by the length of the test, and alpha may underestimate the reliability of the test if different test items measure different underlying concepts (Tavakol and Dennick 2011). In addition, according to the EGRA toolkit (RTI International 2009), the fact that some language assessment tasks have a time limit is likely to inflate the alpha score.[25] However, the extent of the associated bias is not known, and Cronbach's alpha continues to find widespread use for calculating the internal consistency of early-grade reading tests.

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[25] This assumes that students would score higher without a time limit, producing a greater distribution of scores that would lower the alpha. In the case of this study, particularly in word reading and oral reading fluency, so few students were able to identify words that it is unlikely that scores would have been much higher without a time limit. The tasks are indeed measuring the students' ability rather than the speed at which they can complete the task.

For each language, we calculated Cronbach's alpha for each subtask and for the assessment as a whole. For subtasks 1 through 3 and subtask 7, we calculated the measure by using individual item responses. An item refers to one question. For instance, in the listening comprehension task, for each of the five questions posed, a child received a 1 if he or she correctly answered the question and a 0 if he or she incorrectly answered the question. For subtasks 4 through 6, we calculated Cronbach's alpha by using row scores. A row refers to a grouping of letters or words on the questionnaire. For instance, in the letter identification task, children were shown pre-printed pages with 10 rows of 10 letters each. Scores were recorded by summing the number of letters correctly identified in each row, resulting in 10 row scores for the subtask. In Table V.2, we display the alpha scores for each subtask and for the overall test in each language.

Table V.2. Internal consistency reliability (Cronbach's alpha) by language of assessment

| Subtask | Scale reliability coefficient | | | | | |
	Hausa	Zarma	Kanuri	Other local language 1	Other local language 2	French
Subtask 1: Receptive oral language	0.889	0.932	0.908	0.924	0.915	0.945
Subtask 2: Expressive oral language	0.898	0.922	0.903	0.942	0.881	0.939
Subtask 3: Listening comprehension	0.846	0.882	0.899	0.835	0.882	0.824
Subtask 4: Letter identification	0.874	0.832	0.871	0.803	0.840	0.904
Subtask 5: Familiar Word Reading	0.927	0.871	0.894	0.843	0.809	0.934
Subtask 6: Oral reading fluency	0.942	0.876	0.937	0.877	0.861	0.958
Subtask 7: Reading comprehension	0.939	0.717	0.913	0.860	0.923	0.898
Overall test	0.753	0.642	0.725	0.652	0.732	0.840

Source: NECS wave 1 data collection, October and November 2013, Household Survey.

The alpha scores presented in Table V.2 indicate that the assessments developed for each language have a high degree of internal consistency. Cronbach's alpha is above 0.80 for all but one subtask. It is lower for the overall tests, with the Zarma and other local-language scores falling below 0.70, probably reflecting the wide level of skills measured within the test: from understanding basic spoken instructions to reading and comprehending written text.

2. *Correlation of subtask within language*

In addition to calculating Cronbach's alpha for each subtask and the overall assessments, we analyzed the correlation between subtasks within each language assessment. We would expect adjacent subtasks to be the most closely correlated, meaning that students scoring high on one subtask would also likely score high on the preceding and succeeding subtasks, given that the subtasks are arranged in increasing order of difficulty. Our findings confirm that, for the most part, adjacent subtasks are highly correlated with each other within each language (Table V.3, panels a through f) and that the correlations are statistically significant.

Similar trends are observed across all six languages, with adjacent subtasks more highly correlated and the correlation decreasing with the drop-off in the adjacency between subtasks. The adjacent subtasks that appear to be least correlated in all languages are subtasks 2, 3, and 4. The outcome makes sense in that we see the greatest disparities in scores as well as in the number of children responding across these subtasks. Even though most children are able to provide at least one correct response to subtask 2, we observe a large drop-off at subtask 3 and

Table V.3. Correlations of Reading Assessment Subtasks within Language

	Subtask 1	Subtask 2	Subtask 3	Subtask 4	Subtask 5	Subtask 6	Subtask 7
A. Hausa							
Subtask 1: Receptive Oral Language	1.00						
Subtask 2: Expressive Oral Language	0.75***	1.00					
Subtask 3: Listening Comprehension	0.38***	0.44***	1.00				
Subtask 4: Letter Identification	0.11***	0.13***	0.25***	1.00			
Subtask 5: Familiar Word Reading	0.08***	0.09***	0.17***	0.72***	1.00		
Subtask 6: Oral Reading Fluency	0.07***	0.08***	0.16***	0.62***	0.85***	1.00	
Subtask 7: Reading Comprehension	0.07***	0.08***	0.17***	0.59***	0.78***	0.90***	1.00
B. Zarma							
Subtask 1: Receptive Oral Language	1.00						
Subtask 2: Expressive Oral Language	0.77***	1.00					
Subtask 3: Listening Comprehension	0.39***	0.46***	1.00				
Subtask 4: Letter Identification	0.07***	0.09***	0.17***	1.00			
Subtask 5: Familiar Word Reading	0.05***	0.06***	0.17***	0.64***	1.00		
Subtask 6: Oral Reading Fluency	0.02	0.03*	0.06***	0.32***	0.54***	1.00	
Subtask 7: Reading Comprehension	0.01	0.02	0.04***	0.34***	0.39***	0.65***	1.00
C. Kanuri							
Subtask 1: Receptive Oral Language	1.00						
Subtask 2: Expressive Oral Language	0.69***	1.00					
Subtask 3: Listening Comprehension	0.29***	0.28***	1.00				
Subtask 4: Letter Identification	0.10***	0.12***	0.32***	1.00			
Subtask 5: Familiar Word Reading	0.06**	0.08***	0.21***	0.77***	1.00		
Subtask 6: Oral Reading Fluency	0.03	0.06**	0.15***	0.61***	0.77***	1.00	
Subtask 7: Reading Comprehension	0.03	0.06**	0.14***	0.57***	0.67***	0.84***	1.00
D. Tamasheq							
Subtask 1: Receptive Oral Language	1.00						
Subtask 2: Expressive Oral Language	0.92***	1.00					
Subtask 3: Listening Comprehension	0.42***	0.47***	1.00				
Subtask 4: Letter Identification	0.16*	0.18**	0.27***	1.00			
Subtask 5: Familiar Word Reading	0.11	0.12	0.31***	0.56***	1.00		
Subtask 6: Oral Reading Fluency	0.06	0.07	0.21**	0.26***	0.85***	1.00	
Subtask 7: Reading Comprehension	0.05	0.06	0.17**	0.22***	0.76***	0.93***	1.00
E. Fulfulde							
Subtask 1: Receptive Oral Language	1.00						
Subtask 2: Expressive Oral Language	0.79***	1.00					
Subtask 3: Listening Comprehension	0.56***	0.58***	1.00				
Subtask 4: Letter Identification	0.16**	0.22***	0.26***	1.00			
Subtask 5: Familiar Word Reading	0.12	0.18**	0.20***	0.76***	1.00		
Subtask 6: Oral Reading Fluency	0.07	0.09	0.10	0.50***	0.68***	1.00	
Subtask 7: Reading Comprehension	0.05	0.06	0.07	0.40***	0.55***	0.90***	1.00

	Subtask 1	Subtask 2	Subtask 3	Subtask 4	Subtask 5	Subtask 6	Subtask 7
F. French							
Subtask 1: Receptive Oral Language	1.00						
Subtask 2: Expressive Oral Language	0.86***	1.00					
Subtask 3: Listening Comprehension	0.38***	0.41***	1.00				
Subtask 4: Letter Identification	0.62***	0.62***	0.45***	1.00			
Subtask 5: Familiar Word Reading	0.49***	0.51***	0.50***	0.82***	1.00		
Subtask 6: Oral Reading Fluency	0.39***	0.41***	0.44***	0.71***	0.88***	1.00	
Subtask 7: Reading Comprehension	0.36***	0.39***	0.49***	0.64***	0.77***	0.83***	1.00

Source: NECS Wave 1 data collection, October and November 2013, Household Survey.

***/**/*   statistically significant at the .01/.05/.10 level.

an even larger drop-off at subtask 4, which is the first subtask to measure reading skills rather than oral language skills. We performed additional analyses by using item response theory related to the reliability and comparability of the assessments, as detailed in Appendix E.

B. Data collection

To carry out the data collection activities, Mathematica drafted and released a Request for Proposal (RFP) to solicit proposals from local data collection firms. After evaluating the proposals and interviewing representatives from the most promising firms, Mathematica selected CIERPA, led by Idrissa Alichina Kourgueni. The data collection firm was responsible for the following activities:

1. Pretesting the questionnaires

2. Writing terms of reference and contracts for field interviewers and controllers

3. Hiring and training field interviewers and controllers

4. Ensuring proper dispatch of field staff to survey sites

5. Undertaking field supervision during data collection to identify and correct problems

6. Maintaining constant communication with the Mathematica team

7. Entering and cleaning data

Before the start of data collection, CIERPA conducted an extensive interviewer training session that covered the identification of schools, conduct of a village census and random selection of eligible households, basic interviewing procedures, and a review of each question.

The village and household questionnaires were written in French; however, French is rarely spoken in rural villages. Therefore, local interviewers representing the diverse ethnic and linguistic backgrounds in Niger and fluent in both French and local dialects used the French instrument to pose the survey questions in the proper dialect of the local language (using the correct idioms and words for the given village). Interviewers were organized by language (for example, a group that spoke Hausa, a group that spoke Zarma, etc.) into 14 teams and worked together to translate questions and convey the appropriate meaning in the local languages as well as to practice administering the tests.

Mathematica participated during the full duration of the trainings, including the observation of field practice in nearby neighborhoods and schools. In addition, all interviewers took an inter-rater reliability (IRR) test of all child assessments. Interviewers whose scores were more than one standard deviation from the average had the opportunity to retake the test. If they failed to meet the threshold again, they were dropped from the interviewer list. The final average IRR of the enumerators was 92 percent across all assessments.

Data collection took place in October 2013, with all data collection activities completed by early November 2013. The data collection team hired 56 interviewers to collect village, household, and school data. Each of the 14 linguistic teams comprised 3 interviewers led by an experienced field supervisor, and included both male and female interviewers. The teams were then assigned a region, with surveys conducted simultaneously throughout the country.

Prior to beginning data collection, Mathematica obtained approval from the GoN to conduct the survey in sample villages. Mathematica also obtained approval from a US based Institutional Review Board for the data collection plan and instrumentation. [26]

In Table V.4, we list the data sources used for the study, including sources for the primary data collection and additional resources.

Table V.4. Data sources

1.	Plan International Report (2010)
2.	Mathematica One-Year Follow-Up IMAGINE Report (Dumitrescu et al. 2011a)
3.	Mathematica One-Year Follow-Up IMAGINE Data (Mathematica 2011)
4.	Village census (Mathematica 2013)
5.	Household survey (Mathematica 2013)
6.	Village survey (Mathematica 2013)

C. Data cleaning

Following completion of data collection activities, CIERPA entered and cleaned the data by using the Census and Survey Processing System (CSPro). Mathematica worked with the data collection firm to review the system and oversee the entry and cleaning process. In addition, we implemented double data entry of 10 percent of the sample and checked the accuracy of the double-entered data with the data that were originally received. The data entry error rate was very small—2.05 percent at the household level and 0.65 percent at the individual level—and therefore no additional double entry was conducted.

Mathematica worked with CIERPA to conduct the data cleaning process. First, inconsistencies and potential errors were identified and corrected when they were the result of data entry error. To complete the process, Mathematica staff devised a data cleaning protocol designed to resolve inconsistencies and out-of-range data that were not a result of data entry error. Examples of inconsistent data included cases in which a respondent's answer to a subsequent question did not follow logically from the preceding question; in such cases, the subsequent response was changed to missing. Out-of-range data reflected responses that likely were data entry errors, such as a level of education category not included as an option in the questionnaires; all such data were set to missing. Data were cleaned and ready for analysis in July 2014.

D. Outcome definitions

The primary outcomes of interest in the evaluation are enrollment, attendance, French test scores, and local-language test scores. The outcomes are defined as follows:

Enrollment. A household self-report for all children in the sample measures whether a child was enrolled during the most recent school year (2012–2013).

Attendance. At baseline, a measure of absenteeism will be used instead of attendance because of the timing of data collection. The household self-report for all children in the sample will also measure whether a child was absent for more than two consecutive weeks during the

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[26] Western Institutional Review Board - http://www.wirb.com/

most recent school year (2012–2013). In what is a proxy for attendance, children not enrolled during 2012–2013 are considered to be absent. It should be noted that these definitions are different what we plan to use to measure attendance for the estimation of NECS impacts, and also from how the MEP and Plan are defining attendance for the NECS project. At follow-up, the evaluation will use a current measure of attendance.

French test scores. For the French assessment, a summary score is calculated and converted into standard deviations by normalizing by age group. Learning is measured for all children in the sample regardless of child enrollment status.

Local-language test scores. For the local-language assessment, a summary score is calculated and converted into standard deviations by normalizing by age group. We then pool the normalized scores from each local language tested. Learning is measured for all children in the sample regardless of child enrollment status.

The analysis also explores secondary outcomes, including alternative measures similar to those listed above as well as additional educational outcomes. In particular, we break out reading in French and in local languages by the reading skills that are measured, of which there are seven: receptive oral language, expressive oral language, listening comprehension, letter identification, familiar word reading, oral reading fluency, and reading comprehension. We also measure mathematics test scores. A summary score is calculated and converted into standard deviations by normalizing by age group. Learning in math is measured for all children in the sample regardless of child enrollment status.

Additional characteristics of the children, households, and schools in the sample facilitate the subgroup analyses described in the research questions, for boys compared to girls and for households with different asset levels as well as for other subgroups of interest.

VI. FINDINGS

In this chapter, we present baseline findings for the NECS evaluation. First, we discuss the descriptive statistics of key variables, comparing the data collected through our survey to other data sets in order to assess the data's external validity. Second, we compare baseline characteristics and outcomes of the NECS-only and control group villages. Third, we provide additional descriptive characteristics of households and children included in the survey, many of which will also be presented at endline. Fourth, we present additional robustness checks by using alternate specifications of the model. Fifth, we present information on some characteristics that would be expected to change as a result of the NECS intervention activities in the short term. Sixth, we outline findings from a comparison of the NECS-only and control group villages by using data collected in February and March 2011, more than one year before random assignment.

A. Descriptive statistics of key variables

To gauge whether the NECS sample is representative of the rest of Niger, we present summary statistics alongside similar variables gathered by other survey sources in Niger. It is important to note that the NECS sample is not intended to be representative of Niger as a whole. Rather, it comprises villages that were selected in 2008 by the GoN to be eligible to receive IMAGINE from across all seven regions of Niger based on certain criteria, including the number of school-age girls in the villages, access to water within the villages, and proximity to a transportation route.

In Table VI.1, we present descriptive statistics for key variables from our survey compared to similar statistics collected in the 2012 Niger Demographic and Health Survey (DHS). DHS surveys are nationally representative household surveys funded by USAID. The 2012 DHS was the fourth such survey in Niger, and it collected information on socioeconomic indicators, demographics, sanitation, and nutrition. In particular, the household survey collected data similar to that collected by the NECS baseline household survey, including data on household infrastructure, assets, and family composition. The DHS data in Table VI.1 are restricted to areas outside Niamey because NECS is not implemented there. We present the statistics for all areas outside Niamey, including urban areas, as well as statistics for rural areas only.

The NECS sample is similar to the DHS sample with respect to a few household characteristics. In addition, even though both surveys relied on different methods and explored different indicators, we find that the percentages of households using various forms of water sources, toilets, floor material, and assets are similar across samples. For instance, 46.7 percent of households surveyed by NECS reported ownership of a radio while 49.3 percent of rural households interviewed for DHS owned a radio. Among NECS households, 86.2 percent lack access to a toilet compared to 84.3 percent of rural DHS respondents.

The similarity between samples suggests that the households in the NECS sample may be fairly representative of households in rural Niger in terms of assets owned and lack of facilities, even though the sample was not purposefully meant to represent rural Niger.

Table VI.1. Descriptive statistics compared to other sources

| | | Niger 2012 DHS | |
| | | Excluding Niamey | Rural-only |
NECS			
Main source of water during rainy season (%):	Main source of water (%):		
Piped water	3.1	Faucet or public tap	27.2	19.7
Tube well or borehole	14.7	Tube well/borehole	15.8	17.3
Covered well	31.9	Protected dug well	21.8	24.1
Traditional well	20.0	Nonimproved source	35.2	38.8
Toilet (%):	Toilet (%):		
Modern toilet	0.7	Improved, not shared	7.9	4.4
Improved latrine	3.4	Shared toilet	6.1	3.1
Traditional latrine	6.5	Unimproved latrine	8.4	8.2
Bush/in nature	89.4	No toilet/nature	77.6	84.3
Floor constructed mainly of (%):	Floor constructed mainly of (%):		
Natural material	95.7	Natural material	85.6	91.3
Rudimentary material	1.7	Rudimentary material	0.4	0.4
Finished material	2.4	Finished material	14.0	8.3
Assets (% owning):	Assets (% owning):		
Radio	47.0	Radio	51.1	49.3
Telephone (mobile or fixed)	49.8	Telephone (mobile or fixed)	47.5	43.7
Bicycle	10.4	Bicycle	7.4	6.4
Animal-drawn cart	31.7	Animal-drawn cart	22.7	23.9
Household	Household		
Household size	7.5	Average size	5.9	5.9
Household head female (%)	8.4	Female head (%)	15.9	16.0

Source: NECS Wave 1 data collection, October and November 2013, household survey; Niger 2012 Demographic and Health Survey.

Note: The "Excluding Niamey" column is a combination of urban areas except for the capital, Niamey, and rural areas; while the "Rural" column is just rural areas in Niger.

B. Descriptive characteristics

To gauge the internal validity of the evaluation design and to check if that the two groups of villages were indeed comparable at baseline, we look at baseline characteristics (at the village, school, household, and child levels) of the two research groups (NECS-only and control) as well as at baseline child-level outcomes (enrollment, attendance, and test scores).[27] A comparison between treatment and control groups reveals that the two groups are indeed similar to each other on many village and household level characteristics that the project is not expected to influence. However, we do observe statistically significant differences between groups for some household characteristics which are small in magnitude. In addition, on two key outcomes the two groups have statistically significant differences: school enrollment and test scores. There are no differences in test scores in French and local language.

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[27] In this section, we present results that use weights described in Section IV.2 (unless otherwise noted). In each table, we present mean values for each variable for the control group and the regression-adjusted scores for the NECS-only group unless otherwise noted.

1. Baseline characteristics

In the discussion of baseline characteristics, we focus on the type of characteristics measured: village characteristics, school characteristics, and household and child characteristics.

a. **Village characteristics.** In the village census, we counted the total number of eligible households, the total number of people, the number of children (girls and boys), and the percentage of households with school-age children (girls and boys). On all fronts, the two groups of villages look highly similar. Differences between the NECS-only and control groups are generally small, and only one (out of 19 characteristics) is statistically significant at the 10 percent level (Table VI.2), which is less than expected because of chance. For example, the control group villages average 106 eligible households and 640 people per village, whereas NECS-only villages average 116 eligible households and 640 people.

Table VI.2. Comparison between characteristics of NECS-only and control group villages

	NECS-only group	Control group
Village population and demographics		
Number of eligible households in village	115.8	105.7
Number of people in village	639.6	639.6
Number of children in village	291.4	289.2
Number of girls	139.6	144.7
Number of boys	151.7	144.5
Percent of households in village with:		
School-age children	71.8	71.8
School-age girls	58.9	57.7
School-age boys	59.3*	56.8
Sample population and demographics		
Number of households	37.9	38.0
Number of children	83.1	83.0
Number of girls	39.8	40.1
Number of boys	43.2	42.9
Percent of households with:		
Girls ages 5-14	67.9	69.2
Boys ages 5-14	72.3	71.0
Percent of households speaking:		
Hausa	76.9	77.0
Zarma	25.0	25.0
Tamasheq	5.5	10.0
Fulfulde	8.8	5.7
Kanuri	11.9	11.2
Sample size:		
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, village census and household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

In Table VI.2, we show the characteristics of only those households included in the study sample at the village level. Again, we counted the number of households surveyed, number of children (girls and boys), percentage of households with girls and boys age 5 through 14, and percentage of households speaking a variety of local languages. Again, the two groups of villages look similar. We found statistically significant differences in none of the characteristics.

b.   **School characteristics.** As for the characteristics of village schools, the NECS-only and control groups look similar on a broad array of characteristics, including their primary teaching language, the year the school opened, and the presence of many types of outside programming (Table VI.3). We see that schools in NECS-only villages are 17 percentage points more likely to be reported as bilingual schools by the community leader survey respondent than schools in control group villages[28], a finding that is significant at the 5 percent level. However, the difference, which reflects 19 comparisons, is potentially the result of chance.

Table VI.3. Comparison between characteristics of NECS-only and control group schools

	NECS-only group	Control group
School is bilingual (%)	26.5**	9.6
Year school opened	1989	1991
School changed location (%)	16.3	23.1
Primary teaching language is:		
Hausa (%)[a]	0.0	3.8
French (%)[a]	100.0	96.2
Secondary teaching language is:		
Hausa (%)	63.6	60.0
Zarma (%)	22.8	20.0
Tamasheq (%)	1.5	6.0
Fulfulde (%)	2.0	2.0
Kanuri (%)	10.0	10.0
French (%)	0.1	2.0
Outside programs in community (%)	36.0	25.0
UNICEF (%)	8.0	9.6
World Vision (%)	2.0	0.0
Project Luxembourg – development (%)	1.4	1.9
French Development Agency (%)	3.7	3.8
Outside programming includes:		
School feeding (%)	46.0	46.2
Other health program (%)	17.1	15.4
Infrastructure (%)	40.0	38.5
Sample size:		
Number of schools	87	54

Source: NECS Wave 1 data collection, October and November 2013, village survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages.

[a]The NECS-only mean reported here is unadjusted.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

NECS-only and control group villages look similar on nearly all measures of school infrastructure—including number of classrooms; number of classrooms constructed of finished materials; and percentage of schools with the presence of a potable water source, functioning potable water source, functioning toilet facilities, having preschools, having playgrounds, and

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[28] This information was gathered by asking a community leader if the school is bilingual and is prone to measurement error, since that leader may not know the official designation of the school. It could represent whether or not teachers in the school speak multiple languages. Based on implementation information, this does not accurately reflect if the school is a bilingual school, as defined by the MEP and the curriculum offered within the school.

having teacher lodging (Table VI.4). Significant differences in school infrastructure characteristics pertain only to the presence of toilet facilities (34.6 percent of control group schools and 49.9 percent of NECS-only group schools, significant at the 10 percent level), the presence of separate toilets for boys and girls (20.8 percent of control group schools and 40.7 percent of NECS-only group schools, significant at the 1 percent level), and the presence of female-only teacher lodgings (11.5 percent of control group schools and 0.7 percent of NECS-only group schools, significant at the 5 percent level). These findings are greater than expected as a consequence of chance and therefore reflect some differences between the control villages and NECS-only villages in terms of school infrastructure. NECS-only villages appear to have better toilet facilities, but not other types of school infrastructure.

Table VI.4. Comparison between infrastructure characteristics of NECS-only and control group schools

	NECS-only group	Control group
Number of:		
Classrooms	5.4	5.2
Classrooms made of finished materials	2.8	2.7
Percent of schools with:		
Potable water source present	19.6	23.1
Potable water source functioning	13.3	21.2
Toilet facilities present	49.9*	34.6
Toilet facilities functioning	38.2	26.9
Separate toilets for boys and girls	40.7***	20.8
Preschool facility	24.0	25.5
Playground	13.2	13.5
Teacher lodging	0.7**	11.5
Teacher lodging – females only	0.9	1.9
Sample size:		
Number of schools	87	54

Source: NECS Wave 1 data collection, October and November 2013, village survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

c.   **Household and child characteristics.** We next look at household and child characteristics, including size of the household, types of materials used to construct the household dwelling, assets, water sources, information on the household head, and information on children in the household (Table VI.5). Household size, assets (including the percentage of households that own a radio, telephone (mobile or fixed), bicycle, cattle, or camels), the main source of water during the rainy season, the average number of meals consumed per day, and the percentage of households with a member who has gone to bed hungry in the previous seven days are similar between NECS-only and control villages. Further, among households reporting ownership of a cell phone, we followed up to ask which household member(s) were permitted to use the phone and report only two small significant differences among who is permitted to use the cell phone. We also see some significant differences between the two types of villages in terms of the household dwelling construction materials; however, the practical differences are relatively small. For example, the dwellings in 94.2 percent of control group villages have floors constructed of natural materials, whereas 96.5 percent of dwellings in NECS-only villages have floors constructed of natural materials. Even though

the difference is significant at the 5 percent level, it is small at a practical level. Nonetheless, the differences in roof and wall types are statistically significant. These statistically significant differences suggest that NECS-only villages may not be as well off as control group villages, however because the magnitude of the differences is small, we conclude that households in NECS-only villages are quite similar to households in control villages.

Table VI.5. Comparison between household and child characteristics of NECS-only and control group households

	NECS-only group	Control group
Household		
Household size	7.6	7.5
Floor made mainly out of (%):		
Natural material	96.5**	94.2
Rudimentary material	1.9	1.6
Finished material	1.4***	4.0
Roof made mainly out of (%):		
Natural material	34.1	32.1
Rudimentary material	64.1*	59.0
Finished material	2.3***	8.0
Dwelling walls made mainly out of (%):		
Natural material	67.1	66.9
Rudimentary material	26.3*	21.7
Finished material	1.2***	3.6
Assets (%):		
Radio	47.1	46.7
Telephone – mobile or fixed	53.6	51.7
Watch	30.8	29.4
Bicycle	11.5	10.8
Animal-drawn cart	29.1	31.9
Cattle	35.4	34.3
Camels[a]	2.5	3.2
Main source of water during rainy season (%):		
Piped water	18.5	15.5
Tube well or borehole	29.5	35.0
Covered well	20.4	21.2
Traditional well	28.0	27.5
Primary type of toilet used (%)		
Modern toilet	0.7	1.0
Improved latrine	4.6	3.9
Traditional latrine	9.3	8.9
Bush/in nature	85.3	86.2
Average number of meals per day	2.4	2.4
Household member gone to bed hungry in previous 7 days (%)	13.7	14.4
Member of the household permitted to use cell phone (if cell phone is owned) (%):		
Head	92.1	91.9
Spouse	54.4	54.8
Child	25.4	24.7
Grandchild	1.5	1.1
Parent	1.8	2.5
Sibling	5.1*	3.6
Aunt/uncle[a]	0.7	0.5
Niece/nephew[a]	0.5**	0.2
Adopted/foster/step	0.0	0.0
Not related	0.7	0.7
Household head		
Female (%)	9.1	8.0
Average age[a]	45.5	45.0
Completed primary school (%)	20.7	22.2
Completed secondary school (%)	7.1	8.4
Completed madrassa school (%)	0.3	0.2

	NECS-only group	Control group
Speaks		
Hausa (%)	80.0	80.2
Zarma (%)	25.8	25.8
Kanuri (%)	6.7	6.1
Tamasheq (%)	1.4*	6.0
Fulfulde (%)	14.9	11.9
Other (%)	3.2	2.7
Francophone	19.9	22.2
Literate	29.6	30.4
Children		
Female (%)	47.9	48.3
Average age	8.8	8.7
Speaks:		
Hausa (%)	60.4	60.0
Zarma (%)	23.0	22.6
Kanuri (%)	4.2	4.2
Tamasheq (%)[a]	-1.8	2.1
Fulfulde (%)	14.0*	10.9
Other (%)	0.1	0.2
Has legal birth documents (%)	32.6	30.6
Sample size:		
Number of villages	87	54
Number of households	3,342	2,049
Number of children	7,464	4,480

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages.

[a]The NECS-only mean reported is unadjusted.

***/**/* Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

We see only one significant difference between the treatment and control groups in the characteristics of the household head and its children. Heads of household in the control group villages are more likely to speak Tamasheq than households in NECS-only villages, although the difference is significant at the 10 percent level only. Among the other characteristics of the head of household, including gender, age, percentage completing various levels of schooling, other languages they speak, and whether they are literate, we report no statistically significant differences. The child-level characteristics include gender, age, the languages spoken by children, and whether children have legal birth documents. The only statistically significant difference is whether children speak Fulfulde, with treatment villages showing only a 3 percentage point higher likelihood (at a 10 percent level) than control villages.

2. Baseline child outcomes

The main outcomes of interest for the impact evaluation are enrollment, attendance, and test scores. We review baseline values for these outcomes to determine whether NECS-only and control villages started from a similar point. We begin with the primary outcomes of interest and then conduct subgroup analyses by gender and household quality.

a. **Primary outcomes of interest.** First, we look at the measures of the four primary outcomes of interest for the impacts analysis. We see statistically significant differences in the percentage of children reporting enrollment in 2012–2013 (58.8 percent in control group villages and 53.8 percent in NECS-only villages, at the 5 percent level) and the percentage of children absent more than two consecutive weeks during the last school year (48.3 percent in control group villages and 52.0 percent in NECS-only villages, at the 10 percent level) (Table VI.6). Among normalized French and local-language test scores, the two groups demonstrate no significant differences. For the first two primary outcome measures, enrollment and attendance, the differences are not trivial. This is not what we would have expected given random assignment. Later in this report we will explore potential explanations for these differences. We also conducted a test to see if differences for all five variables are jointly significantly different from 0 and found that they are not. In other words, we cannot conclude that the difference between research groups for the four outcomes is statistically significant.

Table VI.6. Primary measures of child enrollment, attendance, and test scores

	NECS-only group	Control group
Child enrolled during previous school year (SY 2012-2013)	53.8**	58.8
Child absent more than 2 consecutive weeks during previous school year (SY 2012-2013)	52.0*	48.3
French score – normalized (standard deviations)	0.0	0.0
Local language score – normalized (standard deviations)	0.0	0.0
Test for joint significance		
F-statistic	1.8	
p-value	0.1144	
Sample size:		
Number of children	7,464	4,480
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Children that were not enrolled in school during the previous school year were considered to be absent. Normalized scores take child age into account. Sample sizes shown are for the largest sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

b. **Subgroup analyses.** Of critical importance to the impact evaluation is whether the project affected girls and boys differently. To determine whether girls in control and NECS-only villages were similar (and, likewise, boys), we conducted subgroup analyses on our key outcomes of interest by gender. In Table VI.7, we see differences between the two groups for females, with control group females 6 percentage points more likely to be enrolled during the previous school year (significant at the 5 percent level) and 5 percentage points less likely to be absent during the previous school year (significant at the 10 percent level). We also see that males in the control group are 3 percentage points more likely to be enrolled during the previous school year, significant at the 10 percent level.

Table VI.7. Primary child outcomes by gender

	Female		Male	
	NECS-only group	**Control group**	**NECS-only group**	**Control group**
Child enrolled during previous school year (SY 2012-2013)	49.6**	55.8	57.8*	61.7
Child absent more than 2 consecutive weeks during previous school year (SY 2012-2013)	55.2*	50.4	49.0	46.4
French score – normalized (standard deviations)	0.0	0.0	0.1	0.1
Local language score – normalized (standard deviations)	-0.1	0.0	0.1	0.0
Sample size:				
Number of children	3,836	2,165	3,836	2,315
Number of villages	46	27	46	27

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Children that were not enrolled in school during the previous school year were considered to be absent. Normalized scores take child age into account. Sample sizes shown are for the largest sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

We also examined whether the two types of villages display significantly different baseline values for children from families of different socioeconomic status.[29] Among families in the lowest quintile of the household quality index, we see no evidence of significant differences in the main outcomes of interest (Table VI.8). Among families in the second through fifth quintiles, we see significant differences in the likelihood of children's enrollment in school as well as in the likelihood of school absences during the last school year (significant at the 1 percent level). The poorest households in both groups are similar in terms of outcomes.

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[29] Socioeconomic status was measured by constructing a household quality index, which is a normalized measure of the type of floor, roof, walls, water source, and toilet available to a household.

Table VI.8. Primary child outcomes by household quality level

	Lowest Quintile		Quintiles 2-5	
	NECS-only group	Control group	NECS-only group	Control group
Child enrolled during previous school year (SY 2012-2013)	50.8	53.0	53.8***	61.2
Child absent more than 2 consecutive weeks during previous school year (SY 2012-2013)	52.9	53.6	52.8***	46.3
French score – normalized (standard deviations)	-0.1	0.0	0.1	0.1
Local language score – normalized (standard deviations)	-0.1	0.0	0.0	0.0
Sample size:				
Number of children	2,045	1,114	5,348	3,317
Number of villages	25	14	61	38

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Children that were not enrolled in school during the previous school year were considered to be absent. Normalized scores take child age into account. Sample sizes shown are for the largest sample; some regressions may include a smaller size due to missing data. The household quality index is a normalized measure of the type of floor, roof, walls, water source, and toilet available to a household.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

C.   Additional descriptive characteristics

Although the following estimates are not among the primary outcomes for the impact analysis, we explore additional child characteristics and outcomes; parental practices, satisfaction, and attitudes regarding schooling; and additional schooling outcomes. Consistent with the findings presented in Section B, we see significant differences between research groups in outcomes related to enrollment in school. However, across the other types of additional outcomes, we see no more variation across treatment and control groups than what we would expect as a result of chance.

In Table VI.9, we present alternate measures of the primary outcomes of interest—enrollment, attendance, and test score outcomes—and find the results to be consistent with, yet somewhat different than, those in Table VI.6. We see no significant differences between villages in either the percentage enrolled in the 2011–2012 school year or the percentage planning to enroll during the 2013–2014 school year. We do, however, see a difference in the percentage of children reporting ever enrolling in school, at a 10 percent level. Similarly, we observe significant differences in the number of days children were absent during the last month as well as in the percentage of children absent more than 14 days in the last month school was open (at a 5 percent level). Finally, when looking at the normalized and raw test score for mathematics and the percentage of correct answers for French and local-language assessments, we see no significant differences between treatment and control villages, as with the normalized test score measures.

Table VI.9. Additional measures of child enrollment, attendance, and test scores

	NECS-only group	Control group
Child ever enrolled in school (%)	57.9*	62.0
Child enrolled during SY 2011-2012 (%)	44.1	47.1
Child will be enrolled during SY 2013-2014 (%)	74.7	75.1
Number of days child absent in last month	14.8**	13.3
Child absent greater than 14 days in the last month school was open during the previous school year (SY 2012-2013) (%)	48.7**	43.6
Mathematics score–normalized (standard deviations)	0.0	0.0
Mathematics score – raw number	4.1	4.2
French score – percent correct	7.2	7.7
Local language score – percent correct	34.2	33.9
Sample size:		
Number of children	7,464	4,480
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Children that were not enrolled in school during the previous school year were considered to be absent. "Math score - raw number" is the total number of questions a child got correct on the math test (out of a possible 18 questions). "French score - percent correct" is the percentage correct (out of a possible 100). Regressions for "math score - raw number" and "French score - percent correct" control for child age. Sample sizes shown are for the largest sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

We look at additional child characteristics and outcomes in Table VI.10—whether the child reported that he or she would like to attend school and whether the child performed any type of labor during the last year (either any type or paid labor)—and report no significant differences between research groups. We also consider outcomes defined only for children who ever enrolled in school and find statistically significant differences for several variables, including whether a child is on-age-for-grade and whether a child failed to complete a particular year in school, failed to progress from one grade to the next during one year in school, and dropped out. The differences are consistent with the findings of higher enrollment in control group villages as compared to NECS-only villages. We do not find statistically significant differences between NECS-only and control group villages for the travel time to school; the age at which a child entered primary school; completion, transition, and repetition; whether the child reported enrollment in school during the 2012–2013 school year; or whether the child reported an experience of violence in school. Similarly, we do not find statistically significant differences between research groups on several measures of outcomes that the NECS project activities aim to affect, including whether teachers called on boys more frequently than on girls during classroom instruction, whether children received deworming treatment in the previous 12 months, and whether children have a mentor.

Table VI.10. Additional child characteristics and outcomes

	NECS-only group	Control group
Outcomes defined for all children		
Child wants to go to school (%)	83.8	83.9
Child Labor: any (%)	9.6	10.2
Child Labor: paid (%)	3.1	3.8
Outcomes defined for children that have ever enrolled		
Age child entered primary school	6.4	6.4
Highest grade child achieved	2.3**	2.5
Child is on-age-for-grade (%)	73.3**	77.1
Number of years child is off-grade	0.4**	0.3
Child failed to complete 2011/2012 school year (%)	1.6	1.2
Progression from school year 2011/2012 to 2012/2013 (%)	85.6***	90.8
Transition from 2nd to 3rd grade (from SY 11/12-SY 12/13) (%)	96.2	97.5
Child failed to complete 2012/2013 school year (%)	0.9***	2.1
Dropout (%)	6.8**	5.3
Repetition (%)	5.1	5.6
Completion of primary school (6th grade) (%)	12.8**	14.9
Enrolled during 2012/2013 school year, according to child (%)	58.8	58.8
Travel time to school	1.3	1.3
Experienced violence in school (%)	52.7	53.6
Teacher called more on boys (%)	18.7	19.8
Child received a de-worming treatment in previous 12 months (%)	87.2	87.4
Child has a mentor (%)	18.8	17.8
Sample size:		
Number of children	7,464	4,480
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Completion rate is only calculated for children ages 13 and older. Transition from 2nd to 3rd grade is defined only for children that were enrolled in 2nd grade during the 2011-2012 school year. Travel time is defined as 1==less than 10 minutes, 2==10-20 minutes, 3==20-30 minutes, 4==more than 30 minutes. The variables "Experienced violence in school" and "Teacher called more on boys" were created from questions that were posed only to children that self-reported having being enrolled in previous school year (SY 2012-2013). Sample sizes shown are for the largest sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

In Table VI.11, we examine additional reading outcomes in both French and three of the tested local languages and review the scores for each of the seven subtasks, breaking out the reading test scores into each subtask by language.[30] For French, Hausa, Zarma, and Kanuri, we show mean scores for each of the seven subtasks for the control group and the regression-adjusted scores for the NECS-only group. The other local languages are not spoken by both research groups; therefore, we show the unadjusted mean scores for the group in which they are spoken. The first two subtasks are measured on a 10-point scale; the third subtask is measured on a 5-point scale; the fourth, fifth, and sixth subtasks are measured according to the number of letters and words read per minute; and the seventh subtask is measured as a percentage score. We see no significant differences between treatment and control groups in performance in French or the other local languages on all skills measured or on all 28 comparisons, except in four instances. We see

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[30] Each subtask is described in Section V.A.2.

Table VI.11. Additional reading outcomes, reading skills by test language

	NECS-only group	Control group
Panel A. French		
Subtask 1: Receptive oral language	1.8	2.0
Subtask 2: Expressive oral language	1.6	1.7
Subtask 3: Listening comprehension	0.1	0.1
Subtask 4: Letter identification	5.5	5.8
Subtask 5: Familiar word reading	1.8	1.9
Subtask 6: Oral reading fluency	2.0	2.0
Subtask 7: Reading comprehension	2.2	2.3
Sample size:		
Number of children	7,019	4,237
Number of villages	87	54
Panel B. Hausa		
Subtask 1: Receptive oral language	8.9	9.0
Subtask 2: Expressive oral language	8.7	8.5
Subtask 3: Listening comprehension	2.6	2.5
Subtask 4: Letter identification	2.3	2.2
Subtask 5: Familiar word reading	0.9	0.8
Subtask 6: Oral reading fluency	1.1	1.1
Subtask 7: Reading comprehension	2.7	2.3
Sample size:		
Number of children	4,563	2,752
Number of villages	53	33
Panel C. Zarma		
Subtask 1: Receptive oral language	9.5	9.5
Subtask 2: Expressive oral language	9.2	9.2
Subtask 3: Listening comprehension	3.2*	3.5
Subtask 4: Letter identification	1.5*	0.9
Subtask 5: Familiar word reading	0.4	0.3
Subtask 6: Oral reading fluency	0.1	0.0
Subtask 7: Reading comprehension	0.3	0.0
Sample size:		
Number of children	1,429	920
Number of villages	18	11
Panel D. Kanuri		
Subtask 1: Receptive oral language	8.9	9.2
Subtask 2: Expressive oral language	8.4	8.5
Subtask 3: Listening comprehension	2.0	1.8
Subtask 4: Letter identification	3.6*	1.8
Subtask 5: Familiar word reading	1.1*	0.3
Subtask 6: Oral reading fluency	0.6	0.1
Subtask 7: Reading comprehension	1.9	0.0
Sample size:		
Number of children	931	423
Number of villages	13	6
Panel E. Other Local Language 1		
Subtask 1: Receptive oral language	8.0	n/a
Subtask 2: Expressive oral language	7.3	n/a
Subtask 3: Listening comprehension	2.7	n/a
Subtask 4: Letter identification	2.2	n/a
Subtask 5: Familiar word reading	0.6	n/a
Subtask 6: Oral reading fluency	0.2	n/a
Subtask 7: Reading comprehension	0.0	n/a
Sample size:		
Number of children	96	0
Number of villages	3	0
Panel F. Other Local Language 2		
Subtask 1: Receptive oral language	n/a	9.3
Subtask 2: Expressive oral language	n/a	8.9

	NECS-only group	Control group
Subtask 3: Listening comprehension	n/a	2.3
Subtask 4: Letter identification	n/a	2.5
Subtask 5: Familiar word reading	n/a	0.6
Subtask 6: Oral reading fluency	n/a	0.4
Subtask 7: Reading comprehension	n/a	1.3
Sample size:		
Number of children	0	142
Number of villages	0	4

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Other languages 1 and 2 were administered only in treatment or only in control villages, so no comparison between research groups can be made.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

statistically significant differences at the 10 percent level in listening comprehension and letter identification in Zarma and letter identification and familiar word reading in Kanuri. Having four differences that are statistically significant at a 10 percent level, out of 35 comparisons, is approximately what would be expected to arise as a consequence of chance, although the differences are noticeably small in magnitude. [31]

Overall, we observe low levels of oral language abilities in French and low levels of reading skills in all languages. In Appendix F, we present scores for a restricted sample of children who had been enrolled in grade 1 or 2 in NECS-only villages during the previous school year. The discussion in Appendix F is similar to that in the *NECS EGRA Descriptive Study* Round 1 report (Bagby et al. 2014b), but it uses the NECS impact evaluation data to present its analyses.

Table VI.12. Parental practices and satisfaction regarding schooling (by household)

	NECS-only group	Control group
Expectations for what age kids learn to read	9.1	9.1
Dissatisfaction with primary school infrastructure (%)	17.6*	23.4
Dissatisfaction with primary school teachers (%)	6.5	9.3
Sample size:		
Number of households	7,464	4,480
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Dissatisfaction is measured as 1 if parents reported being unsatisfied with the item in question and 0 if the parents reported a little satisfied, somewhat satisfied, or satisfied. Sample sizes shown are for the full sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

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[31] We did not adjust for multiple comparisons because this section presents only exploratory findings.

In Table VI.12, we show parental practices and satisfaction regarding school as measured at the household level, based on the head of household's responses to questions about his or her expectations for when children should learn to read, his or her satisfaction with the village's primary school infrastructure, and his or her satisfaction with the village's primary school teachers. We see significant differences between control and NECS-only villages for parental satisfaction with the primary school infrastructure, at the 10 percent level.

In Table VI.13, we explore attitudes toward education, as measured by asking survey respondents whether they would like their child to attend secondary or advanced school and whether they think their child will attend secondary or advanced school and then calculating whether they want their child to receive more schooling than they expect the child to attain. We also asked parents questions about the most important factor for sending their child to school, including distance, textbooks, dry rations, and reading materials in local languages. We see differences that are small in magnitude but statistically significant at the 10 percent level for whether the availability of textbooks or dry rations are the most important factor for sending a child to school.

Table VI.13. Parental attitudes regarding schooling (by child)

	NECS-only group	Control group
Attitudes toward schooling (%):		
Like child to attend secondary or advanced	79.1	81.1
Think child will attend secondary or advanced	64.5	64.6
Wants child to achieve more school than expects	33.7	34.1
Most important factor for sending child to school (%):		
Distance	84.4	87.1
Textbooks	3.9*	2.4
School canteen	1.0	1.8
Dry rations	0.5*	0.1
Separate bathrooms	0.2	0.1
Reading materials in local languages	10.0	8.5
Among two most important factors for sending child to school (%):		
Distance	90.7	92.1
Textbooks	18.1	15.8
School canteen	2.7	3.0
Dry rations	0.6	0.3
Separate bathrooms	0.8	0.4
Reading materials in local languages	21.4	21.7
Sample size:		
Number of children	7,464	4,480
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Sample sizes shown are for the full sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

Finally, we investigate additional schooling outcomes at the village level in Table VI.14. Outcomes include the reported rate at which children completed primary school and the reported rates at which they dropped out of school, repeated a grade, and transitioned from grade 2 to grade 3.[32] We see no significant differences between NECS-only and control group villages for these measures.

Table VI.14. Additional village-level schooling outcomes, from household data

	NECS-only group	Control group
Completion of primary school (6th grade) (%)	13.7	15.5
Dropout (%)	8.7	7.4
Repetition (%)	4.8	5.3
Transition from 2nd to 3rd grade (from SY 11/12–SY 12/13) (%)	96.0	97.3
Sample size:		
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey and village census.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Completion rate is only calculated for children ages 13 and older. Transition from 2nd to 3rd grade is defined only for children that were enrolled in 2nd grade during the 2011-2012 school year.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

D. Robustness checks

The estimates presented thus far include the weights described in Section IV.2 and show that NECS-only and control villages are equivalent in many attributes but not equivalent in measures related to enrollment. As an additional robustness check, we now show the same tables without using weights. In this specification of the regression, we see similar significant differences between the NECS-only and control villages.

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[32] These measures are derived from household self-reported data for children in the sample, with variables aggregated at the village level.

1. Village characteristics

We see no statistically significant differences between NECS-only and control villages on any of the village-level characteristics (Table VI.15).

Table VI.15. Alternate comparison between characteristics of NECS-only and control group villages

	NECS-only group	Control group
Village population and demographics		
Number of eligible households in village	104.6	105.7
Number of people in village	632.5	639.6
Number of children in village	283.9	289.2
Number of girls	136.8	144.7
Number of boys	147.2	144.5
Percent of households in village with:		
School-age children	75.3	71.8
School-age girls	59.1	57.7
School-age boys	59.0	56.8
Sample population and demographics		
Number of households	37.6	38.0
Number of children	82.7	83.0
Number of girls	40.3	40.1
Number of boys	42.4	42.9
Percent of households with:		
Girls age 5 through 14	13.3	69.2
Boys age 5 through 14	50.5	71.0
Percent of households speaking:		
Hausa	75.4	77.0
Zarma	25.8	25.0
Tamasheq	6.7	10.0
Fulfulde	9.1	5.7
Kanuri	11.8	11.2
Sample size:		
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, village census and household survey.

Note: Differences between group means were tested by using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

2.   School characteristics

School characteristics look alike; on no measures of school characteristics do we see statistically significant differences (Table VI.16).

Table VI.16. Alternate comparison between characteristics of NECS-only and control group schools

	NECS-only group	Control group
Bilingual school (%)	16.4	9.6
Year school opened	1990	1991
School changed location (%)	15.9	23.1
Primary teaching language:		
Hausa (%)	0.2	3.8
French (%)	99.8	96.2
Secondary teaching language:		
Hausa (%)	62.0	60.0
Zarma (%)	23.1	20.0
Tamasheq (%)	2.5	6.0
Fulfulde (%)	3.0	2.0
Kanuri (%)	9.8	10.0
French (%)[a]	0.0	2.0
Outside programs in community (%)	31.0	25.0
UNICEF (%)	9.0	9.6
World Vision (%)	2.4	0.0
Project Luxembourg–development (%)	2.7	1.9
French Development Agency (%)	4.8	3.8
Outside programming includes:		
School feeding (%)	30.3	30.0
Other health program (%)	21.7	20.0
Infrastructure (%)	42.1	40.0
Sample size:		
Number of schools	87	54

Source: NECS Wave 1 data collection, October and November 2013, village survey.

Note: Differences between group means were tested by using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects.

[a]The NECS-only mean reported here is unadjusted.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

3.   School infrastructure characteristics

On nearly all measures of school infrastructure, NECS-only and control group villages are similar (Table VI.17). The only school infrastructure characteristics exhibiting statistically significant differences are the presence of separate toilets for boys and girls (20.8 percent of control group schools and 34.6 percent of NECS-only schools) and the presence of teacher lodging (11.5 percent of control group schools and 3.3 percent of NECS-only schools). Both differences are significant at the 10 percent level. With 11 comparisons made, this is more than would be expected to be due to chance.

Table VI.17. Alternate comparison between school infrastructure characteristics of NECS-only and control group villages

	NECS-only group	Control group
Number of:		
Classrooms	5.3	5.2
Classrooms constructed of finished materials	2.8	2.7
Percent of schools with:		
Potable water source present	22.3	23.1
Potable water source functioning	16.5	21.2
Toilet facilities present	44.7	34.6
Toilet facilities functioning	30.7	26.9
Separate toilets for boys and girls	34.6*	20.8
Preschool facility	22.0	25.5
Playground	12.7	13.5
Teacher lodgings	3.3*	11.5
Female-only teacher lodgings	0.8	1.9
Sample size:		
Number of schools	87	54

Source: NECS Wave 1 data collection, October and November 2013, village survey.

Note: Differences between group means were tested by using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

4.   Household and child characteristics

We see some statistically significant differences between the two study groups in terms of the construction materials used in the household dwelling; however, the practical differences are relatively small (Table VI.18. For example, 94.2 percent of households in the control group occupy dwellings with floors constructed of natural materials versus 96.0 percent of households in the NECS-only group. Even though the difference is significant at the 5 percent level, it is, for all practical purposes, extremely small. Similar-sized differences pertain to the percentage of floors, roofs, and dwelling walls constructed from finished materials as well as for the percentage of dwelling walls constructed from rudimentary materials (with significance ranging from 1 to 10 percent).

Table VI.18. Alternate comparison between household and child characteristics of NECS-only and control groups

	NECS-only group	Control group
Household characteristics		
Household size	7.6	7.5
Floor made mainly out of (%):		
Natural material	96.0**	94.2
Rudimentary material	1.8	1.6
Finished material	2.0***	4.0
Roof made mainly out of (%):		
Natural material	33.7	32.1
Rudimentary material	62.3	59.0
Finished material	3.6***	8.0
Dwelling walls made mainly out of (%):		
Natural material	66.2	66.9
Rudimentary material	25.7*	21.7
Finished material	1.8***	3.6
Assets (%):		
Radio	47.1	46.7
Telephone (mobile or fixed)	51.6	51.7
Watch	31.1	29.4
Bicycle	11.5	10.8
Animal-drawn cart	29.5	31.9
Cattle	35.3	34.3
Camels	3.4	3.2
Main source of water during rainy season (%):		
Piped water	16.7	15.5
Tube well or borehole	30.1	35.0
Covered well	19.7	21.2
Traditional well	30.4	27.5
Principal type of toilet (%):		
Modern toilet	0.8	1.0
Improved latrine	4.1	3.9
Traditional latrine	7.9	8.9
Bush/in nature	87.1	86.2
Average number of meals per day	2.4	2.4
Household member gone to bed hungry in previous seven days (%)	15.3	15.3
Member of household permitted to use cell phone (if cell phone is owned) (%):		
Head	91.4	91.9
Spouse	55.0	54.8
Child	25.7	24.7
Grandchild	1.5	1.1
Parent	2.0	2.5
Sibling	5.2*	3.6
Aunt/uncle	0.7	0.5
Niece/nephew	0.7**	0.2
Adopted/foster/step	0.0	0.0
Not related	0.7	0.7
Household head characteristics		
Female (%)	9.2	8.0
Average age	47.0	46.6
Completed primary school (%)	21.6	22.2
Completed secondary school (%)	7.3	8.4
Completed madrassa school (%)	0.3	0.2

	NECS-only group	Control group
Speaks:		
Hausa (%)	77.4	80.2
Zarma (%)	26.4	25.8
Kanuri (%)	3.9	6.1
Tamasheq (%)	8.4	6.0
Fulfulde (%)	12.6	11.9
Other (%)	3.1	2.7
Francophone (%)	20.7	22.2
Literate (%)	29.1	30.4
Child characteristics		
Female (%)	48.7	48.3
Average age	8.8	8.8
Speaks:		
Hausa (%)	58.3	60.0
Zarma (%)	23.7	22.6
Kanuri (%)	2.6	4.2
Tamasheq (%)	3.9	2.1
Fulfulde (%)	11.3	10.9
Other (%)	0.1	0.2
Has legal birth documents (%)	32.1	30.6
Sample size:		
Number of villages	87	54
Number of Households	3,342	2,049
Number of children	7,464	4,480

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested by using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects. Regressions account for clustering within villages. Sample sizes shown are for the full sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

NECS-only and control group villages look very similar in terms of household wealth, including assets, main sources of water during the rainy season, and average number of meals consumed per day. We do see some minor differences among households that reported ownership of a cell phone: the percentage of siblings and nieces/nephews permitted to use the cell phone is significant, but, again, the difference is, for all practical purposes, small. We see no statistically significant differences between NECS-only and control group villages in terms of head-of-household or child-level characteristics.

Significant differences pertain to primary measures of enrollment and attendance, but not to primary measures of learning. For enrollment, children in control group villages are significantly more likely to report enrollment in school during the 2012–2013 school year (62.0 versus 55.8 percent, significant at the 1 percent level) (Table VI.19. Children in control group villages are less likely to report absences of more than two consecutive weeks during the last school year (47.1 versus 52.1 percent, significant at the 5 percent level).

Table VI.19. Alternate comparison of primary measures of child enrollment, attendance, and test scores

	NECS-only group	Control group
Child enrolled during previous school year (SY 2012–2013) (%)	55.8***	62.0
Child absent more than two consecutive weeks during previous school year (SY 2012-2013) (%)	52.1**	47.1
French score–normalized (standard deviations)	0.0	0.0
Local language score–normalized (standard deviations)	0.0	0.0
Sample size:		
Number of children	7,464	4,480
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested by using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects. Regressions account for clustering within villages. Normalized scores take child age into account. Sample sizes shown are for the full sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

E.   Exposure to NECS intervention activities

Some of the sources of the observed differences between research groups noted above could arise from exposure to some NECS intervention activities, especially given that, at the timing of data collection in October and November 2013, the NECS project had begun to introduce some project activities in NECS-only treatment villages. If the intervention had already begun, one would expect to see some differences in measures that were collected specifically to show the roll-out of intervention activities. We therefore look at variables in the data that might indicate that villages were indeed exposed to NECS activities at the time of data collection. As shown in Table VI.20, NECS-only villages were much more likely than control villages to report teacher training activities. They were also more likely to report that adults had participated in adult literacy training, community events related to literacy, and training for community governance structures (Comité de Gestion des Etablissements Scolaires-COGES/CDGES, Association des Peres-APE, or Association des Meres-AME). We observe no significant differences for participation in or receipt of the other outside interventions in schools, including provision of textbooks, provision of reading programs, deworming related programs, programs related to community groups, girls' enrollment activities, and water and sanitation activities.

Table VI.20. Measures of exposure to NECS activities

	NECS-only group	Control group
Village level		
Intervention activities in school received by any program:		
Teacher training (%)	81.0***	11.5
Textbooks/manuals (%)	24.4	15.4
Reading (%)	6.7	3.8
Deworming (%)	11.4	3.8
Community groups (%)[a]	14.3	0.0
Girls' enrollment (%)[a]	28.6	0.0
Water and sanitation (%)[a]	28.6	0.0
Household level		
Adults participated in literacy training (%)	21.8***	13.1
Adults participated in community events related to literacy (%)	16.8***	9.5
Adults participated in COGES/CGDES, AME, or APE (%)	29.7**	25.8
Sample size:		
Number of households	7,464	4,480
Number of villages	87	54

Source: NECS Wave 1 data collection, October and November 2013, household survey.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Sample sizes shown are for the full sample; some regressions may include a smaller size due to missing data.

[a]The NECS-only means are unadjusted.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

F. 2011 IMAGINE evaluation data

Some of the sources of the observed differences between NECS-only and control group villages could also arise as a consequence of two factors related to chance. First, each household eligible for the survey had an equal chance of being sampled; however, it is possible that the sample drawn for the survey does not accurately represent the villages.[33] Second, the households and the children could account for preexisting differences across the villages. Even though random assignment ensures that all eligible villages have an equal chance of participating in either research group, it is possible that the research groups embody some differences.

To test these possible explanations, we use data that Mathematica collected in February and March 2011 for the one-year evaluation of the IMAGINE project—data collected more than one year before random assignment for the NECS project and well before the launch of NECS implementation; therefore, the data do not reflect early impacts of the NECS intervention. In addition, the data come from a cross-section of households and not from the same households represented by the 2013 NECS data. We collected the 2011 IMAGINE evaluation data in a

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[33] The 2013 survey sample was composed of 40 households with school-age children (age 5 through 14) selected randomly from each village in the sample frame. To identify all eligible households with school-age children in each village, interviewers conducted a census of all households in the village. Interviewers then selected 40 households in each village for participation in the survey. The interviewers took the total number of eligible households, N, and divided it by 40, the number of households to be interviewed in each village, yielding the result P. The interviewers chose a random number between 1 and P and then selected the first eligible household on the list matching the random number. The interviewers then continued down the list by a factor of P to select the next household, until they selected 40 households. Households that refused to participate were noted and replaced.

similar manner as with the NECS wave 1 data from the same set of eligible villages, except for the exclusion of two communes and three additional villages. [34] Mathematica hired a data collection firm from the region, a different firm than was hired for the 2013 data collection. Households with children age 6 through 12 were randomly sampled from a census in each village. It is unlikely that two independently drawn cross-sections contain the same information and yet are not representative of the villages.

We looked at the village-, school-, household-, and child-level variables available in the 2011 IMAGINE data that are similar to those variables in the NECS data and conducted comparisons along the lines of those presented in Section VI.B. In Tables VI.21 through 24, we present comparisons of each in turn. The 2011 IMAGINE evaluation sample included 178 villages. Of these, 77 are NECS-only villages and 46 are NECS control group villages.

Using the data from 2011, we observe no significant differences in the village populations' demographic characteristics between the NECS-only and control group villages in the sample (Table VI.21). Consistent with the 2013 findings from Table VI.2, we see that the number of eligible households, number of people, and number of households with school-age children in the villages do not differ in a statistically significant manner.

Table VI.21. Comparison of village characteristics between NECS-only and control groups using the 2011 IMAGINE data

	NECS-only group	Control group
Number of eligible households in village	118.9	121.0
Number of people in village	913.5	934.7
Percent of households in village with:		
School-age children	79.8	79.0
School-age girls	63.1	62.2
School-age boys	63.8	64.3
Sample size:		
Number of villages	76	46

Source: 2011 IMAGINE data.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

We also look at school characteristics in the villages and the sample, finding few statistically significant differences (Table VI.22). In particular, we find no significant difference between the NECS-only and control villages in the year the school opened but do observe a difference at the 10 percent level in whether the primary conversational language is Hausa. In terms of school infrastructure, we report no significant differences in the number of classrooms, number of

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[34] The IMAGINE evaluation excluded two communes from the analysis due to severe deviation from random assignment, and also excluded three villages because the security situation did not allow interviewers to visit them during the IMAGINE data collection effort. Because this report is a baseline for the NECS-only evaluation sample, and villages were randomly assigned to treatment or control from within those villages that had not received IMAGINE schools, the deviation from random assignment for IMAGINE is not as relevant. Also, there were not security concerns during the 2013 data collection effort that restricted access to villages. We therefore include all communes and all NECS-only and control group villages in the 2013 sample.

classrooms constructed of finished materials, presence of a potable water source, availability of separate toilet facilities for girls and boys, and presence of teacher lodging. We do note a difference at the 10 percent level in whether schools have toilet facilities.

Table VI.22. Comparison of school characteristics between NECS-only and control groups using the 2011 IMAGINE data

	NECS-only group	Control group
Year school opened	1990	1992
Primary conversational language is Hausa (%)	6.7*	2.0
Number of:		
Classrooms	5.0	4.7
Classrooms made of finished materials	2.3	2.1
Percent of schools with:		
Potable water source present	15.8	16.0
Toilet facilities present	34.4*	20.0
Separate toilets for boys and girls	42.2	50.0
Preschool facility	18.9	22.4
Teacher lodging	1.3	4.0
Sample size:		
Number of schools	81	50
Number of villages	76	46

Source: 2011 IMAGINE data.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

We also look at household characteristics, finding no significant differences in household structure, main source of water, characteristics of the household head, and age and gender of children in sampled households (Table VI.23). We do find some small significant differences in assets; that is, households in control villages are somewhat more likely than households in NECS-only villages to own a radio or watch and less likely to own cattle.

Table VI.23. Comparison of household and child characteristics between NECS-only and control groups using the 2011 IMAGINE data

	NECS-only group	Control group
Household		
Household size	9.2	9.1
Floor made mainly out of (%):		
Natural material	95.3	95.6
Rudimentary material	3.7	3.2
Finished material	0.9	1.2
Roof made mainly out of (%):		
Natural material	13.2	13.0
Rudimentary material	85.6	85.2
Finished material	1.2	1.9
Assets (%):		
Radio	57.5**	62.1
Telephone – mobile or fixed	47.6	49.1
Watch	51.1***	55.7
Bicycle	10.6	10.0
Animal-drawn cart	30.5	33.3
Cattle	48.0**	43.5
Main source of water during rainy season (%):		
Piped water	10.0	11.7
Tube well or borehole	31.1	33.5
Covered well	40.4	37.8
Traditional well	12.1	10.5
Household Head		
Female (%)	2.0	2.9
Average age	40.9	46.1
Completed primary school (%)	16.6	14.5
Completed secondary school (%)	4.8	4.8
Completed madrassa School (%)	0.2	0.2
Children		
Female (%)	46.8	47.6
Average age	8.4	8.4
Sample size:		
Number of households	2,987	1,798
Number of children	6,997	4,202
Number of villages	76	46

Source: 2011 IMAGINE data.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Sample sizes shown are for the full sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

In Table VI.24, we look at child education outcomes, including measures of enrollment, attendance, and test scores. Consistent with the 2013 NECS data, we find statistically significant differences, at the 5 percent level, between NECS-only villages and control group villages for enrollment and attendance and no statistically significant differences in test scores. Control group villages have higher enrollment and higher attendance than NECS-only villages.

Table VI.24. Comparison of measures of child enrollment, attendance, and test scores using the 2011 IMAGINE data

	NECS-only group	Control group
Enrollment according to household (%)	62.8**	66.6
Enrollment according to school records (%)	61.1**	65.5
Present at school today (school records) (%)	57.9**	61.7
Mathematics score – raw number	5.9	6.1
French score – raw number	1.5	1.5
Math score – normalized (standard deviations)	-0.03	0.02
French score – normalized (standard deviations)	0.00	-0.01
Sample Size		
Number of children	6,997	4,202
Number of villages	76	46

Source: 2011 IMAGINE data.

Note: Differences between group means were tested using two-tailed t-tests. Treatment group means are regression-adjusted, including commune fixed effects and weights. Regressions account for clustering within villages. Normalized scores take child age into account. Sample sizes shown are for the full sample; some regressions may include a smaller size due to missing data.

***/**/*   Difference between the NECS-only and control group means is statistically significant at the .01/.05/.10 level.

That we find similar differences between the NECS-only and control group villages in enrollment and attendance outcomes for sampled children in the 2011 IMAGINE evaluation data, suggests that there are differences between the research groups in enrollment and attendance in these villages and that chance is one possible reason.

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VII. DISCUSSION

NECS project activities, which aim to improve access to high quality education and increase student reading achievement, are undergoing implementation as a package in recipient villages. Activities include borehole construction and maintenance, mobilizing school governance structures to promote joint initiatives with communities, and promotion of gender-equitable classrooms and student leadership activities. NECS is also working to engage the community by supporting school management committees and developing a student mentoring program to foster a healthy school environment and motivate parents to keep their children in school. In addition, NECS is implementing an ambitious local language reading curriculum for first and second grades that trains and supports teachers in new methods of teaching reading in early grades and develops reading materials in local languages. Implementation of the curriculum began in grade 1 during the 2013–2014 school year and will expand to grade 2 during the 2014-2015 school year. NECS also aims to promote a culture of reading by establishing community support for reading and an adult literacy program.

The NECS project is builds on previous efforts to improve the educational outcomes of girls in Niger through a project called IMAGINE, which consisted primarily of improvements in school infrastructure; NECS has a new focus on early grade reading. The impact evaluation of the NECS project will estimate the impacts of the package of NECS interventions with and without IMAGINE infrastructure, using random assignment. In particular, the evaluation aims to answer the following research questions: (1) What is the impact of the NECS project alone and of the NECS project in combination with IMAGINE on enrollment, attendance, and learning as measured by test scores? (2) Do project impacts differ for girls and boys? and (3) Do impacts differ for children from households with different asset levels? The evaluation will also conduct cost analyses to determine if the NECS project investment was justified from a cost perspective.

Random assignment was implemented by randomly assigning villages within each commune during two distinct stages. The first stage occurred in 2009 when villages were randomly assigned to receive IMAGINE. The second round of random assignment occurred in 2012; the villages that did not receive IMAGINE were randomly assigned to either receive the NECS-only project or to be in the control group. All villages that actually received IMAGINE schools were then selected to receive NECS as well. There were some small deviations[35] after the first round of random assignment, because it turned out that some villages were not actually eligible to receive IMAGINE after a ground-truthing effort carried out by the implementer. Therefore there are 59 villages receiving both IMAGINE and NECS that are in the evaluation sample. There was only one deviation from random assignment at the second round, where one NECS-only village was deemed to be too insecure to receive intervention activities and was replaced by another nearby village. These two villages are not part of the evaluation. Therefore, the impact evaluation includes 59 villages that will receive both IMAGINE and NECS interventions, 87 villages that received NECS-only interventions, and 54 villages in the control group, for a total of 200 villages in the study.

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[35] Out of the 65 villages that were randomly selected to receive an IMAGINE school, 57 actually received one. Two villages that were randomly assigned to be part of the control group actually received a school.

This report documents the main findings from baseline analyses of the NECS-only evaluation sample of 141 villages, using data collected during the first year of implementation activities. The activities implemented at the time of data collection included training of inspectors, teachers and community governance structures related to gender. These activities may affect intermediate outcomes but likely did not operate for a long enough period to affect child education outcomes. Therefore, this report does not provide information on the effects of the intervention on child outcomes; rather, it documents baseline characteristics and identifies initial differences between study groups relative to such outcomes. The identification of initial differences is important because it will allow us to control for these differences in the final impact evaluation.

We document baseline measures of village, household, and child characteristics. In describing the sample, we also show that, for some basic characteristics, it is similar to the 2012 Niger DHS sample. Accordingly, we might expect to see similar results if the project were implemented in other schools throughout Niger's rural regions.

In this baseline report, we find equivalence between the NECS-only and control groups on many but not all measures. We do not find any differences between the research groups in baseline village-level characteristics. However, we do identify some small but statistically significant differences in baseline household-level characteristics. Households in control villages tend to be better off than treatment villages, however the differences are practically small. We also find differences in baseline enrollment and absenteeism; control group villages account were found to have higher enrollment levels and lower absenteeism than treatment group villages. We see no differences in learning as measured through test scores in French, local-language, and mathematics assessments.

Several reasons could potentially explain the observed differences between research groups. First, the observed differences could reflect early effects of the NECS intervention. Roll-out of some NECS activities began in 2013, and we saw that indeed the NECS intervention was occurring in treatment villages at the time of data collection. We looked at several measures of short-term effects that are linked to intervention activities to see this, including the village reporting that teacher training had occurred in the village recently and parents reporting involvement in community governance structures and participation in literacy training and community literacy events. However, it is not clear if that these activities would result in a decrease in parents' reports that children were enrolled (or absent) during the previous school year. In addition, given that the Wave I baseline data collection in Niger occurred during the first year of implementation before the full introduction of intervention activities, it is unlikely that the significant differences in mean student outcomes between students in the NECS-only and control groups are attributable to early intervention effects.

Second, if random assignment was not done properly, or was not respected during implementation, differences could arise in these data since they were collected after random assignment had occurred and implementation had already begun. We conducted random assignment ourselves with the GoN, and have no evidence of manipulation of results. We determined the number of villages that would participate in each research group within each commune, and village names were drawn out of a hat. Also, we have no evidence that implementing partners did not respect random assignment. Therefore, we do believe that random assignment was properly implemented.

Third, preexisting differences in households and children in the sample could be the cause of the observed differences. This could be due to chance from random assignment of the villages or due to chance in the sample that was randomly drawn to participate in the survey. Random assignment ensures that all eligible villages have an equal chance of participating in either research group. It does not, however, guarantee that the assignment will be evenly distributed across all observable characteristics. Also, by chance, it is always possible that any given research groups represents some characteristics more than others. Households with children age 5 through 14 were randomly sampled from a list developed after a census of all village households. It is possible that the sample of randomly selected households is not representative of the villages.

We therefore use data that we collected in 2011 to conduct the one-year IMAGINE impact evaluation to explore these potential reasons. Using these data, we demonstrated that school enrollment within the NECS-only group was lower than that within the control group more than one year before random assignment for the NECS project. Such a pattern could not be a result of the NECS intervention itself. In addition, it is unlikely that two independent randomly-drawn samples of households from the same villages misrepresent households in the villages in the same way. We therefore conclude that the most likely cause of the observed differences between the research groups is chance.

Regardless of the cause, our impact analysis will control for any initial differences in the estimation of intervention impacts in order to ensure that the estimated impacts reflect the effect of the intervention and not the effect of any initial differences between research groups. We will use baseline measures to control for the initial differences in the estimation of intervention impacts.

VIII.   DISSEMINATION PROCEDURES AND FUTURE ANALYSIS

In this chapter, we discuss dissemination procedures and future analyses.

A. Dissemination procedures

For the findings in this report to be as useful as possible to a wide group of stakeholders, Mathematica is committed to making the findings accessible through several channels:

- Key findings from this report will be presented in Washington, DC, and were presented in Niamey, Niger, with the purpose of informing stakeholders about the baseline findings and guiding decisions related to the timing of the endline. The presentations provide stakeholders with an opportunity to engage directly with the research team, pose questions about findings, and offer suggestions for the next round of data collection and analysis.

- We will make the report, in both French and English, freely available on both MCC's and Mathematica's websites.

- MCC has published a public-use version of the data file on its website, along with documentation, allowing researchers to use the data to answer other, related research questions.

- The findings from this report will contribute to the final impact evaluation of the NECS project.

B. Future analyses

Mathematica will conduct a rigorous evaluation of the NECS project, estimating the impacts of the package of NECS interventions with and without the IMAGINE infrastructure. The evaluation will help policymakers better understand the importance of a high quality physical environment in conjunction with interventions geared to expanding access to high quality education and improving reading achievement through implementation of an early reading curriculum in local languages. We will also conduct a cost analysis to determine whether the NECS and IMAGINE projects are economically justified. We will determine the combined projects' effects on a per dollar basis (cost-effectiveness), compare potential benefits to costs in monetary terms (benefit-cost analysis), and compute a single summary statistic of the economic merits of the project (economic rate of return).

Endline data collection for the impact evaluation will follow two to three school years' exposure to the full set of NECS intervention activities and had been planned to take place at the end of the 2014–2015 school year, but will be delayed to a later point in time.

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APPENDIX A

CENSUS

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Census Form NECS Baseline Survey   Date |___|___| / |___|___| / |_2_|_0_|_1_|_3_|

Commune _____ |___|___| Village_____ |___|___|___| Interviewer _____ |___|___|___|

Serial Number	District Number	Concession Number	Household Number in the concession	First and last name of head of household	Sex of Head of Household MALE..........1 FEMALE......2	Number of adults in household age 18 or over that are not in school	Number of School-age children (5-14 years) in household		Eligible for Sample ELIGIBLE...........1 NOT-ELIGIBLE....0	Serial Number of Eligible Households	Sample Household Number (IM4)
							Girls	Boys			
					|__|	|__|__|	|__|__|	|__|__|	|__|		
					|__|	|__|__|	|__|__|	|__|__|	|__|		
					|__|	|__|__|	|__|__|	|__|__|	|__|		
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APPENDIX B

VILLAGE QUESTIONNAIRE

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Hello. My name is [NAME] and I am working with the research institute CIERPA. We are working on a study concerned with education in your community. The study is funded by the Millennium Challenge Corporation, an American foreign aid agency, and is being carried out by Mathematica Policy Research. I would like to talk to you about your village. The interview will focus on village information only and will take some time. Your personal information will remain strictly confidential and this information will not be released in any way that would allow identification of you. Your participation is voluntary and you may choose not to answer any or all questions for any reason. In other words, you have the alternative to not participate. There are no risks and no direct benefits to you or your village in participating in this study. You may contact M. Kourgueni, the director of CIERPA, at 96.59.80.79, if you have questions, concerns or complaints about the study or your rights as participants. If you have any questions for me, please feel free to ask at any time.

NECS VILLAGE AND SCHOOL INFRASTRUCTURE QUESTIONNAIRE 2013

REGION [NAME] [ID]	COMMUNE [NAME] [ID]	VILLAGE [NAME] [ID]

VILL1. TEAM LEADER NAME: _____ ID: |___|___|

VILL2. DAY/MONTH/YEAR OF VISIT: |___|___| / |___|___| / |_2_|_0_|_1_|_3_|

VILL3. NAME OF VILLAGE CHIEF: _____

VILL4A. NAME OF RESPONDENT IF NOT VILLAGE CHIEF:
_____

VILL4B. POSITION OF RESPONDENT IF NOT CHIEF:
_____

MODULE VILLAGE LANGUAGE	VL

LIST THE LANGUAGES SPOKEN IN THE VILLAGE, START WITH THE MOST FREQUENTLY SPOKEN.

VL1.

VL2.

VL3.

MODULE VILLAGE SCHOOLS	VE

RECORD ALL PRIMARY SCHOOLS SERVING THE VILLAGE. IF A SCHOOL IS NOT ALREADY LISTED, CREATE A NEW SCHOOL ID BY WRITING THE VILLAGE ID AND THE NUMBER LINKED TO THE ROW (E.G. '004' POUR VE4). THEN FILL IN THE SCHOOL MODULES FOR UP TO 3 SCHOOLS IN THE VILLAGE. RECORD THE PRIMARY LANGUAGE USED IN EACH SCHOOL FROM SCH9 ON THIS TABLE AND CIRCLE THE LANGUAGE FOR THE SCHOOL THAT IS THE LARGEST.

RESULT CODE: 1=SURVEYED, 2=NOT SURVEYED

SCHOOL NAME	SCHOOL ID	LANGUAGE	SCHOOL FORM RESULT
VE1. [IMAGINE NAME]	[ID]		
VE2. [IMAGINE NAME 2]	[ID2]		
VE3. [IMAGINE NAME 3]	[ID3]		
VE4.			
VE5.			

SCHOOL INFORMATION		SCHOOL ID: |__|__|__|		SCH

COLLECT INFORMATION FOR MODULE SCH AND SC BY TALKING TO THE VILLAGE CHIEF OR OTHER VILLAGE LEADER. THEN, GO TO THE SCHOOL AND LOOK FOR THE INFRASTRUCTURE COMPONENTS TO COMPLETE MODULE SS.

SCH1A. SCHOOL NAME _____

SCH1B. SCHOOL ID |__|__|__|

SCH1C. NAME OF SCHOOL DIRECTOR

_____

SCH2.	SEX OF SCHOOL DIRECTOR	MALE ....1 FEMALE..2	|___|
SCH3.	IS THE DIRECTOR FROM THIS VILLAGE?	YES ....1 NO...2	|___|
SCH4.	GEO-REFERENCE:	LATITUDE: DG N|__|__| MN |__|__| SC |__|__|__| LONGITUDE: DG E|__|__| MN |__|__| SC |__|__|__|	
SCH5.	IS THIS A PUBLIC SCHOOL OR A PRIVATE SCHOOL? (READ THE OPTIONS)	PUBLIC/COMMUNITY ....1 PRIVATE..2 KORANIC SCHOOL...................................3 MADRASA..4 NON-FORMAL SCHOOL ....5 OTHER (SPECIFY)................................99 _____	|___|___|
SCH6.	IS THIS A BILINGUAL SCHOOL?	YES .... 1 NO... 2	|___|
SCH7.	WHAT YEAR WAS THIS SCHOOL OPENED?	YEAR .... DON'T KNOW 9998	|___|___|___|___|
SCH8.	HAS THE SCHOOL CHANGED LOCATION?	YES ....1 NO...2	|___|
SCH9.	WHAT IS THE PRIMARY TEACHING LANGUAGE IN THIS SCHOOL?	HAUSSA ....01 ZARMA ....02 TAMASHEQ ....03 FULFULDE ....04 KANOURI 05	|___|___|
SCH10.	What is the SECONDARY TEACHING LANGUAGE?	TOUBOU..06 ARABE ....07 BOUDOUMA ....08 GOURMANTCHE ....09 TASSAWAK ....10 FRANCAIS...11 OTHER LANGUAGE (SPECIFY) 96	|___|___|

SCHOOL INFORMATION		SCHOOL ID: |__|__|__|	SCH

SCH11.	ARE THERE OUTSIDE PROGRAMS ACTIVE IN THE COMMUNITY THAT MAY AFFECT SCHOOLING OR CHILDREN SINCE OCTOBER 2012?	YES...1 NO 2	|___| 2⇨SCH14

SCH12. IF YES, WHAT ARE THOSE PROGRAMS? 1=YES, 2=NO (MULTIPLE ANSWERS POSSIBLE)

1. UNICEF.. |___|
2. WORLD VISION .... |___|
3. PROJECT LUXEMBOURG – DEVELOPMENT .... |___|
4. FRENCH DEVELOPMENT AGENCY (AFD)... |___|
5. OTHER (SPECIFY) _____ |___|

SCH13. IF YES, WHAT PROGRAMMING IS INCLUDED IN THESE ACTIVITIES? 1=YES, 2=NO (MULTIPLE ANSWERS POSSIBLE)

1. TEACHER TRAINING .... |___|
2. TEXTBOOKS/MATERIALS... |___|
3. READING .... |___|
4. SCHOOL FEEDING .... |___|
5. DEWORMING .... |___|
6. OTHER HEALTH PROGRAM... |___|
7. INFRASTRUCTURE... |___|
8. OTHER (SPECIFY) _____ |___|

SCH14.	IS THERE LODGING IN THE VILLAGE SPECIFICALLY FOR THE TEACHERS? YES ....1 NO 2	|___| 2⇨SS1

SCH15.	IS THE LODGING ONLY FOR FEMALE TEACHERS? YES ....1 NO 2	|___|

SCHOOL INFRASTRUCTURE PANEL		SCHOOL ID: |__|__|__|	SS
RESPONSES TO THESE QUESTIONS SHOULD COME FROM DIRECT OBSERVATION ONLY.			
SS1.	HOW MANY CLASSROOMS DOES THIS SCHOOL HAVE?	CLASSROOMS... NOT OBSERVABLE...98	|___|___|
SS2.	HOW MANY OF THESE CLASSROOMS ARE MADE OF FINISHED MATERIAL?	NUMBER.. NOT OBSERVABLE...98	|___|___|
SS3.	DOES THIS SCHOOL HAVE A POTABLE WATER SOURCE?	YES ....1 NO 2	|___| 2⇨SS6

SCHOOL INFRASTRUCTURE PANEL	SCHOOL ID: |__|__|__|	SS

RESPONSES TO THESE QUESTIONS SHOULD COME FROM DIRECT OBSERVATION ONLY.

SS4.	WHAT TYPE OF WATER SOURCE IS IT?	PIPED WATER ....01 TUBE WELL OR BOREHOLE............................02 DUG WELL ....03 RAINWATER...04 TANKER TRUCK...05 CART WITH SMALL TANK ....06 OTHER (SPECIFY) ....99 _____	|____|____|
SS5.	DOES THIS WATER SUPPLY FOR THE SCHOOL FUNCTION?	YES ....1 NO..2	|____|
SS6.	DOES THIS SCHOOL HAVE TOILET FACILITIES FOR STUDENTS?	YES ....1 NO..2	|____| 2⇨SS9
SS7.	DO THE TOILETS FUNCTION?	YES ....1 NO..2 NOT OBSERVABLE.....................................98	|____|____| 2⇨SS9
SS8.	DO GIRLS AND BOYS HAVE SEPARATE TOILET FACILITIES?	YES, SEPARATE BLOCKS................................1 YES, SAME BLOCK...2 NO..3 NOT OBSERVABLE.....................................98	|____|____|
SS9.	DOES THIS SCHOOL HAVE A PRESCHOOL?	YES ....1 NO..2 NOT OBSERVABLE.....................................98	|____|____|
SS10.	DOES THIS SCHOOL HAVE A PLAYGROUND?	YES ....1 NO..2	|____|

MODULE VILLAGE HOUSEHOLDS.			**VM**
RECORD THE NUMBER OF HOUSEHOLDS ENUMERATED IN THE CENSUS, AND THE COUNT OF ELIGIBLE HOUSEHOLDS FROM THE CENSUS. RECORD THE NUMBER OF HH INTERVIEWED. VERIFY THAT 40 HOUSEHOLDS WERE INTERVIEWED IN EACH VILLAGE. IF THERE ARE FEWER THAN 40 ELIGIBLE HOUSEHOLDS IN THE VILLAGE, VERIFY THAT ALL ELIGIBLE HOUSEHOLDS WERE INTERVIEWED.			
VM1. Count CENSUS			
VM2. Count ELIGIBLE			
VM3. Count Interviewed			

INTERVIEW RESULT	**RE**
RE1. RESULT OF HOUSEHOLD INTERVIEW: |___|___|	
COMPLETE 01	REFUSED 03
INCOMPLETE 02	OTHER (SPECIFY) ....…………96

RE2A. NAME OF DATA ENTRY CLERK – 1ST ENTRY : _____

DATA ENTRY CLERK NUMBER   \|___\|___\|

DATA ENTRY DAY/MONTH/YEAR: \|___\|___\| / \|___\|___\| / \| 2 \| 0 \| 1 \| 3 \|

RE2B. NAME OF DATA ENTRY CLERK – 2ND ENTRY : _____

DATA ENTRY CLERK NUMBER   \|___\|___\|

DATA ENTRY DAY/MONTH/YEAR: \|___\|___\| / \|___\|___\| / \| 2 \| 0 \| 1 \| 3 \|

APPENDIX C

HOUSEHOLD QUESTIONNAIRE

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HELLO. MY NAME IS [NAME] AND I AM WORKING WITH THE RESEARCH INSTITUTE CIERPA. WE ARE WORKING ON A STUDY CONCERNED WITH EDUCATION IN YOUR COMMUNITY. THE STUDY IS FUNDED BY THE MILLENNIUM CHALLENGE CORPORATION, AN AMERICAN FOREIGN AID AGENCY, AND IS BEING CARRIED OUT BY MATHEMATICA POLICY RESEARCH. I WOULD LIKE TO TALK TO YOU ABOUT YOUR HOUSEHOLD. THE INTERVIEW WILL TAKE SOME TIME. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND THIS INFORMATION WILL NOT BE RELEASED IN ANY WAY THAT WOULD ALLOW IDENTIFICATION OF YOUR HOUSEHOLD OR YOUR FAMILY'S ANSWERS. THIS INFORMATION WILL BE USED FOR EVALUATION PURPOSES ONLY, AND ONCE THE STUDY IS COMPLETED DATA FROM THE STUDY THAT DOES NOT IDENTIFY YOU PERSONALLY WILL BE MADE PUBLICLY AVAILABLE TO ENABLE ADDITIONAL ANALYSES. YOUR PARTICIPATION IS VOLUNTARY AND YOU MAY CHOOSE NOT TO ANSWER ANY OR ALL QUESTIONS FOR ANY REASON. IN OTHER WORDS, YOU HAVE THE ALTERNATIVE TO NOT PARTICIPATE. THERE ARE NO RISKS AND NO DIRECT BENEFITS TO YOU IN PARTICIPATING IN THIS STUDY. YOU MAY CONTACT M. KOURGUENI, THE DIRECTOR OF CIERPA, AT 96.59.80.79, IF YOU HAVE QUESTIONS, CONCERNS OR COMPLAINTS ABOUT THE STUDY OR YOUR RIGHTS AS PARTICIPANTS. IF YOU HAVE ANY QUESTIONS FOR ME, PLEASE FEEL FREE TO ASK AT ANY TIME. DURING THIS TIME I WOULD LIKE TO SPEAK WITH THE HOUSEHOLD HEAD AND ALL MOTHERS OR OTHERS WHO TAKE CARE OF CHILDREN IN THE HOUSEHOLD.

IDENTIFICATION OF HOUSEHOLD   IM

IM1. REGION: _____ ID |___|	IM2. COMMUNE: _____ ID |___|___|
IM3. VILLAGE: _____ ID |___|___|___|	IM4. HOUSEHOLD NUMBER: |___|___|
IM5. INTERVIEWER NAME AND NUMBER: NAME_____ ID |___|___|___|	IM6. SUPERVISOR NAME AND NUMBER: NAME_____ ID |___|___|___|

IM7. DAY/MONTH/YEAR OF INTERVIEW: \|___\|___\| / \|___\|___\| / \| 2 \| 0 \| 1 \| 3 \|

HOUSEHOLD CHARACTERISTICS   HC

HC1.   NAME OF HEAD OF HOUSEHOLD: _____

HC2.   RESPONDENT RELATIONSHIP TO HEAD OF HOUSEHOLD: \|___\|___\|

HEAD 01	MOTHER/FATHER.............................05	ADOPTED/FOSTER/STEPCHILD 09
WIFE OR HUSBAND 02	BROTHER OR SISTER 06	NOT RELATED 10
SON OR DAUGHTER 03	UNCLE/AUNT 07	OTHER RELATION............................ 96
GRANDCHILD 04	NIECE/NEPHEW 08	DON'T KNOW 98

HC3.   RESPONDENT'S NAME (IF NOT HEAD OF HOUSEHOLD) _____

HC4.   HOUSEHOLD GEO-REFERENCE: LATITUDE: DG N\|___\|___\| MN\|___\|___\| SC\|___\|___\|___\|

LONGITUDE: DG E\|___\|___\| MN\|___\|___\| SC\|___\|___\|___\|

HC5.   DESCRIPTION OF HOUSEHOLD LOCATION: _____

HC6.   RESPONDENT'S TELEPHONE NR.:   \|___\|___\|___\|___\|___\|___\|___\|___\|___\|

HC7.   HEAD OF HOUSEHOLD'S TELEPHONE NR.:   \|___\|___\|___\|___\|___\|___\|___\|___\|___\|

HC8.   PERSON TO CONTACT TO FIND THE RESPONDENT IN THE FUTURE. IF POSSIBLE, THIS PERSON SHOULD LIVE IN THE VILLAGE. IF THE CODE IS 'OTHER', SPECIFY THE RELATIONSHIP.

HEAD 01	MOTHER/FATHER.............................05	ADOPTED/FOSTER/STEPCHILD 09
WIFE OR HUSBAND 02	BROTHER OR SISTER 06	NEIGHBOR.....................................10
SON OR DAUGHTER 03	UNCLE/AUNT 07	COUSIN...11
GRANDCHILD 04	NIECE/NEPHEW 08	FRIEND 11
		OTHER (SPECIFY)............................96

NAME _____   RELATIONSHIP: \|___\|___\| _____

TELEPHONE NR: \|___\|___\|___\|___\|___\|___\|___\|___\|___\|

HOUSEHOLD CHARACTERISTICS		HC
HC9. SEX OF HEAD OF HOUSEHOLD:	MALE ....1 FEMALE 2	|___|
HC10. AGE OF HEAD OF HOUSEHOLD: (DON'T KNOW, 98)		|___|___|
HC11. HIGHEST LEVEL OF EDUCATION OF HEAD OF HOUSEHOLD: *MARK THE HIGHEST LEVEL, UP TO TWO RESPONSES ARE POSSIBLE* NONE .... 00 KORANIC SCHOOL...................................... 05 PRE-SCHOOL................................... 01 MADRASA .... 06 PRIMARY .... 02 ADULT LITERACY .... 07 SECONDARY .... 03 DON'T KNOW .... 98 HIGHER 04		A. |___|___| B. |___|___|
HC12. TOTAL NUMBER OF HOUSEHOLD MEMBERS:		|___|___|
HC13. TOTAL NUMBER OF CHILDREN UNDER 18 YEARS OLD IN HOUSEHOLD:		|___|___|
HC15. WHAT NATIONAL LANGUAGES DOES THE HEAD OF THIS HOUSEHOLD SPEAK? *MARK ALL THAT APPLY, UP TO THREE*	HAOUSSA .... 01 ZARMA .... 02 TAMASHEQ .... 03 FULFULDE .... 04 KANURI .... 05 TOUBOU .... 06 ARABE .... 07 BOUDOUMA .... 08 GOURMANTCHE .... 09 TASSAWAK.. 10 OTHER LANGUAGE (SPECIFY) .... 96 _____	A. |___|___| B. |___|___| C. |___|___|
HC16. DOES THE HEAD OF THIS HOUSEHOLD SPEAK FRENCH?	YES .... 01 NO... 02 DON'T KNOW 98	|___|___|
HC17. CAN THE HEAD OF THE HOUSEHOLD READ A SIMPLE PHRASE IN ANY LANGUAGE?	YES .... 01 NO... 02 DON'T KNOW 98	|___|___|

3

HOUSEHOLD CHARACTERISTICS HC

HC18.	MAIN MATERIAL OF THE DWELLING FLOOR?	NATURAL MATERIAL (EARTH, SAND) .... 01 RUDIMENTARY MATERIAL (WOOD PLANKS)............. 02 FINISHED MATERIAL (VINYL, ASPHALT, CERAMIC, CEMENT, TILE) .... 03 OTHER (SPECIFY) .... 96 _____	|___|___|
HC19.	MAIN MATERIAL OF THE ROOF?	NATURAL MATERIAL (NO ROOF, STRAW) .... 01 RUDIMENTARY MATERIAL (RUSTIC MAT, WOOD PLANKS) .... 02 FINISHED MATERIAL (METAL, WOOD, CEMENT, SHINGLES) .... 03 OTHER (SPECIFY) .... 96 _____	|___|___|
HC20.	MAIN MATERIAL OF THE DWELLING WALLS?	NATURAL MATERIAL (EARTH, SAND)....................... 01 RUDIMENTARY MATERIAL (WOOD PLANKS, PALM, STEM/STALK, STRAW) .... 02 FINISHED MATERIAL (ASPHALT, TILES, CEMENT) ..... 03 WITHOUT WALLS .... 04 OTHER (SPECIFY) .... 96 _____	|___|___|

HC21.	DO ANY MEMBERS OF YOUR HOUSEHOLD OWN ANY OF THE FOLLOWING FUNCTIONING GOODS?	
A. RADIO	YES ....1 NO 2	|___|
B. TELEPHONE /CELL PHONE	YES ....1 NO 2	|___|
C. WATCH	YES ....1 NO 2	|___|
D. BICYCLE	YES ....1 NO 2	|___|
E. ANIMAL DRAWN-CART	YES ....1 NO 2	|___|
F. CATTLE	YES ....1 NO 2	|___|
G. CAMELS	YES ....1 NO 2	|___|
HC22A. IF HC21B =1, HOW MANY CELL PHONES ARE OWNED BY MEMBERS OF THE HOUSEHOLD?	NUMBER OF CELL PHONES	|___|___|

4

HOUSEHOLD CHARACTERISTICS		HC

HC22B. IF HC21B =1, WHICH MEMBERS OF THE HOUSEHOLD HAVE THESE CELL PHONES?

MARK ALL APPLICABLE RELATIONS TO THE HEAD OF THE HOUSEHOLD

HEAD...01	
WIFE OR HUSBAND 02	
SON OR DAUGHTER 03	
GRANDCHILD.................................04	A. |___|___|
MOTHER/FATHER 05	
BROTHER/SISTER 06	B.|___|___|
UNCLE/AUNT 07	
NIECE/NEPHEW 08	C.|___|___|
ADOPTED/FOSTER/STEP CHILD.......09	
NOT RELATED 10	
OTHER RELATIONS (SPECIFY) 96	
_____	

HC22C. IF HC21B =1, WHICH MEMBERS OF THE HOUSEHOLD ARE ALLOWED TO USE THESE CELL PHONES?

MARK ALL APPLICABLE RELATIONS TO THE HEAD OF THE HOUSEHOLD

HEAD...01	
WIFE OR HUSBAND 02	
SON OR DAUGHTER 03	
GRANDCHILD.................................04	A. |___|___|
MOTHER/FATHER 05	
BROTHER/SISTER 06	B.|___|___|
UNCLE/AUNT 07	
NIECE/NEPHEW 08	C. |___|___|
ADOPTED/FOSTER/STEP CHILD.......09	
NOT RELATED 10	
OTHER RELATIONS (SPECIFY) 96	
_____	

HC23. WHAT IS THE MAIN SOURCE OF DRINKING WATER FOR MEMBERS OF YOUR HOUSEHOLD DURING THE RAINY SEASON?

PIPED WATER.................................01	
TUBE WELL OR BOREHOLE 02	
COVERED WELL..............................03	
TRADITIONAL WELL 04	
TANKER TRUCK 05	|___|___|
SURFACE WATER (RAIN, RIVER, STREAM, ETC) 06	
BOTTLED WATER 07	
OTHER (SPECIFY)...........................96	
_____	

HC24. WHAT IS THE PRINCIPAL TYPE OF TOILET THAT IS USED BY YOUR HOUSEHOLD?

MODERN TOILET.............................01	
IMPROVED LATRINE.........................02	
TRADITIONAL LATRINE 03	|___|___|
BUSH/IN NATURE 04	
OTHER (SPECIFY)...........................96	
_____	

HC25. HAVE ANY ADULT MEMBERS OF THIS HOUSEHOLD PARTICIPATED IN LITERACY TRAINING OF ANY KIND?

YES...1	|___|
NO 2	2⇨HC29

HC26. HOW MANY ADULT MEMBERS PARTICIPATED, BY GENDER?

A. MALES	|___|___|
B. FEMALES	|___|___|

HC27. DO ANY ADULT MEMBERS CURRENTLY PARTICIPATE?

YES...1	|___|
NO 2	1⇨HC29

HOUSEHOLD CHARACTERISTICS		HC

HC28. HAVE ANY ADULT MEMBERS PARTICIPATED DURING THE PREVIOUS 1 YEAR?	YES ....1 NO..2	|___|
HC29. HAVE ANY MEMBERS OF THIS HOUSEHOLD PARTICIPATED IN ANY COMMUNITY EVENTS RELATED TO LITERACY AND READING IN THE PREVIOUS 1 YEAR?	YES ....1 NO..2	|___|
HC30. ON AVERAGE, HOW MANY MEALS PER DAY DO YOU HAVE IN YOUR HOUSEHOLD?	NUMBER OF MEALS	|___|
HC31. IN THE PREVIOUS 7 DAYS, HAVE YOU OR ANY MEMBER OF YOUR HOUSEHOLD GONE TO BED HUNGRY BECAUSE THERE WAS NOT ENOUGH FOOD AVAILABLE?	YES ....1 NO..2	|___|
HC32. HOW SATISFIED ARE YOU WITH THE INFRASTRUCTURE IN THE PRIMARY SCHOOL IN YOUR VILLAGE? *IF THERE IS MORE THAN 1 SCHOOL, THINK OF THE SCHOOL THAT THE LARGEST NUMBER OF YOUR CHILDREN ATTEND.*	UNSATISFIED ....1 A LITTLE SATISFIED ....2 SOMEWHAT SATISFIED ....3 SATISFIED 4	|___|
HC33. HOW SATISFIED ARE YOU WITH THE TEACHERS IN THE PRIMARY SCHOOL IN YOUR VILLAGE? *IF THERE IS MORE THAN 1 SCHOOL, THINK OF THE SCHOOL THAT THE LARGEST NUMBER OF YOUR CHILDREN ATTEND.*	UNSATISFIED ....1 A LITTLE SATISFIED ....2 SOMEWHAT SATISFIED ....3 SATISFIED 4	|___|
HC34. DOES SOMEONE (ADULT) IN YOUR HOUSEHOLD PARTICIPATE IN ACTIVITIES WITH THE COGES/CGDES, AME OR APE DURING THE PREVIOUS YEAR?	YES ....01 NO..02 DON'T KNOW 98	|___|___|
HC35. DOES THE PRIMARY SCHOOL OFFER SEPARATE BATHROOMS FOR BOYS & GIRLS?	YES ....01 NO..02 DON'T KNOW 98	|___|___|
HC36. DOES THE PRIMARY SCHOOL OFFER A SCHOOL FEEDING PROGRAM?	YES ....01 NO..02 DON'T KNOW 98	|___|___| 2⇨HC39
HC37. DOES THE PRIMARY SCHOOL OFFER DRY RATIONS?	YES ....01 NO..02 DON'T KNOW 98	|___|___| 2⇨HC39
HC38. IF YES, ARE THE DRY RATIONS FOR GIRLS ONLY?	YES ....01 NO..02 DON'T KNOW 98	|___|___|
HC39. DOES THE PRIMARY SCHOOL OFFER TEXTBOOKS?	YES ....01 NO..02 DON'T KNOW 98	|___|___|
HC40. AT WHAT AGE DO YOU EXPECT CHILDREN TO BE CAPABLE OF READING?	AGE .... DON'T KNOW 98	|___|___|

6

| HOUSEHOLD LISTING FORM | | Village ID: |___|___|___| | | | | | Household Number |___|___| | | HL |

FIRST, PLEASE TELL ME THE NAME OF EACH CHILD WHO USUALLY LIVES HERE BETWEEN THE AGES OF 5 AND 14. *List all household members between 5 and 14 years old in HL2, their relationship to the household head (HL5), their sex (HL3), and their age (HL4). Then ask:* ARE THERE ANY OTHER CHILDREN BETWEEN THE AGE OF 5 AND 14 WHO LIVE HERE, EVEN IF THEY ARE NOT MEMBERS OF YOUR FAMILY, DO NOT HAVE PARENTS LIVING IN THIS HOUSEHOLD, OR ARE NOT AT HOME NOW? (INCLUDING CHILDREN IN SCHOOL OR AT WORK). *If yes, complete listing. Add a continuation sheet if there are more than 10 children in the household between the ages of 5 and 14.   Tick here if continuation sheet used* ☐
The ID code of the child noted in HL1 has to be constant on all following pages.

HL1. Child ID	HL2. CHILD'S NAME	HL3. IS (NAME) MALE FOR FEMALE? 1 MALE 2 FEMALE	HL4A. HOW OLD IS (NAME)? RECORD IN COMPLETED YEARS 98 DON'T KNOW	HL4B. DO YOU HAVE (NAME'S) LEGAL BIRTH DOCUMENTS? 1 YES 2 NO	HL5. WHAT IS THE RELATIONSHIP OF (NAME) TO THE HEAD OF THE HOUSEHOLD? 01 SON OR DAUGHTER 02 GRANDSON OR GRANDDAUGHTER 03 BROTHER OR SISTER 04 NIECE OR NEPHEW 05 ADOPTED/FOSTERED/ STEPCHILD 06 NO RELATION 96 OTHER (SPECIFY) _____ 98 DON'T KNOW	HL6. WHAT IS (NAME)'S MOTHER TONGUE? 01 HAOUSSA 02 ZARMA 03 TAMASHEQ 04 FULFULDE 05 KANURI 06 TOUBOU 07 ARABE 08 BOUDOUMA 09 GOURMANTCHE 10 DJOULA 11 FRENCH 96 OTHER (SPECIFY) _____	HL7. AT ANY TIME DURING THE PAST YEAR, DID (NAME) DO ANY KIND OF WORK FOR SOMEONE WHO IS NOT A MEMBER OF THIS HOUSEHOLD? IF YES: FOR PAY IN CASH/ IN KIND OR NON-PAID? 1 YES, PAID (CASH OR IN KIND) 2 YES, NON-PAID 3 NO	HL8. WHAT IS THE HIGHEST LEVEL OF SCHOOL (NAME) ATTENDED? LEVEL: 00 NO SCHOOL 01 PRESCHOOL 02 PRIMARY 03 SECONDARY 04 NON FORMAL 98 DON'T KNOW 00 OR 04 OR 98 ⇨ HL10	HL9. WHAT IS THE HIGHEST GRADE (NAME) COMPLETED AT THIS LEVEL? GRADE: 1 PRESCHOOL 2 CI 3 CP 4 CE1 5 CE2 6 CM1 7 CM2 8 6TH 9 ABOVE 6TH	HL10. WHAT IS THE HIGHEST LEVEL YOU THINK (NAME) WILL COMPLETE? LEVEL: 00 NO SCHOOL 01 PRESCHOOL 02 PRIMARY 03 SECONDARY 04 ADVANCED DEGREE 98 DON'T KNOW	HL11. WHAT IS THE HIGHEST LEVEL OF SCHOOL YOU WOULD LIKE (NAME) TO ATTEND? LEVEL: 00 NO SCHOOL 01 PRESCHOOL 02 PRIMARY 03 SECONDARY 04 ADVANCED DEGREE 98 DON'T KNOW
ID	NAME	SEX	AGE	BIRTH CERTIFICATE	RELATION	MOTHER TONGUE	WORK	LEVEL	GRADE	LEVEL	LEVEL
01		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|__|

| HOUSEHOLD LISTING FORM | | Village ID: |___|___|___| | | | | HOUSEHOLD NUMBER |___|___| | | HL |

To be administered for every child in the household age 5 through 14 years

HL1. *CHILD ID*	HL2. CHILD'S NAME	HL12. DURING THE (2011-2012) SCHOOL YEAR, HAS (NAME) ATTENDED SCHOOL OR PRESCHOOL AT ANY TIME? 01 YES 02 NO ⇨ HL15 98 DON'T KNOW ⇨ HL15	HL13. WHAT GRADE DID (NAME) ATTEND DURING THE 2011/2012 SCHOOL YEAR? GRADE: 1 PRESCHOOL 2 CI 3 CP 4 CE1 5 CE2 6 CM1 7 CM2 8 6IEME 9 5IEME OU PLUS	HL14. DID (NAME) COMPLETE THE SCHOOL YEAR? 01 YES 02 NO 98 DON'T KNOW	HL15. DURING THE (2012-2013) SCHOOL YEAR, HAS (NAME) ATTENDED SCHOOL OR PRESCHOOL AT ANY TIME? 01 YES 02 NO ⇨ HL18 98 DON'T KNOW ⇨ HL18	HL16. WHAT GRADE DID (NAME) ATTEND DURING THE 2012/2013 SCHOOL YEAR? GRADE: 1 PRESCHOOL 2 CI 3 CP 4 CE1 5 CE2 6 CM1 7 CM2 8 6IEME 9 5IEME OU PLUS	HL17. DID (NAME) COMPLETE THE SCHOOL YEAR? 01 YES 02 NO 98 DON'T KNOW GO TO HL19	HL18. IF NO IN HL15: WHAT IS THE PRIMARY REASON (NAME) DID NOT ENROLL IN SCHOOL IN 2012-2013? 01 NO SCHOOL IN THE VILLAGE 02 SCHOOL FEES 03 CHILD TOO YOUNG 04 SCHOOL TOO FAR 05 WORK FOR INCOME 06 HOUSEHOLD WORK 07 TAKING CARE OF SIBLINGS 08 NO SEPARATE TOILETS 09 CHILD TOO OLD 10 AVOID DEBAUCHERY 11 EARLY MARRIAGE 12 FAMILY REFUSED 13 NO CERTIFICATE OF BIRTH 14 VIOLENCE 15 CHILD HAS HEALTH PROBLEMS 16 CHILD DISABLED 17 CHILD REFUSED 18 EXPELLED/FAILED 96 OTHER (SPECIFY) 98 DON'T KNOW	HL19. DO YOU PLAN TO ENROLL (NAME) IN SCHOOL DURING THE 2013/2014 SCHOOL YEAR? 01 YES → ED1 02 NO 98 DON'T KNOW	HL20. IF NO IN HL19: WHAT IS THE PRIMARY REASON YOU DO NOT PLAN TO ENROLL (NAME) IN SCHOOL IN 2013-2014? 01 NO SCHOOL IN THE VILLAGE 02 SCHOOL FEES 03 CHILD TOO YOUNG 04 SCHOOL TOO FAR 05 WORK FOR INCOME 06 HOUSEHOLD WORK 07 TAKING CARE OF SIBLINGS 08 NO SEPARATE TOILETS 09 CHILD TOO OLD 10 AVOID DEBAUCHERY 11 EARLY MARRIAGE 12 FAMILY REFUSED 13 NO CERTIFICATE OF BIRTH 14 VIOLENCE 15 CHILD HAS HEALTH PROBLEMS 16 CHILD DISABLED 17 CHILD REFUSED 18 EXPELLED/FAILED 96 OTHER (SPECIFY) 98 DON'T KNOW
ID	NAME	ENROLLMENT 2011/2012	GRADE 2011/2012	COMPLETED 2011/2012	ENROLLMENT 2012/2013	GRADE 2012/2013	COMPLETED 2012/2013	REASON NOT ENROLLED 2012/2013	ENROLLMENT 2013/2014	REASON NOT ENROLLED
01		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|
02		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|
03		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|
04		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|
05		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|
06		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|
07		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|
08		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|
09		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|
10		|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|	|__|	|__|__|

MODULE EDUCATION		Village ID: |___|___|___|		HOUSEHOLD NUMBER |___|___|		ED

TO BE ADMINISTERED FOR EVERY CHILD IN THE HOUSEHOLD AGE 5 THROUGH 14 YEARS THAT WENT TO SCHOOL DURING THE 2012-2013 SCHOOL YEAR (HL15=1)

HL1. CHILD ID	HL2. CHILD'S NAME **HL15=1**	ED1. DID (NAME) HAVE ACCESS TO A COMPLETE SET OF TEXTBOOKS FOR HIS OR HER USE? 1 YES 2 NO	ED2. WHAT IS THE NAME OF THE SCHOOL THAT (NAME) ATTENDED IN 2012/2013 AND IN WHICH VILLAGE IS IT LOCATED? WRITE THE APPROPRIATE SCHOOL AND VILLAGE CODE FROM THE LIST. IF SCHOOL IS NOT LISTED, RECORD 888 AND WRITE FULL NAME OF SCHOOL AND THE VILLAGE ID. IF VILLAGE IS NOT LISTED, WRITE 888 IN VILLAGE ID AND RECORD VILLAGE NAME.		ED3. HOW LONG DOES IT TAKE (NAME) TO TRAVEL TO HIS/HER SCHOOL? 01 LESS THAN 10 MINUTES 02 10 – 20 MINUTES 03 20 – 30 MINUTES 04 MORE THAN 30 MINUTES 98 DON'T KNOW	ED4. OF THE FOLLOWING FACTORS, (READ THE OPTIONS) WHAT IS THE MOST IMPORTANT TO YOU FOR SENDING (NAME) TO THIS SCHOOL? 01 DISTANCE TO SCHOOL 02 TEXTBOOKS 03 SCHOOL CANTEEN 04 DRY RATIONS 05 SEPARATE BATHROOMS FOR BOYS AND GIRLS 06 READING MATERIALS IN LOCALE LANGUAGE	ED5. OF THE FOLLOWING FACTORS, (READ THE OPTIONS) WHAT IS THE SECOND MOST IMPORTANT REASON TO YOU FOR SENDING (NAME) TO THIS SCHOOL? 01 DISTANCE TO SCHOOL 02 TEXTBOOKS 03 SCHOOL CANTEEN 04 DRY RATIONS 05 SEPARATE BATHROOMS FOR BOYS AND GIRLS 06 READING MATERIALS IN LOCALE LANGUAGE
ID	NAME	MANUALS	ID SCHOOL	ID VILLAGE	ONE WAY	PRINCIPAL REASON	SECONDARY REASON
01		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|
02		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|
03		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|
04		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|
05		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|
06		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|
07		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|
08		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|
09		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|
10		|___|	|___|___|___|	|___|___|___|	|___|___|	|___|___|	|___|___|

MODULE EDUCATION	Village ID: |___|___|___|		HOUSEHOLD NUMBER |___|___|			ED

TO BE ADMINISTERED FOR EVERY CHILD IN THE HOUSEHOLD AGE 5 THROUGH 14 YEARS THAT WENT TO SCHOOL DURING THE 2012-2013 SCHOOL YEAR (HL18=1)

HL1. *CHILD ID*	HL2. CHILD'S NAME	ED6. WAS THE CHILD EVER ABSENT FOR MORE THAN 2 CONSECUTIVE WEEKS DURING THE PAST SCHOOL YEAR? 01 YES 02 NO 98 DON'T KNOW	ED9. HOW MANY DAYS DID (NAME) MISS DURING THE LAST MONTH THAT SCHOOL WAS OPEN? 98 DON'T KNOW IF 00 OR 98, GO TO ED11	ED10. WHAT WAS THE PRINCIPAL REASON FOR (NAME) MISSING SCHOOL? 01 SICK 02 FUNERAL 03 OTHER CEREMONY 04 WORK FOR INCOME 05 HOUSEHOLD CHORES 06 FINANCIAL REASONS 07 TAKING CARE OF SIBLINGS 08 CHILD REFUSED 09 TEACHER ABSENT 10 SCHOOL CLOSED 11 TRAVEL 12 VIOLENCE 13 WORKING IN THE FIELD/PASTURAGE 96 OTHER (SPECIFY)	ED11. HOW OLD WAS (NAME) WHEN HE/SHE FIRST ENTERED PRIMARY SCHOOL? 94 NOT APPLICABLE (IF CHILD IS CURRENTLY IN PRESCHOOL)	ED13. DOES (NAME) HAVE A MENTOR? 01 YES 02 NO 98 DON'T KNOW	ED14. HAS (NAME) RECEIVED DE-WORMING TREATMENT IN THE PREVIOUS 12 MONTHS? 01 YES 02 NO 98 DON'T KNOW
ID	NAME	PRESENCE	NR OF DAYS	REASON	AGE	MENTOR	DEWORMING
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|

OPINIONS OF CHILDREN	Village ID: |___|___|___|	HOUSEHOLD NUMBER |___|___|	OE

To be administered for every child in the household age 5 through 14 years, even those that have never been currently enrolled in school. Before speaking with each child, obtain consent to speak to the child from the household head or the child's parent. "I am [name]. I work with parents and children. I am trying to learn more about the daily life of children like you. I would like to ask you a few questions." **Pose some simple questions to the child to build a rapport. Make them feel comfortable. Use the language most comfortable to the child, his/her mother tongue, and note it in OE1.** "What is your name? What is the name of your father? What is the name of your mother?" **If the child refuses to speak with you, note the refusal and move to the next child. If the child speaks with you, say:** "Now I would like to ask you a few questions about school and then give you a short test in [local language] and French. I will ask you a set of questions. You should give the answer that fits best. If you don't understand the question, I will read the question again. You can ask me anytime to explain a question. You can choose not to answer, or you can tell me if a question is hard for you and we will skip that question. If you like, you can end the interview at any time. Do you understand?" **If the child understands, continue. If the child does not understand, ask what the child does not understand and clarify the issue for the child. If the child agrees, begin with a few questions about schooling in OE2-OE6 and then move to the first reading test. Record the result code of the child.**

HL1. *CHILD ID*	HL2. CHILD'S NAME COPY FROM HL2	**RESULT CODE CHILD** AFTER OBTAINING CONSENT, RECORD THE RESULT CODE 1 INTERVIEW COMPLETED IN THE HOME 2 INTERVIEW COMPLETED AT THE SCHOOL 3 PARENT REFUSED 4 CHILD REFUSED 5 CHILD NOT AVAILABLE 6 OTHER (SPECIFY)	OE1. *WRITE THE LANGUAGE USED TO POSE QUESTION TO THE CHILD* 01 FRENCH 02 HAOUSSA 03 ZARMA 04 KANURI 05 TAMASHEQ 06 FULFULDE 96 OTHER LOCALE LANGUAGE (SPECIFY)	OE2. HOW OLD ARE YOU? 98 DON'T KNOW	OE3. WERE YOU ENROLLED IN SCHOOL DURING THE LAST SCHOOL YEAR? 1 YES 2 NO ⇨ OE6	OE4. DID YOU EXPERIENCE VIOLENCE IN SCHOOL? 1 YES 2 NO	OE5. DID YOUR TEACHER CALL MORE ON BOYS OR ON GIRLS? 1 BOYS 2 GIRLS 3 SAME	OE6. DO YOU WANT TO GO TO SCHOOL? 1 YES 2 NO
ID	NAME	RESULT	LANGUAGE	AGE	ENROLLED	VIOLENCE	GENDER	SCHOOL
01		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|
02		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|
03		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|
04		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|
05		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|
06		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|
07		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|
08		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|
09		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|
10		|___|	|___|___|	|___|___|	|___|	|___|	|___|	|___|

LOCAL LANGUAGE	VILLAGE ID: |___|___|___|	HUSEHOLD NUMBER |___|___|___|

Based on the local language chosen for the main school, the reading tests begin either in Haoussa, Zarma, Kanuri, Tamasheq, or Fulfulde, and the children are only given one local language test. All the children in the village will take the same language test. After the local language test (Haoussa, Zarma, Kanuri, Tamasheq or Fulfulde), proceed to the French test and then the Math test, which will be administered to all children. Note that no matter what test is given, explain the instructions to the child in the language that they understand best.

The instructions for all the reading tests in local languages and French are the same.

LANGUAGE AND TEST CODE IN LOCAL LANGUAGE: |___| _____

    HAOUSSA......................1
    ZARMA.........................2
    KANURI.........................3
    TAMASHEQ....................4
    FULFULDE 5

Use the sheets for the local language noted above.
After finishing the local language tests, continue with the French test.

Subtask 1: Receptive Oral Language

This is not a timed exercise and is administered orally.

Interviewer states: "We are going to play a game, ok? I am going to give you instructions, and we can see if you can follow what I say!"

Example 1: Interviewer states: "Point to your nose". The interviewer then points to his nose, and encourages the child to do the same. If the child points correctly, the interviewer states "Bravo that is correct!" If the child does not point, the interviewer repeats the instructions and asks, "Can you point to your nose?"

Example 2: Interviewer states: "Point to your head". The interviewer does not point to his head, but encourages child to point.

Interviewer states: "Do you understand?" If the child does not understand, the interviewer explains the instructions again and repeats the examples. If the child understands, the interviewer starts the test. If child makes 5 consecutive errors, continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask.

Ask each question in French and note the response in the questionnaire. **RESPONSE CODES: 1= CORRECT,   2= INCORRECT,   3= NO RESPONSE**

HL1.	HL2. CHILD'S NAME	FA11. MONTRE TON OREILLE	FA12. MONTRE TA BOUCHE	FA13. LEVE TA MAIN	FA14. LEVE UN PIED	FA15. TAPE DANS TES MAINS	FA16. SAUTE!	FA17. LEVE LES BRAS	FA18. REGARDE EN ARRIERE	FA19. ASSIEDS-TOI	FA110. METS CET OBJET DEVANT TOI	**No RESPONSE**
ID	NAME	TOUCH YOUR EAR	TOUCH YOUR MOUTH	RAISE YOUR HAND	RAISE YOUR FOOT	CLAP YOUR HANDS	JUMP !	RAISE YOUR ARMS	LOOK BEHIND	SIT DOWN	PUT THE OBJECT IN FRONT OF YOU	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 2: Expressive Oral Language

This is not a timed exercise and is administered orally.

Interviewer states: "Now I am going to show you things, and you tell me what they are called."

Example 1: Interviewer points to his eye and states: "What is this?" Then the interviewer states: "You say 'it is an eye'".

Example 2: Interviewer points to his ear and states: "What is this?" Then the interviewer encourages the child to say 'ear'.

Interviewer states: "Do you understand?" If the child does not understand, the interviewer explains the instructions again and repeats the examples. If the child understands, the interviewer starts the test. If child makes 5 consecutive errors, continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask.

Ask each question in French and note the response in the questionnaire. **RESPONSE CODES: 1= CORRECT,   2= INCORRECT,   3=NO RESPONSE**

HL1.	HL2. CHILD'S NAME	FA21. NEZ	FA22. TETE	FA23. PIED	FA24. DOIGT	FA25. COU	FA26. DENTS	FA27. BOUCHE/ LEVRES	FA28. GENOU	FA29. PANTALON/ PAGNE	FA210. CHAUSSURE	**NO RESPONSE**
ID	NAME	NOSE	HEAD	FOOT	FINGER	NECK	TEETH	MOUTH/LIPS	KNEE	PANTS/SKIRT	SHOE	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 3: Listening Comprehension

This is not a timed exercise and this is administered orally only.

Interviewer states "Now, I am going to read to you a story aloud one time. Afterwards, I will ask you some questions about the story. Listen carefully, and after you will answer the questions the best you can. Okay? Do you understand what are you supposed to do? Let's begin! Listen carefully."

The interviewer reads aloud the short story, ONE TIME, slowly, (about 1 word per second), in French.

After reading the text, ask the child each comprehension question and note the response. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not respond, go on to the next question.

TEXT:

LA PETITE POULE BLANCHE EST TOMBEE DANS LA MARE. « AIDE-MOI ! » ELLE CRIE. UN AGNEAU NOIR VIENT A SON SECOURS. MAIS IL TOMBE LUI AUSSI DANS LA MARE. « QUE FAIRE ? » DEMANDE-T-IL. LA POULE DIT « REGARDE CE TRONC D'ARBRE QUI FLOTTE. IL PEUT NOUS SAUVER ! » LES DEUX AMIS GRIMPENT ALORS SUR LE TRONC D'ARBRE ET CRIENT, « OUF, NOUS ALLONS POUVOIR RETROUVER LA TERRE FERME ! »

QUESTIONS :
FA31. OU EST TOMBEE LA PETITE POULE ?
FA32. DE QUELLE COULEUR EST L'AGNEAU ?
FA33. QUEL OBJET IMPORTANT LA PETITE POULE A VU ?
FA34. POURQUOI L'AGNEAU VIENT AU SECOURS DE LA PETITE POULE?
FA35. QUAND EST-CE QUE LES DEUX AMIS CRIENT?

RESPONSE CODE: 1=CORRECT, 2=INCORRECT, 3=NO REPONSE

RESPONSE LANGUAGE: 01 FRANÇAIS, 02 HAOUSSA, 03 ZARMA, 04 KANURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

HL1. ID	HL2. CHILD'S NAME	FA31. OU EST TOMBEE LA PETITE POULE ?		FA32. DE QUELLE COULEUR EST L'AGNEAU ?		FA33. QUEL OBJET IMPORTANT LA PETITE POULE A VU?		FA34. POURQUOI L'AGNEAU VIENT AU SECOURS DE LA PETITE POULE?		FA35. QUAND EST-CE QUE LES DEUX AMIS CRIENT ?	
ID	NAME	A. LA MARE	B. RESPONSE LANGUAGE	A. NOIR	B. RESPONSE LANGUAGE	A. LE TRONC D'ARBRE	B. RESPONSE LANGUAGE	A. IL EST TOMBEE	B. RESPONSE LANGUAGE	A. APRÈS GRIMPER	B. RESPONSE LANGUAGE
01		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
02		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
03		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
04		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
05		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
06		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
07		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
08		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
09		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
10		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 4: Letter identification (name or sound)

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 4. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand? When I say "Begin", point to each letter with your finger as you read it. Be careful to read from left to right, line by line. Do you understand what I am asking? Put your finger on the first letter. Ready? Try to read quickly and correctly. Begin."

Start the timer when the child reads the first letter **name** or **sound**. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates on a letter for 3 seconds. In this case, point to the next letter and say "Please go on." Mark the letter skipped as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 10 letters, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	FA41.	FA42.	FA43.	FA44.	FA45.	FA46.	FA47.	FA48.	FA49.	FA410.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(10)	(20)	(30)	(40)	(50)	(60)	(70)	(80)	(90)	(100)	AUTO	SECONDS	TOTAL
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

16

Subtask 5: Word Identification

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 5. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand what I am asking you to do? When I say "Start", read the words from left to right, line by line. At the end of the line, continue to the next line. Try to read quickly and correctly. Ready? Begin."

Start the timer when the child reads the first word. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates for 3 seconds. In this case, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 5 words, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	FA51.	FA52.	FA53.	FA54.	FA55.	FA56.	FA57.	FA58.	FA59.	FA510.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(5)	(10)	(15)	(20)	(25)	(30)	(35)	(40)	(45)	(50)	AUTO	SECONDS	TOTAL
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

HL1.	HL2. CHILD'S NAME	SUBTASK 6- ORAL READING FLUENCY	SUBTASK 7 – READING COMPREHENSION
		Give the child 60 seconds to read as much of the text as possible. Note the number of words read correctly per each line. Show the child the test booklet. "Here is a story. Now I would like you to read it out loud, quickly and correctly, and afterwards, I will ask you some questions. Start here when I tell you. If you don't know a word, continue to the next word. Ready? Start." Give the child 60 seconds to read all that he can. Stay quiet, except when providing answers as follows: if the child hesitates for 3 seconds, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet. Auto stop rule: if the child cannot read correctly a single word in the first two lines, stop the test and note "auto-stop". Say "thank you" and end the test. NOTE THE NUMBER OF WORDS READ CORRECTLY FOR EACH LINE. IF THE CHILD READ EVERYTHING IN LESS THAN ONE MINUTE, NOTE THE EXACT NUMBER OF SECONDS REMAINING ON THE TIMER. OTHERWISE, MARK '00' SECONDS.	After the child has finished reading, **take the card from the child** and ask the first question. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not answer, go to the next question. Ask only those questions that correspond to the lines of text read by the child, up to the last line the child was able to read. "Now I am going to ask you a few questions about the story you just read." Pose the questions to the child, *in French*. *A QUI A FAIM?* *B. QU'EST-CE QUI N'EST PAS PRÊT ?* *C. Où VA ISSA?* *D. QU'EST-CE QUE MAMAN PREPARE ?* *E. POURQUOI ISSA EST-IL CONTENT?* **RESPONSE : 1=CORRECT, 2=INCORRECT, 3=NO RESPONSE** **LANGUAGE OF RESPONSE : 01 FRENCH, 02 HAOUSSA, 03 ZARMA, 04 KANURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)**

ID	NAME	A (8)	B (11)	C (9)	D (10)	E (10)	TIME	AUTO STOP	A1. ISSA	A2. LANGUAGE	B1. LE REPAS	B2. LANGUAGE	C1. A LA CUISINE	C2. LANGUAGE	D1. LE RIZ	D2. LANGUAGE	E1. IL MANGE LE PLAT QU'IL AIME	E2. LANGUAGE
01		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|
02		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|
03		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|
04		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|
05		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|
06		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|
07		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|
08		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|
09		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|
10		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|	|__|	|___|

Before continuing, say "Good effort! Let's continue to the next section!"

18

| MATH TEST | VILLAGE ID: \|___\|___\|___\| | | | | HOUSEHOLD NUMBER \|___\|___\| | | | | | | MA |

To be administered for every child in the household age 5 through 14 years, even those are not currently enrolled in school. Pose the questions in the language that is most comfortable for the child. Do not assist the child by reading the numbers to them. If the child misses four questions in a row, stop the test. RESPONSE CODES: 1= CORRECT; 2=INCORRECT

HL1. CHILD ID	HL2. CHILD'S NAME	MA1. COUNT FROM 1 TO 10 ENTER HIGHEST NUMBER CORRECT MARK 00 IF NOT ABLE TO COUNT	MA2. ARE YOU ABLE TO IDENTIFY THE FOLLOWING NUMBERS? A. 3 B. 9 Show Card Do not say the number		MA3. ARE YOU ABLE TO COUNT THE FOLLOWING ITEMS? A. CANARIS B. ROOSTERS Show Card Do not say the number		MA4. OF THE NUMBERS BELOW, ARE YOU ABLE TO IDENTIFY THE GREATER NUMBER? WHICH IS LARGER? A. 7 8 B. 63 54 C. 381 279 Show Card Do not say the numbers			MA5. ARE YOU ABLE TO COMPLETE THE FOLLOWING ADDITION? A. 4+2= B. 13+3= Show Card Do not say the number		MA6. ARE YOU ABLE TO COMPLETE THE FOLLOWING SUBTRACTION? A. 3-1= B. 12-9= Show Card Do not say the numbers		MA7. ORAL QUESTION: ARE YOU ABLE TO SOLVE THE FOLLOWING PROBLEMS I WILL READ OUT LOUD? A. MOHAMMED HAS 2 MANGOES. HIS FATHER GIVES HIM 5 MORE MANGOES. HOW MANY DOES HE HAVE NOW? B. THERE ARE 8 KIDS WALKING TO SCHOOL. 6 ARE BOYS, AND THE OTHERS ARE GIRLS. HOW MANY GIRLS ARE WALKING TO SCHOOL?		MA8. ARE YOU ABLE TO INDENTIFY THE TRIANGLE AMONG THE FOLLOWING FIGURES? Show Card	MA9. ARE YOU ABLE TO COMPLETE THE FOLLOWING CALCULATIONS? A. 2X4= B. 12 : 3= Show Card Do not say the numbers		MA10. ORAL QUESTION: AMADOU GOES 180KM IN 6 HOURS. WHAT IS HIS AVERAGE SPEED? 180KM/H 60KM/H 30KM/H
ID	NAME	COUNT	A= 3	B= 9	A= 4	B= 7	A = 8	B = 63	C = 381	A = 6	B = 16	A = 2	B = 3	A = 7	B = 2	TRIANGLE	A = 8	B = 4	30 KM/H
01		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

After finishing the test, say "Very good effort! Thank you!"

INTERVIEW RESULT   **Village ID:** |___|___|___| **Household Number** |___|___|___| **RE**

AFTER THE QUESTIONNAIRE HAS BEEN COMPLETED, FILL IN THE FOLLOWING INFORMATION:

RE1.   RESULT OF HOUSEHOLD INTERVIEW: |___|___|

COMPLETE 01   REFUSED 03

INCOMPLETE 02   OTHER (SPECIFY)..……….96

_____

RE2.   *INTERVIEWER/SUPERVISOR NOTES:* USE THIS SPACE TO RECORD NOTES ABOUT THE INTERVIEW WITH
THIS HOUSEHOLD.

RE3A.   NAME OF DATA ENTRY CLERK -1ST ENTRY: _____

DATA ENTRY CLERK NUMBER: |___|___|

DATA ENTRY DAY/MONTH/YEAR: |___|___| / |___|___| / | 2 | 0 | 1 | 3 |

RE3B.   NAME OF DATA ENTRY CLERK -2ND ENTRY: _____

DATA ENTRY CLERK NUMBER: |___|___|

DATA ENTRY DAY/MONTH/YEAR: |___|___| / |___|___| / | 2 | 0 | 1 | 3 |

Subtask 1: Receptive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "We are going to play a game, ok? I am going to give you instructions, and we can see if you can follow what I say."

Example 1: Interviewer states: "Point to your nose"." The interviewer points to his nose, and encourages the child to do the same. If the child points correctly, say "Bravo, that is correct!" If the child does not point, repeat the instructions and ask, "Can you point to your nose?"

Example 2: Interviewer states: "Point to your head". This time the interviewer does not point, but encourages child to point. If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask. Ask each question in Haoussa and note the response in the questionnaire. **RESPONSE CODES: 1= CORRECT, 2= INCORRECT, 3= NO RESPONSE**

HL1.	HL2. CHILD'S NAME	HA11. GWODI KUNAN KA/KI	HA12. GWODI BAKIN KA/KI	HA13. GWODI GUWA HANNU KA/KI	HA14. ƊAGA ƙAFA KA/KI	HA15. GWODI MINI YATSA/ FARCE KA/KI	HA16. TAƀA HUNNUA KA/KI	HA17. TUMA DA BAYA BAYA	HA18. ƊAGA HANU KA/KI	HA19. DUKA	HA110. SA WANNAN ABU A GABAN KA/KI	NO RESPONSE
ID	NAME	EAR	MOUTH	ELBOW	FOOT	FINGER	CLAP	JUMP BACKWARDS	HAND	BEND FORWARD	PLACE IN FRONT	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 2: Expressive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "Now I am going to show you things, and you tell me what they are called."

Example 1: Interviewer points to his eye and says, "What is this?" Interviewer says, "You say it is an eye!"

Example 2: Interviewer points to his ear, and says, "What is this?" The interviewer encourages the child to say "ear". "Interviewer asks, "Do you understand?"

If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop the test and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask.

Ask each question in the test language and note the response in the questionnaire. **RESPONSE CODES: 1= CORRECT,   2= INCORRECT,   3=NO RESPONSE**

HL1.	HL2. CHILD'S NAME	HA21. HANCI	HA22. YATSA/FARCE	HA23. WUYA	HA24. HAKURA	HA25. LEƊA/BAKI	HA26. GWUWA	HA27. WANDO/ZANE	HA28. GWUWA HANNU	HA29. HAMMATA	HA210. KAFAƊA	NO RESPONSE
ID	NAME	NOSE	FINGER	NECK	TEETH	MOUTH/LIPS	KNEE	PANTS/SKIRT	ELBOW	ARMPIT	SHOLDER	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 3: Listening Comprehension

This is not a timed exercise and this is administered orally only. The Interviewer states "Now, I am going to read to you a story aloud ONE TIME. Afterwards, I will ask you some questions about the story. Listen carefully, and after you will answer the questions the best you can. Okay? Do you understand what are you supposed to do? Let's begin! Listen carefully."

The interviewer reads aloud the short story, ONE TIME, slowly, (about 1 word per second), in the language of the test.

After reading the text, ask the child each comprehension question and note the response. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not respond, go on to the next question.

TEXT:
MUSA DA ABOKIN SA ALI SUKA HADU DAN SU CI SHINKAFA. MUSA YA YI ZARIN LOMA, SAI SHINKAFA TA SARKE SHI.SAI YA FARA TARI, ALI YA DAMU KWARAI. SAI YA YI SAURI YA KAWO MASA RUWA YA SHA. BAYAN MUSA YA SHA RUWA, SAI SUKA GAMA CIN SHINFKAFARSU, SAI SUKA RUGA A GUJE YIN WASAR KWALLO.

QUESTIONS:
HA31. MINENE MUSA DA ALI SUKA CI TARE?
HA32. YAYA ALI YA TAIMAKI MUSA ?
HA33. ME SUKAYI BAYAN SUN KARE CIN ABINCI ?
HA34. DOMI ALI YA KAWO MA MUSA RUWA?
HA35. A WANE LOKACI SUN KA TAHI WASSAN KOLLON KAFA (BALLO)?

RESPONSE CODES : 1=CORRECT, 2=INCORRECT, 3=PAS DE REPONSE

REPONSE LANGUAGE: 01 FRENCH, 02 HAOUSSA, 03 ZARMA, 04 KANURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

HL1. ID	HL2. CHILD'S NAME	HA31. MINENE MUSA DA ALI SUKA CI TARE?		HA32. YAYA ALI YA TAIMAKI MUSA?		HA33. ME SUKAYI BAYAN SUN KARE CIN ABINCI?		HA34. DOMI ALI YA KAWO MA MUSA RUWA?		HA35. A WANE LOKACI SUN KA TAHI WASSAN KOLO (BALLO)?	
ID	NAME	A. SHINKAFA	B. LANGUAGE	A. YA KAWO MASA RUWA	B. LANGUAGE	A. WASAN KWALLO	B. LANGUAGE	A. MUSA NA TWARI	B. LANGUAGE	A. DA SUKA KARE CIN CINKAFA	B. LANGUAGE
01		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
02		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
03		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
04		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
05		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
06		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
07		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
08		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
09		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
10		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 4: Letter Identification (name or sound)

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 4. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand? When I say "Start", point to each letter with your finger as you read it. Read from left to right, line by line. Do you understand what I am asking? Put your finger on the first letter. Ready? Try to read quickly and correctly. Begin."

Start the timer when the child reads the first letter **name** or **sound**. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates on a letter for 3 seconds. In this case, point to the next letter and say "Please go on." Mark the letter skipped as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 10 letters, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	HA41.	HA42.	HA43.	HA44.	HA45.	HA46.	HA47.	HA48.	HA49.	HA410.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(10)	(20)	(30)	(40)	(50)	(60)	(70)	(80)	(90)	(100)	AUTO	SECONDS	TOTAL
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 5: Word Identification

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 5. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand what I am asking you to do? When I say "Start", read the words from left to right, line by line. At the end of the line, continue to the next line. Try to read quickly and correctly. Ready? Begin."

Start the timer when the child reads the first word. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates for 3 seconds. In this case, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 5 words, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	HA51.	HA52.	HA53.	HA54.	HA55.	HA56.	HA57.	HA58.	HA59.	HA510.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(5)	(10)	(15)	(20)	(25)	(30)	(35)	(40)	(45)	(50)	AUTO	SECONDS	TOTAL
01		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|
02		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|
03		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|
04		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|
05		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|
06		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|
07		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|
08		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|
09		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|
10		|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|___|	|___|	|___|___|	|___|___|

Before continuing, say "Good effort! Let's continue to the next section!"

HL1.	HL2. CHILD'S NAME	SUBTASK 6- ORAL READING FLUENCY	SUBTASK 7 – READING COMPREHENSION

SUBTASK 6- ORAL READING FLUENCY

Give the child 60 seconds to read as much of the text as possible. Note the number of words read correctly per each line. Show the child the test booklet.

"Here is a story. Now I would like you to read it out loud, quickly and correctly, and afterwards, I will ask you some questions. Start here when I tell you. If you don't know a word, continue to the next word. Ready? Start."

Give the child 60 seconds to read all that he can.

Stay quiet, except when providing answers as follows: if the child hesitates for 3 seconds, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

Auto stop rule: if the child cannot read correctly a single word in the first two lines, stop the test and note "auto-stop". Say "thank you" and end the test.

NOTE THE NUMBER OF WORDS READ CORRECTLY FOR EACH LINE. IF THE CHILD READ EVERYTHING IN LESS THAN ONE MINUTE, NOTE THE EXACT NUMBER OF SECONDS REMAINING ON THE TIMER. OTHERWISE, MARK '00' SECONDS.

SUBTASK 7 – READING COMPREHENSION

After the child has finished reading, **take the card from the child** and ask the first question. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not answer, go to the next question. Ask only those questions that correspond to the lines of text read by the child, up to the last line the child was able to read.

"Now I am going to ask you a few questions about the story you just read."
Pose the corresponding questions to the child, in Haoussa.

Yanzu zan yi miki/maka wasu yan tambayoyi game da labarin da kika/ka karanta. Ki/ka yi kokari Kika/ka bada amsa gwargwadon iyawarka/ki
A. Yaw wace rana ce ?
B. Minene Raabi ta ke son ta sayé?
C. Wane irin kalan riga ne Rabi take nema ?
D. Ta samu jan rigan ?
E. Minene Raabi ta samu ?

RESPONSE : 1=CORRECT, 2=INCORRECT, 3=NO RESPONSE
LANGUAGE OF RESPONSE : 01 FRENCH, 02 HAOUSSA, 03 ZARMA, 04 KANOURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

ID	NAME	A (4)	B (7)	C (5)	D (11)	E (10)	TIME	AUTO STOP	A1. RANAN KASUWA	A2. LANGUAGE	B1. RIGA	B2. LANGUAGE	C1. JAN RIGA	C2. LANGUAGE	D1. A'A	D2. LANGUAGE	E1. SABUAR RIGA/RIGA MAY KAW	E2. LANGUAGE
01		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
02		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
03		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
04		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
05		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
06		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
07		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
08		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
09		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
10		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

ZARMA	VILLAGE ID: |___|___|___|	HOUSEHOLD NUMBER |___|___|___|									ZA1

Subtask 1: Receptive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "We are going to play a game, ok? I am going to give you instructions, and we can see if you can follow what I say."

Example 1: Interviewer states: "Point to your nose"." The interviewer points to his nose, and encourages the child to do the same. If the child points correctly, say "Bravo, that is correct!" If the child does not point, repeat the instructions and ask, "Can you point to your nose?"

Example 2: Interviewer states: "Point to your head". This time the interviewer does not point, but encourages child to point. If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask.

Ask each question in Zarma and note the response in the questionnaire.

RESPONSE CODES: 1= CORRECT, 2= INCORRECT, 3= NO RESPONSE

HL1.	HL2. CHILD'S NAME	ZA11. CEBE NI HANGA	ZA12. CEBE NI MEYO	ZA13. CE BE NI KANBAY	ZA14. SAMBU NI CE FA	ZA15. AY CEBE NI KAMBAYZO	ZA16. KOBI	ZA17. NI MA SAR BANDA	ZA18. SAMBU NI KAMBA	ZA19. SONKOM	ZA110. JINA WO GISI NI JINE	NO RESPONSE
ID	NAME	EAR	MOUTH	ELBOW	FOOT	FINGER	CLAP	JUMP BAKCWARDS	HAND	BEND	PLACE IN FRONT	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 2: Expressive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "Now I am going to show you things, and you tell me what they are called."

Example 1: Interviewer points to his eye and says, "What is this?" Interviewer says, "You say it is an eye!"

Example 2: Interviewer points to his ear, and says, "What is this?" The interviewer encourages the child to say "ear". "Interviewer asks, "Do you understand?"

If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop the test and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask.

Ask each question in the test language and note the response in the questionnaire.   **RESPONSE CODES: 1= CORRECT,   2= INCORRECT,   3=NO RESPONSE**

HL1.	HL2. CHILD'S NAME	ZA21. NINE	ZA22. CANBAIZE	ZA23. GINDE	ZA24. HINGEY	ZA25. ME	ZA26. KANGE	ZA27. MUDUNE	ZA28. KAMBA GOLLO	ZA29. FATA	ZA210. GESA	NO RESPONSE
ID	NAME	NOSE	FINGER	NECK	TEETH	MOUTH	KNEE	PANTS/SKIRT	ELBOW	ARMPIT	SHOLDER	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 3: Listening Comprehension

This is not a timed exercise and this is administered orally only. The Interviewer states "Now, I am going to read to you a story aloud ONE TIME. Afterwards, I will ask you some questions about the story. Listen carefully, and after you will answer the questions the best you can. Okay? Do you understand what are you supposed to do? Let's begin! Listen carefully."

The interviewer reads aloud the short story, ONE TIME, slowly, (about 1 word per second), in the language of the test.

After reading the text, ask the child each comprehension question and note the response. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not respond, go on to the next question.

TEXT:
MUSA DA INGA CERA ALI NA CARE KUBEY GA NWA MOO HAWROU. MUSA NA LAKALZAREY LOMA TE KALA MOA NADI. A SINTIN GA KOTO, ALI LAKALEY TUNU GUMO. ALI WASI GA KANDE A SE HARI. MUSA NA HARO HAN YAN BANDA INA INGAY MOA NWA GA BANE, KULU IZURU WASU GA KOY GA INGAY BALL FORI TE.

QUESTIONS:
ZA31. I FO NO MUSA DA INGA CEAR ALI INWA CARE BANDE?
ZA32. MATE NO ALI NA MUSA FABA DA ?
ZA33. IFO NO ITE KAN INWA GA BAN?
ZA34. IFO SE NO ALI KANDE MUSA SE HARI?
ZA3 5. WATI FO CINE NO I ZURU GA KOY GA BALLE KARE?

RESPONSE CODES : 1=CORRECT, 2=INCORRECT, 3=NO RESPONSE

RESPONSE LANGUAGE : 01 FRENCH, 02 HAOUSSA, 03 ZARMA, 04 KANURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

HL1. ID	HL2. CHILD'S NAME	ZA31. IFO NO MUSA INGA ALI INWA CARE BANDE?		ZA32. MATE NO ALI NA MUSA FABA DA ?		ZA33. IFO NO ITE KAN INWA GA BAN?		ZA34. IFO SE NO ALI KANDE MUSA SE HARI?		ZA35. WATI FO CINE NO I ZURU GA KOY GA BALLE KAR YAN?	
ID	NAME	A. MOO	B. LANGUAGE	A. A KONDA SE HARI	B. LANGUAGE	A. BALLE KARE YAN	B. LANGUAGE	A. MUSA GO KWATOI	B. LANGUAGE	A. HAWRU WAYAN BANDA	B. LANGUAGE
01		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|
02		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|
03		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|
04		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|
05		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|
06		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|
07		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|
08		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|
09		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|
10		|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|	|___|	|___|___|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 4: Letter Identification (name or sound)

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 4. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand? When I say "Start", point to each letter with your finger as you read it. Read from left to right, line by line. Do you understand what I am asking? Put your finger on the first letter. Ready? Try to read quickly and correctly. Begin."

Start the timer when the child reads the first letter **name** or **sound**. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates on a letter for 3 seconds. In this case, point to the next letter and say "Please go on." Mark the letter skipped as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 10 letters, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	ZA41.	ZA42.	ZA43.	ZA44.	ZA45.	ZA46.	ZA47.	ZA48.	ZA49.	ZA410.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(10)	(20)	(30)	(40)	(50)	(60)	(70)	(80)	(90)	(100)	AUTO	SECONDS	TOTAL
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

| ZARMA | VILLAGE ID: \|___\|___\|___\| | HOUSEHOLD NUMBER \|___\|___\|___\| | ZA5 |

Subtask 5: Word Identification

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 5. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand what I am asking you to do? When I say "Start", read the words from left to right, line by line. At the end of the line, continue to the next line. Try to read quickly and correctly. Ready? Begin."

Start the timer when the child reads the first word. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates for 3 seconds. In this case, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 5 words, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	ZA51.	ZA52.	ZA53.	ZA54.	ZA55.	ZA56.	ZA57.	ZA58.	ZA59.	ZA510.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(5)	(10)	(15)	(20)	(25)	(30)	(35)	(40)	(45)	(50)	AUTO	SECONDS	TOTAL
01		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
02		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
03		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
04		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
05		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
06		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
07		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
08		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
09		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
10		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|

Before continuing, say "Good effort! Let's continue to the next section!"

HL1.	HL2. CHILD'S NAME

SUBTASK 6- ORAL READING FLUENCY

Give the child 60 seconds to read as much of the text as possible. Note the number of words read correctly per each line. Show the child the test booklet.

"Here is a story. Now I would like you to read it out loud, quickly and correctly, and afterwards, I will ask you some questions. Start here when I tell you. If you don't know a word, continue to the next word. Ready? Start."

Give the child 60 seconds to read all that he can.

Stay quiet, except when providing answers as follows: if the child hesitates for 3 seconds, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

Auto stop rule: if the child cannot read correctly a single word in the first two lines, stop the test and note "auto-stop". Say "thank you" and end the test.

NOTE THE NUMBER OF WORDS READ CORRECTLY FOR EACH LINE. IF THE CHILD READ EVERYTHING IN LESS THAN ONE MINUTE, NOTE THE EXACT NUMBER OF SECONDS REMAINING ON THE TIMER. OTHERWISE, MARK '00' SECONDS.

SUBTASK 7 – READING COMPREHENSION

After the child has finished reading, **take the card from the child** and ask the first question. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not answer, go to the next question. Ask only those questions that correspond to the lines of text read by the child, up to the last line the child was able to read.

"Now I am going to ask you a few questions about the story you just read."
Pose the corresponding questions to the child, in Zarma.

SOHON AY GA HAYAN TE NI SE LABAREY KAN NI CAW BON, NI MA KOKARI GA TU AY SE MATE KAN NI GA HINE

A.HONKUNA ZARRI FO NO ?
B. IFO NO RAABI GABA INGA MA DAY?
C.HARI FO DUMI NO KWAAYO KAN RAABI GA BA?
D. A DU KWAAYI CIRAA NO?
E. IFO NO RAABI DU ?

RESPONSE : 1=CORRECT, 2=INCORRECT, 3=NO RESPONSE
LANGUAGE OF RESPONSE : 01 FRENCH, 02 HAOUSSA, 03 ZARMA, 04 KANOURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

ID	NAME	A (5)	B (8)	C (6)	D (9)	E (9)	TIME	AUTO STOP	A1. HABOU ZAARI	A2. LANGUAGE	B1. KWAYI	B2. LANGUAGE	C1. KWAYI CIREY	C2. LANGUAGE	D1. HA'A	D2. LANGUAGE	E1.KWAY I TAGGI HANO	E2. LANGUAGE
01		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|
02		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|
03		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|
04		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|
05		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|
06		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|
07		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|
08		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|
09		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|
10		|__|	|__|	|__|	|__|	|__|	|___|	|__|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|	|__|	|____|

Before continuing, say "Good effort! Let's continue to the next section!"

KANURI	VILLAGE ID: |___|___|___|	HOUSEHOLD NUMBER |___|___|___|	KA1

Subtask 1: Receptive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "We are going to play a game, ok? I am going to give you instructions, and we can see if you can follow what I say."

Example 1: Interviewer states: "Point to your nose"." The interviewer points to his nose, and encourages the child to do the same. If the child points correctly, say "Bravo, that is correct!" If the child does not point, repeat the instructions and ask, "Can you point to your nose?"

Example 2: Interviewer states: "Point to your head". This time the interviewer does not point, but encourages child to point. If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask.

Ask each question in Kanuri and note the response in the questionnaire.

RESPONSE CODES: 1= CORRECT, 2= INCORRECT,   3= NO RESPONSE

HL1.	HL2. CHILD'S NAME	KA11. SƏNMONƞMFƞLENE	KA12. CINƞM FƞLENE	KA13. N'DJURAMI OUM FƞLENE	KA14. SI FAL SANGE	KA15. NGULONDO FAL FƞLESƞGƞNNE	KA16. KAWA JANE	KA17. SƞNKTƞNNE NGAWORO	KA18. NUKKO SANGE	KA19. N'GUOUNE	KA110. KARE ADƞA FUWUNƞMBO YAKKE	NO RESPONSE
ID	NAME	EAR	MOUTH	ELBOW	FOOT	FINGER	CLAP	JUMP BACKWARDS	HAND	BEND	PLACE IN FRONT	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 2: Expressive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "Now I am going to show you things, and you tell me what they are called."

Example 1: Interviewer points to his eye and says, "What is this?" Interviewer says, "You say it is an eye!"

Example 2: Interviewer points to his ear,and says, "What is this?". The interviewer encourages the child to say "ear". "Interviewer asks, "Do you understand?"

If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop the test and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask. Ask each question in the test language and note the response in the questionnaire.

RESPONSE CODES: 1= CORRECT,   2= INCORRECT,   3=NO RESPONSE

HL1.	HL2. CHILD'S NAME	KA21. KINJA	KA22. NGULONDO	KA23. DAU	KA24. SHEƊI	KA25. KA CIYE	KA26. N'GURUNGURAM	KA27. YANGE	KA28. N'DJURAMI	KA29. TƷLWU	KA210. N'GAWARNA	NO RESPONSE
ID	NAME	NOSE	FINGER	NECK	TEETH	MOUTH	KNEE	PANTS/SKIRT	ELBOW	ARMPIT	SHOULDER	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

KANURI	VILLAGE ID: |___|___|___|	HOUSEHOLD NUMBER |___|___|___|	KA3

Subtask 3: Listening Comprehension

This is not a timed exercise and this is administered orally only. The Interviewer states "Now, I am going to read to you a story aloud ONE TIME. Afterwards, I will ask you some questions about the story. Listen carefully, and after you will answer the questions the best you can. Okay? Do you understand what are you supposed to do? Let's begin! Listen carefully."

The interviewer reads aloud the short story, ONE TIME, slowly, (about 1 word per second), in the language of the test.

After reading the text, ask the child each comprehension question and note the response. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not respond, go on to the next question.

TEXT:
MUSA SWANJU ALI YA KƐLDANE SHINGAWA BUWORO NAPKERA. MUSA KOLAMA KIDƐNIYA, SAY SHINGAWA DAW U JULAN DAYENO. KASAWUDU BADIYENO, ALYEHANGAL JU JAWURO CI YENO, SAY DUWA CIDE INGI CUKKUDE KIYANO. N'GAWO MUSA INGI CANAYEN, SAY KUMBO SHINGAWA YE DA TUMOYERA SAY CIJANE N'GURMJANE KƐLANGA BALL YERO LEYERA.

QUESTIONS:
KA31. AWI MUSA SHIA ALI RROKKO JAWO?
KA32. AWILAN ALI, MUSA BANAYENO?
KA33. AWI TCHADO GAWO JAWOU NAYEN?
KA34. ABIRO ALI MOUSSARO INGUI TCHIWDO?
KA35. YIMBI LIDYANÉ KLELANGUA BALL YÉ TCHADIRA?

RESPONSE CODE: 1=CORRECT, 2=INCORRECT, 3=PAS DE REPONSE

RESPONSE LANGUAGE : 01 FRENCH, 02 HAOUSSA, 03 FULFULDE, 04 KANURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

HL1. ID	HL2. CHILD'S NAME	KA31. AWI MUSA SHIA ALI RROKKO JAWO?		KA32. AWILAN ALI, MUSA BANAYENO?		KA33. AWI TCHADO GAWO JAWOU NAYEN?		KA34. ABIRO ALI MOUSSARO INGUI TCHIWDO?		KA35. YIMBI LIDYANÉ KLELANGUA BALL YÉ TCHADIRA?	
ID	NAME	A. SHINGAWA	B. LANGUAGE	A. INGI	B. LANGUAGE	A. KƐLANGA BALL	B. LANGUAGE	A. KOSSAKTOU OU BADIJINA NANKARO	B. LANGUAGE	A. BIRIN DJA NDJASSAOUÉ N'GOUWOLAN	B. LANGUAGE
01		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
02		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
03		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
04		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
05		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
06		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
07		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
08		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
09		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
10		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 4: Letter Identification (name or sound)

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 4. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand? When I say "Start", point to each letter with your finger as you read it. Read from left to right, line by line. Do you understand what I am asking? Put your finger on the first letter. Ready? Try to read quickly and correctly. Begin."

Start the timer when the child reads the first letter **name** or **sound**. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates on a letter for 3 seconds. In this case, point to the next letter and say "Please go on." Mark the letter skipped as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 10 letters, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	KA41.	KA42.	KA43.	KA44.	KA45.	KA46.	KA47.	KA48.	KA49.	KA410.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(10)	(20)	(30)	(40)	(50)	(60)	(70)	(80)	(90)	(100)	AUTO	SECONDS	TOTAL
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 5: Word Identification

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 5. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand what I am asking you to do? When I say "Start", read the words from left to right, line by line. At the end of the line, continue to the next line. Try to read quickly and correctly. Ready? Begin."

Start the timer when the child reads the first word. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates for 3 seconds. In this case, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 5 words, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	KA51.	KA52.	KA53.	KA54.	KA55.	KA56.	KA57.	KA58.	KA59.	KA510.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(5)	(10)	(15)	(20)	(25)	(30)	(35)	(40)	(45)	(50)	AUTO	SECONDS	TOTAL
01		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
02		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
03		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
04		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
05		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
06		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
07		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
08		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
09		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|
10		|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|___|	|__|	|___|	|___|

Before continuing, say "Good effort! Let's continue to the next section!"

| KANURI SUBASK 6 & 7 | | VILLAGE ID: |___|___|___| | | HOUSEHOLD NUMBER |___|___|___| | | | | KA6 & KA7 | | | | | | | |

HL1.

HL2. CHILD'S NAME

SUBTASK 6- ORAL READING FLUENCY

Give the child 60 seconds to read as much of the text as possible. Note the number of words read correctly per each line. Show the child the test booklet.

"Here is a story. Now I would like you to read it out loud, quickly and correctly, and afterwards, I will ask you some questions. Start here when I tell you. If you don't know a word, continue to the next word. Ready? Start."

Give the child 60 seconds to read all that he can.

Stay quiet, except when providing answers as follows: if the child hesitates for 3 seconds, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

Auto stop rule: if the child cannot read correctly a single word in the first two lines, stop the test and note "auto-stop". Say "thank you" and end the test.

NOTE THE NUMBER OF WORDS READ CORRECTLY FOR EACH LINE. IF THE CHILD READ EVERYTHING IN LESS THAN ONE MINUTE, NOTE THE EXACT NUMBER OF SECONDS REMAINING ON THE TIMER. OTHERWISE, MARK '00' SECONDS.

SUBTASK 7 – READING COMPREHENSION

After the child has finished reading, **take the card from the child** and ask the first question. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not answer, go to the next question. Ask only those questions that correspond to the lines of text read by the child, up to the last line the child was able to read.

"Now I am going to ask you a few questions about the story you just read. ."
Pose the corresponding questions to the child, in Kanuri.
Kirmaa koro laa niro n'djidiki kla hawara kranemba di kawari de nounksine kla awo nonumbadi.

A. Ku kingal fi?
B. Awi rabi cirawo tiro casukuworo?
C. Kaluwu kala fiya rabi maji?
D. Kaluwu kime da cuwandina'a?
E. Awi rabi cakko?

RESPONSE : 1=CORRECT, 2=INCORRECT, 3=NO RESPONSE
LANGUAGE OF RESPONSE : 01 FRENCH, 02 HAOUSSA, 03 ZARMA, 04 KANOURI,
    05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

ID	NAME	A (4)	B (6)	C (4)	D (8)	E (8)	TIME	AUTO STOP	A1.	A2. LANGUAGE	B1.	B2. LANGUAGE	C1.	C2. LANGUAGE	D1.	D2. LANGUAGE	E1.	E2. LANGUAGE
01		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
02		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
03		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
04		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
05		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
06		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
07		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
08		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
09		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
10		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

FULFULDE	VILLAGE ID: |___|___|___|	HOUSEHOLD NUMBER |___|___|___|	FU1

Subtask 1: Receptive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "We are going to play a game, ok? I am going to give you instructions, and we can see if you can follow what I say."

Example 1: Interviewer states: "Point to your nose"." The interviewer points to his nose, and encourages the child to do the same. If the child points correctly, say "Bravo, that is correct!" If the child does not point, repeat the instructions and ask, "Can you point to your nose?"

Example 2: Interviewer states: "Point to your head". This time the interviewer does not point, but encourages child to point. If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask.

Ask each question in Fulfulde and note the response in the questionnaire.

RESPONSE CODES: 1= CORRECT, 2= INCORRECT, 3= NO RESPONSE

HL1.	HL2. CHILD'S NAME	FU11. HOLLU NOWRU MAAƊA	FU12. HOLLU HUNNDUKO MAAƊA	FU13. YOLLAM SOBUDU MADA	FU14. ƁANTU KOYNGAL	FU15. HOLLAM HONNDU WO'OTURU	FU16. HELLU	FU17. FITIR GADA MA	FU18. ƁANTU JUNNGO	FU19. POPPINA	FU110. [HOKKA SUKA HUUND] RESU HUUNDE NDEE YEESO MAAƊA	NO RESPONSE
ID	NAME	EAR	MOUTH	ELBOW	LEG	FINGER	CLAP	JUMP BAKCWARDS	HAND	BEND	PLACE IN FRONT	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 2: Expressive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "Now I am going to show you things, and you tell me what they are called."

Example 1: Interviewer points to his eye and says, "What is this?" Interviewer says, "You say it is an eye!"

Example 2: Interviewer points to his ear, and says, "What is this?". The interviewer encourages the child to say "ear". "Interviewer asks, "Do you understand?"

If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop the test and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask. Ask each question in the test language and note the response in the questionnaire.

RESPONSE CODES: 1= CORRECT,   2= INCORRECT,   3=NO RESPONSE

HL1.	HL2. CHILD'S NAME	FU21. HINERE	FU22. HUNDU	FU23. DADE	FU24. NIJE	FU25. HUNDUKO	FU26. HOWRU	FU27. SARA	FU28. SOBUDU	FU29. NAWKI	FU210. WALAWO	**No RESPONSE**
ID	NAME	NOSE	HAIR/HEAD	FOOT	FINGER	NECK	TEETH	SHIRT	PANTS/SKIRT	SHOE	PEN/PENCIL	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

SUBTASK 3: ORAL COMPREHENSION

This is not a timed exercise and this is administered orally only. The Interviewer states "Now, I am going to read to you a story aloud ONE TIME. Afterwards, I will ask you some questions about the story. Listen carefully, and after you will answer the questions the best you can. Okay? Do you understand what are you supposed to do? Let's begin! Listen carefully."

The interviewer reads aloud the short story, ONE TIME, slowly, (about 1 word per second), in the language of the test.

After reading the text, ask the child each comprehension question and note the response. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not respond, go on to the next question.

TEXT:
MUSA ET HIGHDUME ALI BE POTTI BE NYAMI NYIRI MAARO. MUSA HOLLI GUGAKU, NAAKO LONGORE NDEN SONDIMO. O FUNDI OMO DOJA. ALI HAKKILLOMUNE UMMI SANNE. ALI WADI LAW WADONOWIMO DIYAM. GADA MUSSA YARI DIYAN DAM, BE KANTIDI NYAMDE MAARO MABE FU BE DOGI LAW LAW BE PIYOYE BAL.

QUESTIONS:
FU31. DUME MUSSA E ALI NYAMI?
FU32. DUME ALI WALLIRI MUSA?
FU33. DUME BE NGADI KOBE NYAMIDI?
FU34. GUA DOUMÉ ALI WADDANI MUSA N'DIAM?
FU35. N'DÉ HBE DJAHI BE BADI FIJO BALL?

RESPONSE CODE: 1=CORRECT, 2=INCORRECT, 3=PAS DE REPONSE

RESPONSE LANGUAGE : 01 FRENCH, 02 HAOUSSA, 03 FULFULDE, 04 KANURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

HL1. ID	HL2. CHILD'S NAME	FU31. DUME MUSSA E ALI NYAMI?		FU32. DUME ALI WALLIRI MUSA?		FU33. DUME BE NGADI KOBE NYAMIDI?		FU34. GUA DOUMÉ ALI WADDANI MUSA N'DIAM?		FU35. N'DÉ HBE DJAHI BE BADI FIJO BALL?	
ID	NAME	A. MAARO	B. LANGUAGE	A. DIYAME	B. LANGUAGE	A. BE PIYOYI BAL	B. LANGUAGE	A. GAME MO FOUDDI N'DOJJAE	B. LANGUAGE	A. BAWTIN BE KEEGNI GNAAMKI GNIRI	B. LANGUAGE
01		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
02		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
03		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
04		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
05		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
06		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
07		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
08		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
09		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
10		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 4: Letter Identification (name or sound)

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 4. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand? When I say "Start", point to each letter with your finger as you read it. Read from left to right, line by line. Do you understand what I am asking? Put your finger on the first letter. Ready? Try to read quickly and correctly. Begin."

Start the timer when the child reads the first letter **name** or **sound**. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates on a letter for 3 seconds. In this case, point to the next letter and say "Please go on." Mark the letter skipped as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 10 letters, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	FU41.	FU42.	FU43.	FU44.	FU45.	FU46.	FU47.	FU48.	FU49.	FU410.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(10)	(20)	(30)	(40)	(50)	(60)	(70)	(80)	(90)	(100)	AUTO	SECONDS	TOTAL
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

FULFULDE	VILLAGE ID: |___|___|___|	HOUSEHOLD NUMBER |___|___|___|	FU5

Subtask 5: Word Identification

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 5. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand what I am asking you to do? When I say "Start", read the words from left to right, line by line. At the end of the line, continue to the next line. Try to read quickly and correctly. Ready? Begin."

Start the timer when the child reads the first word. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates for 3 seconds. In this case, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 5 words, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	FU51.	FU52.	FU53.	FU54.	FU55.	FU56.	FU57.	FU58.	FU59.	FU510.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(5)	(10)	(15)	(20)	(25)	(30)	(35)	(40)	(45)	(50)	AUTO	SECONDS	TOTAL
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

HL1.

HL2. CHILD'S NAME

SUBTASK 6- ORAL READING FLUENCY

Give the child 60 seconds to read as much of the text as possible. Note the number of words read correctly per each line. Show the child the test booklet.

"Here is a story. Now I would like you to read it out loud, quickly and correctly, and afterwards, I will ask you some questions. Start here when I tell you. If you don't know a word, continue to the next word. Ready? Start."

Give the child 60 seconds to read all that he can.

Stay quiet, except when providing answers as follows: if the child hesitates for 3 seconds, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

Auto stop rule: if the child cannot read correctly a single word in the first two lines, stop the test and note "auto-stop". Say "thank you" and end the test.

NOTE THE NUMBER OF WORDS READ CORRECTLY FOR EACH LINE. IF THE CHILD READ EVERYTHING IN LESS THAN ONE MINUTE, NOTE THE EXACT NUMBER OF SECONDS REMAINING ON THE TIMER. OTHERWISE, MARK '00' SECONDS.

SUBTASK 7 – READING COMPREHENSION

After the child has finished reading, **take the card from the child** and ask the first question. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not answer, go to the next question. Ask only those questions that correspond to the lines of text read by the child, up to the last line the child was able to read.

"Now I am going to ask you a few questions about the story you just read.."
Pose the corresponding questions to the child, *in Fulfulde.*
"Djonimi diamete dow habaruji ko janguouda wad kokari gnotanam iyaka andal mada."

A. Haden nyalloma oyé non?
B. Dume Raabi yidi fa sooda?
C. Iri toggoré nde Raabi yidi ?
D. O hebi toggore wodere nden na?
E. Dume Raabi hebi?

RESPONSE : 1=CORRECT, 2=INCORRECT, 3=NO RESPONSE
LANGUAGE OF RESPONSE : 01 FRENCH, 02 HAOUSSA, 03 ZARMA, 04 KANOURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

ID	NAME	A (5)	B (8)	C (6)	D (8)	E (6)	TIME	AUTO STOP	A1. HADEN LUMO NON	A2. LANGUAGE	B1. TOGGORE	B2. LANGUAGE	C1. TOGGORE WODERE	C2. LANGUAGE	D1. O HEBAYE	D2. LANGUAGE	E1. TOGGORE HEYRE LOBBERE	E2. LANGUAGE
01		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
02		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
03		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
04		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
05		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
06		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
07		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
08		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
09		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
10		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 1: Receptive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "We are going to play a game, ok? I am going to give you instructions, and we can see if you can follow what I say."

Example 1: Interviewer states: "Point to your nose"." The interviewer points to his nose, and encourages the child to do the same. If the child points correctly, say "Bravo, that is correct!" If the child does not point, repeat the instructions and ask, "Can you point to your nose?"

Example 2: Interviewer states: "Point to your head". This time the interviewer does not point, but encourages child to point. If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask.

Ask each question in Tamasheq and note the response in the questionnaire.

RESPONSE CODES: 1= CORRECT, 2= INCORRECT, 3= NO RESPONSE

HL1.	HL2. CHILD'S NAME	TA11. ŞĂKNU TANđƏRƏK-NĂK/NAM	TA12. ŞAKNU IMI NAK/NAM	TA13. SAKNI TAɣMAR NAK/NAM	TA14. ƎTKƏL AđAR IYYAN	TA15. ŞAKN-I AđAđ IYYAN	TA16. ƎQQƏS	TA17. ƎĞID Ǝş DƎFUR	TA18. ƎTKƏL ƏFUş-NAK/NAM	TA19. ƎNƎẓ	TA110. [ĂKFU I BĂRAI ĂRĂţ IYYAN] ĂGU ĂRAţ-DI DĂT-ƏK	No RESPONSE
ID	Name	EAR	MOUTH	ELBOW	FOOT	FINGER	CLAP	JUMP BACKWARDS	HAND	BEND	PLACE IN FRONT	No RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 2: Expressive Oral Language

This section is not timed and there are no stimuli for the child (to be administered orally).

Interviewer states: "Now I am going to show you things, and you tell me what they are called."

Example 1: Interviewer points to his eye and says, "What is this?" Interviewer says, "You say it is an eye!"

Example 2: Interviewer points to his ear, and says, "What is this?" The interviewer encourages the child to say "ear". "Interviewer asks, "Do you understand?"

If the child does not understand, the Interviewer states the instructions again and repeats the examples. If the child understands, start the test.

If child makes 5 consecutive errors, stop the test and continue to the next subtask. If child does not respond, mark "No Response", and continue to the next subtask. Ask each question in the test language and note the response in the questionnaire.

RESPONSE CODES: 1= CORRECT, 2= INCORRECT, 3=NO RESPONSE

HL1.	HL2. CHILD'S NAME	TA21. TENJART	TA22. AḍAḍ	TA23. IRI	TA24. ISENAN	TA25. IDƏLAY	TA26. ƎFUD	TA27. EKARBAY	TA28. TAƔMAR	TA29. TEDDAWEN	TA210. ƎJƎR	**No RESPONSE**
ID	NAME	NOSE	FINGER	NECK	TEETH	MOUTH	KNEE	PANTS/SKIRT	ELBOW	ARMPIT	SHOULDER	NO RESPONSE
01		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
02		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
03		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
04		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
05		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
06		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
07		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
08		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
09		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|
10		|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|	|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 3: Listening Comprehension

This is not a timed exercise and this is administered orally only. The Interviewer states "Now, I am going to read to you a story aloud ONE TIME. Afterwards, I will ask you some questions about the story. Listen carefully, and after you will answer the questions the best you can. Okay? Do you understand what are you supposed to do? Let's begin! Listen carefully."

The interviewer reads aloud the short story, ONE TIME, slowly, (about 1 word per second), in the language of the test.

After reading the text, ask the child each comprehension question and note the response. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not respond, go on to the next question.

TEXT:

Mûsa əd əmidineṭ Ɣaliyu əməyan Fel ad əcĭn tafaɣat. Mûsa yiga tatôgât məqərat. Tôɣayaṣ tafaɣat. Yôfǎr təṣut. Ɣaliyu yirmǎɣ huḷen. Yiṭ rab yikfê ǎman, yiša. Dəfur as iša ǎman, aṣ ismandan têtè n'tafaɣat nasan ôzalan sər aḍalan təwayya (baló).

QUESTIONS :

TA31. May môs awa acan Mûsa əd əmidineṭ?

TA32. Mani əmuk waṣ tôgaz Ɣaliyu ?
TA33. Mǎgan dəfur as šan imənsiwän ?
TA34. Mǎ fel Ɣaliyu aẓ deway aman î Mûsa?
TA35. Mǎni alôg waṣ ikkan addalan n'tawayya (baló)?

RESPONSE CODES : 1=CORRECT, 2=INCORRECT, 3=NO RESPONSE

RESPONSE LANGUAGE: 01 FRENCH, 02 HAOUSSA, 03 FULFULDE, 04 KANURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

HL1. ID	HL2. CHILD'S NAME	TA31. MAY MOS AWA ACAN MUSA ƏD ƏMIDINEṬ?		TA32. MANI ƏMUK WAS TOGAZ ƔALIYU ?		TA33. MǍGAN DƏFUR AS ŠAN IMƏNSIWǍN ?		TA34. MǍ FEL ƔALIYU AẒ DEWAY AMAN Î MÛSA?		TA35. MǍNI ALOQ WAS IKKAN ADDALAN N'TAWAYYA (BALO)?	
ID	NAME	A. TAFAƔAT	B. LANGUAGE	A. ǍMAN	B. LANGUAGE	A. AḌALAN TƏWAYYA	B. LANGUAGE	A. FEL TƏSÛT	B. LANGUAGE	A. DƏFUR ƏMANSIWAN	B. LANGUAGE
01		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
02		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
03		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
04		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
05		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
06		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
07		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
08		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
09		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
10		|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 4: Letter Identification (name or sound)

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 4. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand? When I say "Start", point to each letter with your finger as you read it. Read from left to right, line by line. Do you understand what I am asking? Put your finger on the first letter. Ready? Try to read quickly and correctly. Begin."

Start the timer when the child reads the first letter **name** or **sound**. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates on a letter for 3 seconds. In this case, point to the next letter and say "Please go on." Mark the letter skipped as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 10 letters, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	TA41.	TA42.	TA43.	TA44.	TA45.	TA46.	TA47.	TA48.	TA49.	TA410.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(10)	(20)	(30)	(40)	(50)	(60)	(70)	(80)	(90)	(100)	AUTO	SECONDS	TOTAL
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

Subtask 5: Word Identification

This is a timed exercise and is administered using the test booklet.

Show the test booklet to the child for subtask 5. Explain the subtask in the child's maternal language, using the examples in the booklet. After explaining the examples, say "Ok? Do you understand what I am asking you to do? When I say "Start", read the words from left to right, line by line. At the end of the line, continue to the next line. Try to read quickly and correctly. Ready? Begin."

Start the timer when the child reads the first word. If the child does not respond after 10 seconds, mark 'Auto Stop'. Count self-corrections as correct. Stay quiet, except if the child hesitates for 3 seconds. In this case, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

After 60 seconds say, "Stop and Thank you." Note the total number correct. If the child read everything in less than one minute, note the exact number of seconds remaining on the timer. Otherwise, if the child has not finished the exercise, mark '00' seconds.

Auto stop rule: If the child does not give a single correct response in the first 5 words, gently tell the child to stop, and mark 'Auto Stop'. Say "Thank you" and go on to the next subtask.

HL1.	HL2. CHILD'S NAME	TA51.	TA52.	TA53.	TA54.	TA55.	TA56.	TA57.	TA58.	TA59.	TA510.	AUTO STOP	TIME REMAINING	TOTAL CORRECT
ID	NAME	(5)	(10)	(15)	(20)	(25)	(30)	(35)	(40)	(45)	(50)	AUTO	SECONDS	TOTAL
01		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
02		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
03		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
04		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
05		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
06		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
07		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
08		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
09		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|
10		|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|__|	|__|	|__|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

HL1. ID de l'enfant	HL2. CHILD'S NAME	SUBTASK 6- ORAL READING FLUENCY	SUBTASK 7 – READING COMPREHENSION

SUBTASK 6- ORAL READING FLUENCY

Give the child 60 seconds to read as much of the text as possible. Note the number of words read correctly per each line. Show the child the test booklet.

"Here is a story. Now I would like you to read it out loud, quickly and correctly, and afterwards, I will ask you some questions. Start here when I tell you. If you don't know a word, continue to the next word. Ready? Start."

Give the child 60 seconds to read all that he can. Stay quiet, except when providing answers as follows: if the child hesitates for 3 seconds, point to the next word and say "Please go on." Mark the word as incorrect on the test sheet.

Auto stop rule: if the child cannot read correctly a single word in the first two lines, stop the test and note "auto-stop". Say "thank you" and end the test.

NOTE THE NUMBER OF WORDS READ CORRECTLY FOR EACH LINE. IF THE CHILD READ EVERYTHING IN LESS THAN ONE MINUTE, NOTE THE EXACT NUMBER OF SECONDS REMAINING ON THE TIMER. OTHERWISE, MARK '00' SECONDS.

SUBTASK 7 – READING COMPREHENSION

After the child has finished reading, take the card from the child and ask the first question. If the child does not give any response after 10 seconds, repeat the question, and give the child another 5 seconds to respond. If the child still does not answer, go to the next question. Ask only those questions that correspond to the lines of text read by the child, up to the last line the child was able to read.

"Now I am going to ask you a few questions about the story you just read." Pose the corresponding questions to the child, *in Tamasheq*. « əmarda ada kâga işəştânan fel əlquişatta taɣrê. »

a. Ayôra wa n'dar əzal ?

b. Mâ tarâ Răbi as şat wazənzu ?

c. Mâ fst tôlă tekarsat ta tağammay ?

d. Tağraw tekarsat ta zağaɣat ?

e. Mâ tazlağ Răbi ?

RESPONSE : 1=CORRECT, 2=INCORRECT, 3=NO RESPONSE
LANGUAGE OF RESPONSE : 01 FRENCH, 02 HAOUSSA, 03 ZARMA, 04 KANOURI, 05 TAMASHEQ, 06 FULFULDE, 96 OTHER (SPECIFY)

ID	NAME	A (6)	B (7)	C (4)	D (8)	E (8)	TIME	AUTO STOP	A1. ƏZAL N'AşUK	A2. LANGUE	B1. TEKARSAT	B2. LANGUE	C1. TEKARSAT ZAĞAɣAT	C2. LANGUE	D1. BEHU/KAY-KAY	D2. LANGUE	E1. TEKARSAT TENAYÂT/ TEKARSAT HÔşAYAT	E2. LANGUE
01		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
02		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
03		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
04		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
05		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
06		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
07		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
08		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
09		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|
10		|__|	|__|	|__|	|__|	|__|	|__|__|	|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|	|__|	|__|__|

Before continuing, say "Good effort! Let's continue to the next section!"

APPENDIX D

TEST BOOKLET

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NECS

Baseline

e K D

a r i a n Z K e K W
u c n i W a O U Y S
M f a Y t Y G A y k
a S T K o i h N U F
a A i a C A K T s u
y A t D N V k L e d
i M y a m l r A R i
N i R b A D N s A n
A a u E m E X j w s
i g U H N q A n B i

Haoussa – HA4

ku   suka   wasa

tana	in	nan	tahiya	sai
ina	kai	tsaya	yi	zo
su	malam	za	ku	ce
makaranta	audu	suna	ta	iya
shi	gida	ba	har	ka
wata	tare	ya	wasa	to
ruwa	yara	tafi	ana	mai
lahiya	ki	da	wani	daga
yana	ga	rana	aka	suka
cikin	ke	ina	ne	ni

Haoussa – HA5

Kasuwa. Yau raná kasuwa.

Rabi zata kasuwa domin ta saya riga.

Rabi na neman jan riga.

Ba ta samu jan riga ba, Rabi ta samu fará riga.

Raabi ta na murna, ta sa sabuwá riga mai kyan.

e   c   D

u	A	d	i	ŋ	s	a	D	o	n
S	e	N	h	o	y	E	i	s	b
t	ŋ	d	U	y	s	Z	m	b	a
K	u	A	m	b	t	i	B	d	Z
g	W	c	O	j	M	u	k	G	y
l	p	ŋ	i	f	a	h	z	S	w
ã	Y	e	K	l	r	t	C	m	a
Z	h	r	E	s	k	ã	g	W	p
p	M	J	d	ŋ	õ	f	h	e	S
Õ	ã	T	i	u	C	e	ũ	ĩ	z

		habu	tira	kwayi	

garu	ay	kaŋ	kasi	mooto
kali	afo	tira	dabu	bini
lutu	gure	mari	koli	mitti
habu	lutu	hina	jine	furu
sari	ŋuna	kwaayi	gabu	suba
pati	cawyaŋ	fansi	zagu	waasi
kande	dondon	hantum	kayne	moolo
fundi	kurŋe	zanjiḡombo	ganji	haari
dundu	tara	zunku	tamma	bindi
sungay	hungum	dangay	kollo	faasa

Zarma – ZA5

Habu. Hunkuna zaaro, habu no.

Raabi go ga koya habu ga day kwayi.

Raabi go ga kwaayi ciray ceeci.

A man du kwaei ciraa, Raabi du kwaayi kwaarey.

Raabi go ga farhã a du kwayi han no.

a u sh

i	o	f	m	s	t	h	k	u	z
e	p	r	ny	i	w	y	o	ɗ	b
M	SH	H	a	ɲ	z	J	T	H	sh
o	k	y	R	t	d	a	k	N	u
w	ì	E	g	u	Ɲ	c	F	K	O
y	ŋ	L	e	i	c	D	e	n	W
s	R	k	r	a	h	j	u	z	B
m	u	t	y	ɗ	i	p	A	l	O
c	p	s	k	U	p	Ɲ	sh	ny	l
ɲ	ɗ	F	c	n	s	n	t	M	o

Kanuri – KA4

Wu	kɲla	bɲri		
fado	ni	wu	kare	nalle
malɲm	wu	sa	lado	bi
koro	mana	kɲska	kɲra	kange
karwu	bollo	njo	ci	bul
jaawol	kani	cidi	kolji	andi
milo	kam	ingi	kamu	bina
dondi	ti	kalu	kura	so
ngɲla	ɗeke	bɲlɲm	fe	baɗi
collo	goro	kiari	kɲri	dalo
kɲla	kaji	karo	wuri	nja

Kanuri – KA5

Kasuwu. Ku im kasuwuye.

Rabi Kasuwuro leji kaluwu n'jiworo.

Rabi kaluwu kime maji.

Kaluwu kime da cuwandinni, Rabi kaluwu bul cuwando.

Rabi kiji fanji, kaluwu birin shawa ciwandinna nangaro.

i	f	n	Y	O	E	R	G	B	ŋ
a	g	ny	s	a	h	U	y	N	Ɓ
b	ng	ŋ	B	Ng	T	I	Y	W	e
mb	h	o	mb	I	ɗ	L	P	D	Ny
ɓ	i	p	C	c	S	nj	s	J	nd
c	j	ɍ	E	H	ny	Mb	F	T	k
d	nj	s	F	m	D	Nd	ŋ	A	S
nd	k	ƭ	J	Ng	M	w	C	O	Y
ɗ	l	u	ŋ	k	r	Nj	i	ɓ	i
e	m	w	U	A	p	g	K	f	G

Fulfulde – FU4

pilkol goggo loonde

emo	lila	an	ɓe	cardi
oole	liila	ɓe haako	ɓiɓɓe	ummu
sooda	ceede	daado	haala	gada
una	miilo	on	rewɓe	pilkol
uulo	ada	nder	foti	yaha
oolo	adol	jam	pade	roogo
lima	omo	nanii	pede	debbo
elol	min	weeti	lootoo	lobbo
molu	no	waali	loota	natal
daago	leele	inna	licce	mboyri

Fulfulde – FU5

Lumo. Handen nyalooma lumo non.

Raabi no don ya lumo fa sooda toggore.

Raabi no don filoo toggoré wodere.

O hebaye toggoré woodere, Raabi heebi toggore ranere.

Raabi sehake o hebi toggore loobere.

ɑ	i	A	Ê	ê	B	î	Ô	f	w
n	b	p	ṭ	s	!	â	e	u	j
F	H	c	n	C	ô	Ğ	ł	ṣ	Š
Ǝ	Ə	f	d	E	D	s	Â	h	r
m	Ṭ	l	ṣ	e	r	ẓ	y	Ẓ	x
ḍ	b	ɣ	ă	L	f	z	H	M	k
r	š	!	Y	q	Ṣ	g	Ḷ	p	l
Ḍ	l	Z	o	î	Q	ɣ	h	ṣ	N
ł	ğ	n	J	a	K	O	T	i	q
c	m	Ă	ǰ	ŭ	d	W	X	Û	j

Tamasheq – TA4

ta	har	afud		
ta	əd	yel	imi	amidi
wa	anu	tile	əwəl	eyəs
wen	aman	win	ener	idi
ɣur	anna	tin	aḷəm	tafala
daw	dadăɣ	idi	eɣăyd	ax
sər	har	taɣat	ad	bəhu
əs	fel	taşt	işan	əšink
ăkal	dagman	măş	taḷəmt	enăle
ehăn	dənnəg	afud	as	awăra
ezăl	kăy	kăm	ehăd	ammaş

Tamasheq – TA5

Əṣuk. Aɣôra wa əzal n'aṣuk.

Rǎbi takka əṣuk fel aṭ taẓzunzu tekarsat.

Rǎbi tagammay tekarsat zağaɣat.

Wər təgraw tekarsat zağaɣat, Rǎbi təgraw tekarsat maḷât.

Rǎbi tiddî wat fellas təgraw tekarsat tenâyat hôṣayat.

A   b   o

E	i	f	O	A	é	c	Q	z	u
b	N	o	s	i	m	L	n	G	T
w	O	g	u	L	T	j	c	p	M
V	K	a	R	u	f	é	J	s	b
s	L	c	a	D	Y	f	H	a	e
i	s	u	p	M	v	i	T	n	P
Z	n	e	g	i	F	d	o	n	v
d	é	b	A	m	n	T	C	o	r
R	L	q	B	e	n	i	a	p	u
g	E	h	V	d	U	ç	i	m	x

ta	elle	lune		
tu	il	vol	sa	ma
ou	or	lire	ami	car
sol	peur	papa	sage	bébé
carte	cri	vache	blé	fleur
sur	chaise	peau	vole	bleu
mil	mur	table	clé	monde
fin	date	tour	posé	kilo
ronde	pré	abri	faire	porter
été	beau	pain	rougir	moto
mal	douze	bol	vélo	vide

Le repas. Il est midi. Issa a faim.

Maman ne l'appelle pas. Le repas n'est pas prêt.

Issa va à la cuisine. Maman prépare le riz.

Le plat est prêt. Toute la famille est à table.

Issa est content. Il mange le plat qu'il aime.

MATH
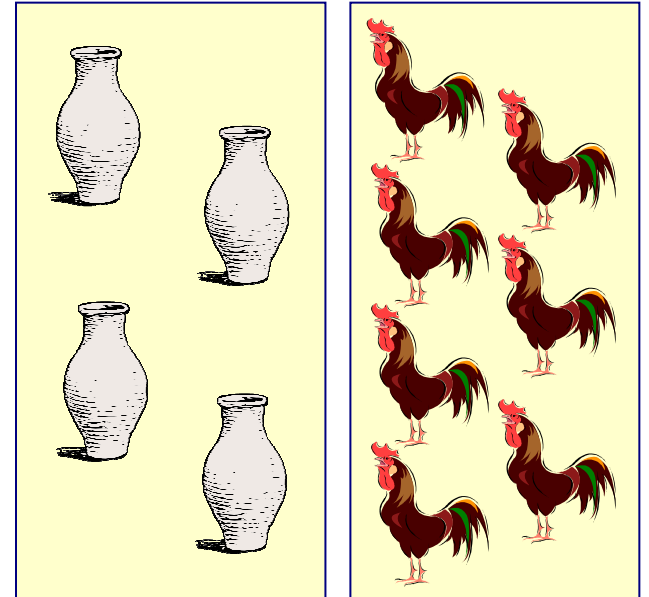
3

9

7   8

63   54

381 279

4 + 2 =

13 + 3=

3 - 1 =

12 - 9 =

Math

MA8.	MA9.
	$2 \times 4 =$
	$12 : 3 =$

Math
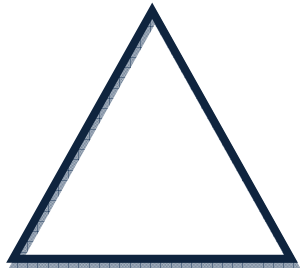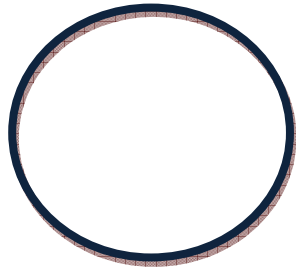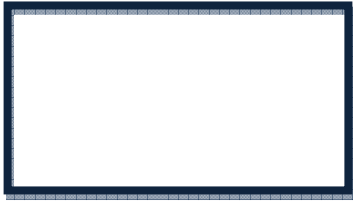
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APPENDIX E

ITEM RESPONSE THEORY ANALYSES OF READING ASSESSMENTS

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ITEM RESPONSE THEORY ANALYSES OF READING ASSESSMENTS

Purpose

Item response theory (IRT) is the modern approach to measurement. It provides more informative methods for analyzing, scaling, and scoring the results of tests than the traditional approach. Classical test theory assumes that all questions on a test, or items, are equally difficult and assigns scores based on the total number of items answered correctly. More specifically, the estimate of a person's ability is based on the proportion of items answered correctly (or endorsed) by the individual. If the sample of items is relatively easy, the person's ability will appear high in the area of interest (for example, reading ability). A student in grade 3 taking a grade 1 reading test would receive particularly high ability scores, even if his or her reading ability in grade 3 books were low. To address such a disparity, classical test theory tried to develop normed scores for different samples (usually by grade or age for school-age testing). Tests include items targeted to a particular age or grade, with individuals receiving a score based on how they performed relative to a larger sample of children of the same age or grade.

IRT analyses, on the other hand, estimate the difficulty level of each item (with information from all the people who responded to that item) and then use the information to obtain more precise estimates of each person's ability level. The ability of children is estimated according to their success on items that measure different levels of ability. Using IRT analyses, we can determine not only how many items the test taker answered correctly but also the difficulty level of each item relative to other items on the test. Instead of an ordinal level of measurement, IRT produces continuous measures.

IRT offers other advantages. With precise estimates of each item's difficulty and each person's ability, IRT allows either different tests sharing common items or different tests taken by the same test takers to be linked together. Independent items from a single test may be scaled relative to two tests' common items so that the two tests provide scores on the same measurement scale. IRT permits us to determine how the items across different tests of the same construct (that is, the area of interest) compare to one another in terms of difficulty, and we can use the resultant information to improve our interpretation of the results from both tests.

All children in our sample took an adapted version of the Early Grade Reading Assessment (EGRA) [1] in French as well as an assessment of similar skills in their local language of instruction. Given that we administered the same French test to all language groups, we had a unique opportunity to place all tests on the same scale, allowing us to use a Rasch model (Rasch 1960) to examine the difficulty of the reading items in the local language relative to the difficulty of the reading items in French. As with other IRT models, Rasch models use all available information to estimate each person's ability level and each item's difficulty level.

We analyzed together the French-language results of children from all language groups such that the Rasch model provided the best estimate of the difficulty level of the French items across all children. We then used the difficulty level of the French items to estimate the difficulty of the local-language items by placing the all items on the same continuous scale, permitting us to understand differences in tests and groups.

---

[1] In addition to using several standard EGRA tasks to measure specific reading skills, we incorporated tasks inspired by the PreLAS to measure receptive oral vocabulary and expressive oral vocabulary.

Methods

As described in Section V.A, all children took two language assessments: one in French and one in their local language of instruction (Hausa, Zarma, Kanuri, Tamasheq, or Fulfulde[2]). Each assessment included seven subtasks: receptive vocabulary, expressive vocabulary, oral comprehension, letter identification, familiar word reading, oral reading fluency, and reading comprehension.

IRT analysis sample. For the IRT analyses, we limited the sample to children who had been enrolled in school during the previous school year so that they would have sufficient exposure to both French and reading to permit variation in scores (not all 0 scores) and to ensure ample information to estimate the difficulty of the items. The sample thus included 9,568 children across all languages. The total number of children who took each local-language test follows: 5,945 for Hausa; 2,366 for Zarma; 1,081 for Kanuri; 48 for other language 1; and 128 for other language 2.

Scoring for IRT analysis. In the first three subtasks (receptive vocabulary, expressive vocabulary, oral comprehension) and the final subtask (reading comprehension), children received a score of 1 (for a correct response) or 0 (for an incorrect response). For fluency subtasks 4 and 5 (letter identification and familiar word reading), children were shown 10 rows of 10 letters or words per row and were asked to read as many letters/words as possible within one minute. For each row, they received one point for each correct letter/word read. For subtask 6 (oral reading fluency), children were given a short story to read, with their scores again based on the number of words read correctly per line of text. In subtask 6, the number of possible words read per line varied with language.

For the fluency tasks, we reviewed the score distributions in each language and found that the variation in any row score was insufficient to justify use of more than a three-point scale. The letter identification subtask, however, exhibited sufficient variation in children's scores across a three-point scale; children could score 0 (if they read no letters on a line correctly), 1 (if they read a handful of letters on a line correctly), or 2 (if they read most or all of the letters on a line correctly). The word identification and oral reading fluency subtasks revealed less differentiation across children than the letter identification subtask, with most children either not recognizing any words or recognizing most words in a given row. We thus rescaled the items so that children scored 0 if they did not read any of the words correctly and 1 if they read at least one word per line correctly. In Table E.1, we display the final scales used for the Rasch analysis. We used the same scoring for all languages.

---

[2] From this point forward, we refer to Tamasheq and Fulfulde as "other languages" to protect confidentiality for public use.

Table E.1. Item scoring for IRT analysis by subtask

Subtask name	Number of items[a]	Scoring for the IRT analyses
1. Receptive vocabulary	10	0 (incorrect) or 1 (correct)
2. Expressive vocabulary	10	0 (incorrect) or 1 (correct)
3. Oral comprehension	5	0 (incorrect) or 1 (correct)
4. Letter identification	10	0 (no letters identified), 1 (some letters identified), or 2 (most or all letters identified)
5. Familiar word reading	10	0 (no words identified) or 1 (one or more words identified)
6. Oral reading fluency	5	0 (no words read) or 1 (one or more words read)
7. Reading comprehension	5	0 (incorrect) or 1 (correct)

[a] In some cases, an item is one question. For subtasks 4 through 6, an item is a row of letters or words. The same scoring is used for all languages.

French analysis. Using data across all local-language groups, we first calibrated[3] the French scores of all children. Given that the letter identification subtask used an ordered scale from 0 to 2 (a polytmous scale), we relied on the Rasch rating scale model (Andrich 1978) for the letter identification subtask in order to estimate the probabilities of children receiving a score of 0 (incorrect), 1 (partially correct), or 2 (correct) for each item instead of a score of just 0 or 1. We analyzed items from the different tasks as groups of items within the overall test. After calibrating all of the items in French, we examined the evidence of the reliability and validity of the difficulty estimates as follows:

- **Infit and outfit statistics.** We examined the error in the estimates of difficulty across children of different ability levels within each of the local-language groups in order to ensure that the relative difficulty of the French items was similar across groups. IRT calibrates the estimates of item difficulty and the estimates of children's ability on the same scale. A child's score (or ability estimate) represents the point at which the child has a 50 percent probability of correctly answering items a decreasing probability of correctly answering more difficult items, and an increasing probability of correctly answering easier items. The infit statistics tell us whether children respond as expected to items close to their ability level while outfit statistics tell us if children provide unexpected responses (for example, correctly guessing very difficult items) far from their ability level. If the items are properly developed and ordered in difficulty across children of varying abilities, then the fit of the items will be strong. For the French items in particular, we wanted to be sure that the items fit well across groups. We looked for any items that might fit poorly for children in a particular language group.

- **Differential item functioning (DIF).** Next, we conducted DIF analysis to investigate whether French items functioned differently across local-language groups. DIF analyzes whether the same items have a different difficulty level for people from different groups at the same ability level as estimated by the IRT analysis. For example, if children taking the Hausa test have the same ability level as children taking the Zarma test but are more likely to answer a specific item correctly on the French assessment, the item would demonstrate DIF and possibly indicate that the item is biased.

---

[3] We used Winsteps (Linacre 2014a), a software program for Rasch models, for all the IRT analyses.

- **Variability of scores.** We reviewed the number of children measured (those who answered some but not all questions correctly) and the distribution of scores across language groups to ensure variability in scores on the French assessment in each language group.

Drawing on the analysis of item difficulty, the infit and outfit statistics, and the variability of scores (discussed in the results section), we determined that we could use the same scale for the French scores across languages and analyze whether the local-language assessments could be placed on the same scale.

Local-language analysis. Both the local-language test and the French test measured language and literacy. Therefore, the goal of the local-language analyses was to determine whether the items would scale together and, if so, to place each local-language test on the same scale as the French test, thus allowing us to compare the difficulty of items across language groups and, ultimately, compare how children acquire reading skills in the various languages of interest. The comparison would be possible only if the distribution of difficulty of the French items overlapped with the difficulty of the local- language items. We performed the following steps:

- **Data set construction.** We created a separate data file for each local language. The file includes each child's responses to both the French and local-language items.

- **IRT analysis.** Using the estimates from the analysis with all the language groups, we set the difficulty level of the French items to be the same across test takers in the various local languages. [4] We then calibrated each local-language file along with the anchored French items so that we would be able to estimate the difficulty of the local-language items relative to the difficulty of the French items.

- **Checks.** To determine the success of the procedure, we performed several quality checks. In particular, we reviewed infit/outfit statistics, the distribution of scores, the percentage of variance explained by the scores, and the degree to which the French scores overlapped with the local-language scores.

Results

French analysis. The results of the initial French analysis and checks suggested that French could serve as an adequate anchor to the local languages. Our review of the infit and outfit of items and persons fell within a reasonable range. An infit or outfit mean square error between 1.5 and 2.0 is considered unproductive for measurement, and a mean above 2.0 is considered problematic because it distorts or degrades the measurement system (Linacre 2014b). However, high infit is generally more problematic than high outfit because it means that responses are unexpected on items close to the child's ability level. Of the 55 French items, none had an infit higher than 2.0, and 5 had an outfit higher than 2.0. The infit and outfit statistics for the children were similar across languages. Fewer than 3 percent of children had high infit, and fewer than 10 percent of children (and generally fewer than 5 percent) in each language had a high infit and/or outfit score (Table E.2).

---

[4]The anchor file excluded any French items with high DIF; however, the same French items excluded from the anchor file were included in the data file for each language group in order to improve the measurement. Thus, each language's final output included the same IRT difficulty values for the items anchored in French and the unique IRT difficulty values for the non-anchored French items and the local-language items.

Table E.2. Children infit and outfit statistics of French test, by local-language group

Language	Percent of children with infit greater than 2.0	Percent of children with outfit greater than 2.0	Percent of children with infit OR outfit greater than 2.0
Hausa	1.83%	5.25%	5.89%
Zarma	1.94%	3.34%	3.84%
Kanuri	2.41%	1.85%	3.79%
Other language 1	2.08%	4.17%	6.25%
Other language 2	0.78%	7.03%	7.03%

Results from the DIF analysis show that 10 of the 55 items had a high degree of DIF, indicating that the French items did not function similarly across local-language groups and should not be included in the anchor file. [5] In particular, DIF indicated that 3 items from subtask 1, 4 items from subtask 2, 2 items from subtask 3, and one item from subtask 7 differed for one or more language groups. All but one of these items were oral language items rather than reading items, indicating that reading in French was more similar across language groups than speaking and listening in French and suggesting that problems might arise in connecting the oral language items across languages to the same scale. Given differences in phonemes (individual sounds) across languages, it may be easier to distinguish sounds and words in French because of their greater similarity to some versus other languages. Relying on the French items, we used only the 45 items without any DIF to anchor the tests to the same scale.

Finally, the number of children measured (those who did not answer all questions correctly or all questions incorrectly) and the distribution of their scores on the French assessment for each language group provided a sufficient basis for using the French items for anchoring. The recommended minimum sample size for performing Rasch analysis in well-designed studies is between 30 and 50 to ensure stable item calibrations (Linacre 1994). However, the recommendation also assumes sufficient variability in the scores across children who responded correctly to at least one item. Some children did not answer any item correctly and therefore did not contribute to the estimate of item difficulty (Table E.3). The number of measured children was sufficient across groups, though closer to the minimum size in the two other language groups. Review of the histograms of scores showed adequate distribution across the French scores of each language group.

Table E.3. Number of children in sample and number measured, by local-language group

Language	Total in sample	Total measured
Hausa	5,945	3,656
Zarma	2,367	1,424
Kanuri	1,081	493
Other language 1	48	40
Other language 2	128	83

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[5] These items were identified by reviewing the DIF plots produced in WINSTEPS, which shows the size of the item DIF for the person classification relative to the overall item difficulty.

In summary, the results from the analyses of the French items indicated that we could use the French test as an anchor to the local-language tests.

Local-language analysis. We next look at the results by language group of the analyses that estimate the difficulty of the local-language test items with the French test items.

1. Person and item summary statistics

In Tables E.4 and E.5, we provide summaries of the persons and items measured in each analysis. The French results include the analysis of all persons, or test takers, across languages on the 55 French items. The local-language test results pertain to the given language group on both the 55 French items and the 55 local-language items. IRT person reliability is a measure of internal consistency and is similar to a Cronbach's alpha. [6] Reliability was strong for each language group, with reliability estimates for local languages greater than 0.95 and the reliability for the French test at 0.94. A high percentage of children (40 percent) had extreme minimum scores in French, and only seven children had extreme maximum scores[7] in French. Fewer than 2 percent of children had extreme minimum scores in their local language. One child had an extreme maximum score in Kanuri, and no other children reached maximum scores in their home languages. The mean score on the IRT scale is 0, which, in this case, is based on the estimate of the mean difficulty of the French items used to anchor the scale. Children's scores represent their language and literacy ability across the languages that that they are learning. The mean IRT estimate of children's language and literacy ability was low across language groups, ranging from -4.91 to -1.69.

Table E.4. Summary of person measurement across languages

	French	Hausa	Zarma	Kanuri	Other language 1	Other language 2
Total measured	9,568	5,884	2,350	1,059	48	126
Person model reliability	.94	.97	.96	.96	.97	.98
Extreme minimum	3,872	61	17	21	0	2
Extreme maximum	7	0	0	1	0	0
Mean for those measured	-2.72	-4.19	-4.56	-4.91	-1.69	-3.26

As shown in Table E.5, for all but one local language, the item measures had negative means, indicating that, on average, local-language questions targeted a lower ability level than the French-language items. The mean difficulty level for the French analysis is 0, which results from using the French test as an anchor for comparing the other languages. The mean estimates of item difficulty reveal that, on average, all but one of the local languages had easier items compared to French. The standard deviation indicates that the items assess a broad range of difficulty. As compared to the tests in Hausa, Zarma, and Kanuri, the tests in other language 1 and other language 2 were not as well targeted to the sample of children taking the tests. At least 25 percent of the items on those tests could not be measured because all children answered the

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[6] The reliabilities reported here are higher than those reported for other analyses in the report. The reason is that calculation of the reliabilities is based on 110 items per person (55 in French and 55 in the local language), whereas those in the report include only the 55 local-language items. Increasing the number of items and assessing more of the variation in language and literacy lead to better measurement and higher reliabilities.

[7] Extreme minimum scores are indicators of a test's floor problem, that is, the number of easy items is insufficient to differentiate ability levels among the children with extreme minimum scores. None of the tests had any indication of a ceiling problem (that is, an inability to measure high-ability children).

item correctly (extreme minimum) or incorrectly (extreme maximum). In addition, the distribution in difficulty levels did not overlap sufficiently with the French items to justify placing the local language items on the same continuous scale. Analysis of scores in other language 1 and other language 2 without the French items would result in lower reliability, and the middle of the measurement scale would lack items for measuring children's skills.

Table E.5. Summary of item measurement across languages

	French	Hausa	Zarma	Kanuri	Other language 1[a]	Other language 2 [a]
Total items measured	55	110	106	110	84	96
Extreme minimum	0	0	0	0	9	0
Extreme maximum	0	0	4	0	7	14
Mean for items measured	0.00	-1.28	-1.66	-1.25	.64	-1.61
Standard deviation for items measured	2.50	4.41	5.43	4.48	3.16	4.57

[a] In some cases, an item is one question. For subtasks 4 through 6, an item is a row of letters or words. The same scoring is used for all languages.

2. Summary of misfitting items across languages

Examination of the item statistics for the local-language items indicated misfit in some local-language items. Misfitting items include those with problematic infit and outfit mean square errors[8] and often those with more extreme scores. Nearly all items in subtasks 1 through 3 (the oral language items) were misfitting when linked to the French test. The items had difficulty levels much lower than those of any of the French items, indicating that children experienced less difficulty in listening and responding orally in their local language versus listening and responding orally in French or reading in either language. Given that these items had less reliable measurement in this analysis, we exclude subtasks 1 through 3 from further analyses and discussion.

Examination of extreme scores suggested that we should not include other language 1 and other language 2 in the analyses; our review of infit and outfit supported our decision. The few items remaining in other languages 1 and 2 that could be measured also had high infit and outfit scores. The high degree of misfit with the few items measuring children's ability calls into question the validity of tests in other language 1 and 2. Larger samples and revision of the tests are needed to ensure reliable and valid measurement.

3. Difficulty of items when placed on same scale

For items in French, Hausa, Zarma, and Kanuri under subtasks 4 through 7, we reported results that compare literacy items from the different languages, though on the same scale. For subtask 4 (letter identification) and subtask 5 (familiar word reading), we reported the IRT item difficulty levels for the first 5 rows of text. Very few children got beyond row 5; therefore, the item difficulties for rows 6 through 10 were so high that they did not overlap with the French items. Similarly, for subtask 6 (oral reading fluency) and subtask 7 (reading comprehension based on text read in subtask 6), we reported the IRT item difficulty levels for rows and questions 1 through 3 because few children were able to read and answer corresponding

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[8] Items with infit and outfit problems had mean square errors greater than or equal to 1.5.

questions about the text beyond row 3. The French-language results are based on the items used to anchor to all of the languages.

In Figures E.1 through E.4, we display the IRT difficulty values for subtasks 4 through 7 by language when anchored to the French items. The IRT value of 0 is the mean difficulty of the items. A difficulty value of -3.0 indicates a very easy item while a difficulty value of 3.0 indicates a very difficult item. Although the results show how the items compare in difficulty across languages, they cannot explain the reasons for the differences in difficulty. Differences could arise from several factors, such as phonemic or linguistic differences that cause one language to be more difficult to read than another; differences in how the items were written or administered in each language; or differences in culture or education practices. Without further information, the results should not be used to compare the literacy ability levels of different groups.

A review of the results across subtasks confirms the increasing difficulty of tasks. From subtask 4 to subtask 6, for example, the difficulty level increases as children read more rows of text. The increased difficulty level parallels the design of the assessment.

Despite efforts to make the tasks similar across languages, the items in some languages proved to be more difficult for children than similarly constructed items in the other languages. The difference in difficulty could relate to children's opportunities to learn, the importance of the measured skill, or the construction of the items in different languages. As shown in Figures E.1 and E.2, the results from letter identification and familiar word reading (subtasks 4 and 5) indicate that it is easier for children to read letters and words in French than in their local language. As shown in Figures E.3 and E.4, the results from oral reading fluency and reading comprehension (subtasks6 and 7) demonstrate that Zarma items are more difficult than items in other languages. It is important to note that the stories read in subtask 6 and the questions about the text in subtask 7 were translated to be the same story across the local languages but differed in French, perhaps accounting for some differences in difficulties between French and local languages.

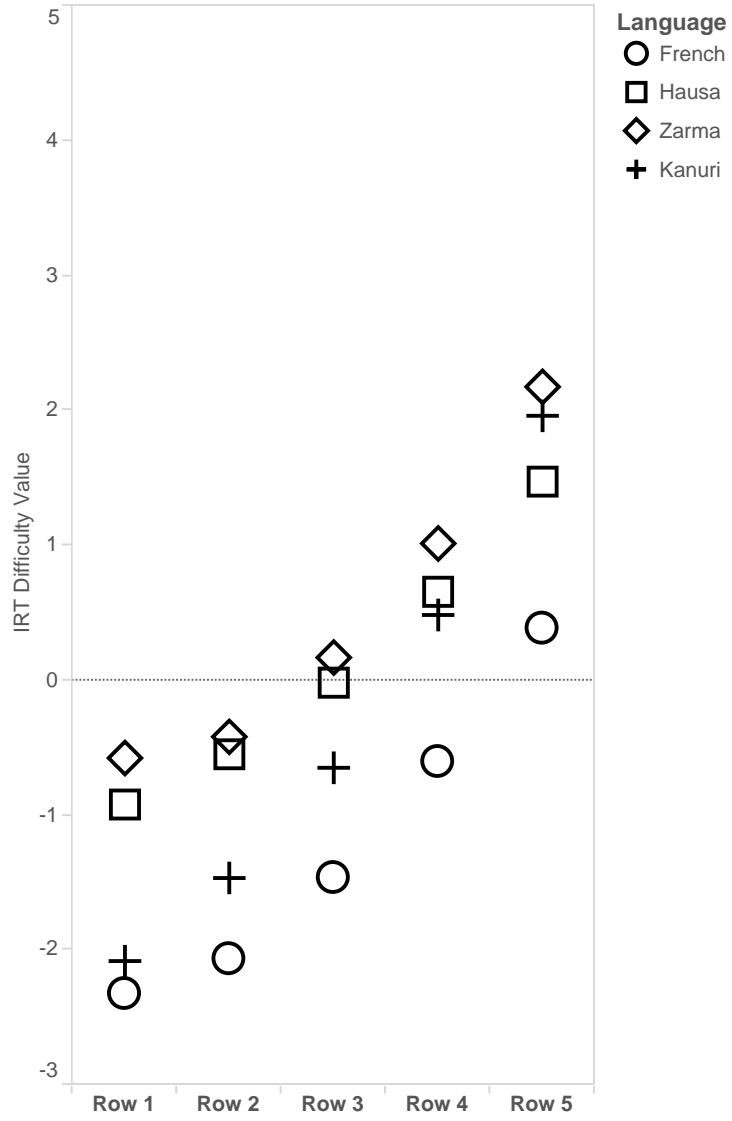**Figure E.1. Sous-tache 4 IRT valeurs de difficulté par langue**

Figure E.2. Sous-tache 5 IRT valeurs de difficulté par langue
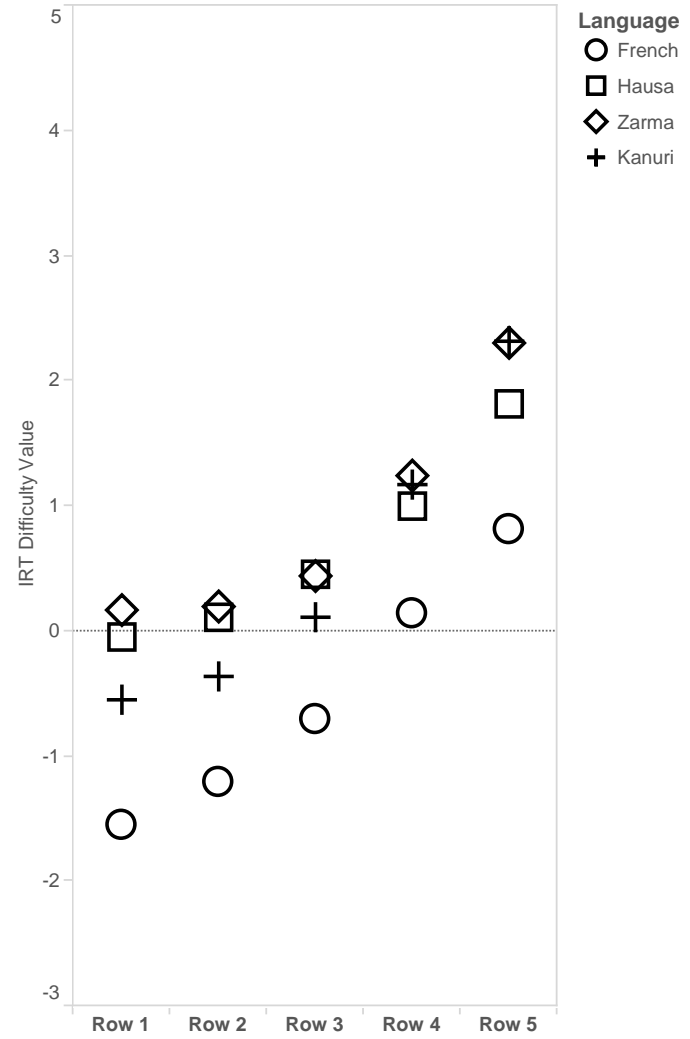
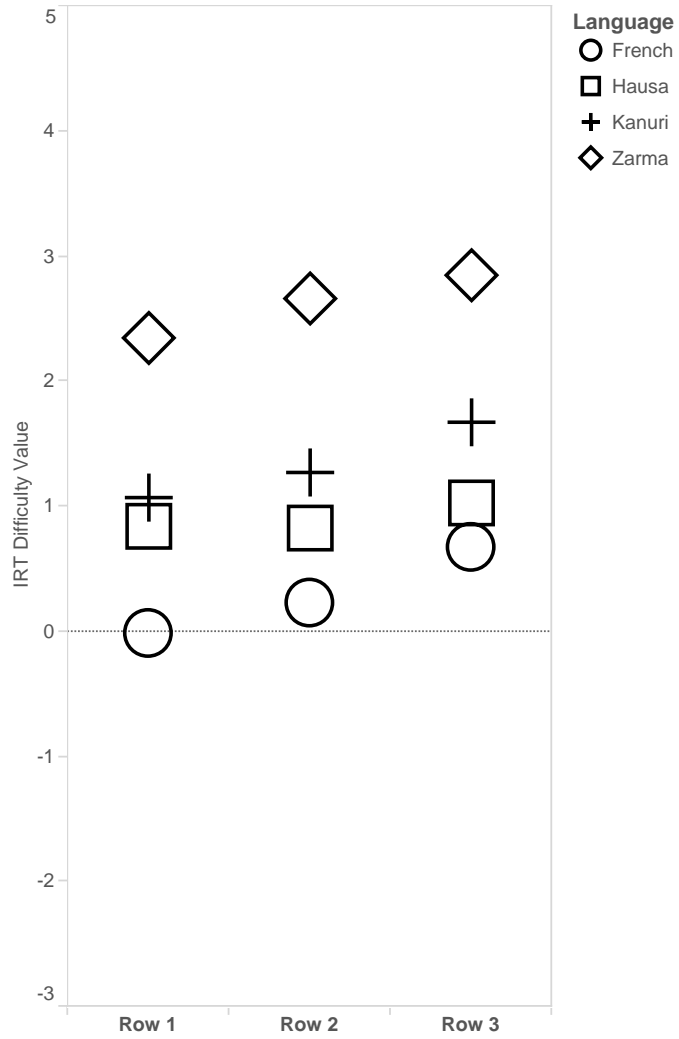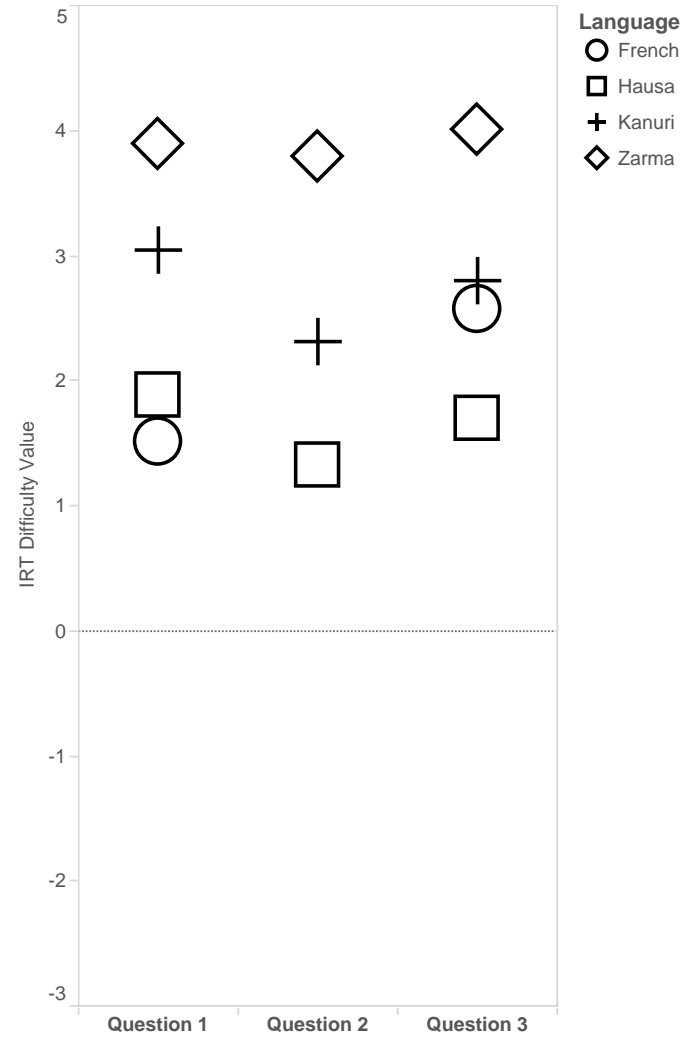**Figure E.3. Sous-tache 6 IRT valeurs de difficulté par langue**

Figure E.4. Sous-tache 7 IRT valeurs de difficulté par langue

Discussion

The initial results suggest that EGRA assessments of separate language groups may be measured on the same continuous scale by anchoring scores on the different local-language assessments to scores on the French assessment taken by all children. The results can guide discussions about differences between/among languages, tests, and learning environments across language groups. The analysis permits us to draw several conclusions as follows:

1. Oral language items in children's local languages are much easier compared to oral language items in French or to reading items and do not lend themselves to placement on the same scale. The reason may be that learning French and learning to read are more related to children's educational experiences while oral language skills in a child's mother tongue are learned from infancy.

2. Other language 1 and other language 2 did not sufficiently overlap with the French items and could not be placed on the same scale, probably because of small sample sizes and the lack of variation in scores for the local-language items. Therefore, we should be cautious about interpreting results from these languages in both Appendix E and the main body of the report. The measurements are less reliable than those from the local languages with large sample sizes.

3. As expected and consistent with the literature on how children acquire early reading skills, the difficulty level of the items increased as children progressed from letter identification to familiar word reading to oral reading fluency to reading comprehension. The difficulty level also increased within subtasks 4 through 6, reflecting the design of the assessment.

4. Whereas children's oral language skills were much higher in their local language as compared to French, their reading skills were higher in French as compared to their local language. The French reading items tended to be easier for children than the reading items in their local language.

5. A comparison of the difficulty of reading items across the three local languages on the same scale as French indicated differences across local languages. In particular, Zarma items were most difficult under subtasks 6 and 7 (oral reading fluency and reading comprehension). Below, we discuss possible explanations for the differences.

First and as stated, it is crucial to note that placing all items from different assessments on the same scale does not make the assessments equivalent. Items across different languages should be viewed as unique items rather than as translated versions of the same items, even when they are translations of the same words. Although the results may demonstrate that item 3 in one language is more difficult than item 3 in another language, they cannot show why it is more difficult. The difference in difficulty may result from several factors, such as phonemic or linguistic differences that cause one language to be more difficult to read than another; differences in how the items were written or administered in each language; or differences in the opportunities to learn among the samples taking the tests. Therefore, the analyses of assessment results should spur further discussion among linguists, implementers, and researchers regarding the reasons for differences in the difficulty of items between languages.

Limitations. Use of the Rasch model with the given assessment's particular data set gives rise to limitations. First, the Rasch model assumes that all items are locally independent such that the latent trait undergoing measurement provides the only explanation for why items are related

to one another. This assumption is often violated when a test includes a testlet or smaller section with items related to one another especially in the instance of a common reading passage. In this case, several measures of reading fluency and comprehension of passages—and the responses to the associated items—relate to one another. Second, the Rasch model assumes unidimensionality such that all items in an assessment measure the same latent trait or ability. In this case, it is more likely that the test measures two latent traits: language (subtasks 1 through 3) and reading (subtasks 4 through 7). For this reason, we included only subtasks 4 through 7 in the analyses, placing the various tests on the same scale. Finally, with the assessment involving seven subtasks, we had to break up the analyses into seven groups for analysis, permitting us to estimate separately the cut-point between scores (in most cases between 0 and 1) for each language group. Seven groupings were essential for the assessment, but we recognize that such a large number could weaken the measurements. Overall, it is important to keep in mind that the results from the analyses are estimates based on a statistical model that does not perfectly fit any set of real data. Accordingly, we have been careful to report only the results for the languages and subtasks that best fit the Rasch model.

Directions for further research. Future work on the NECS study could include analyses that utilize this same technique to provide additional information on the differences between language groups. For example, we could place responses from two time periods on the same scale to show growth over time and to compare growth between languages. We could also compare differences in ability levels across subgroups, such as grade levels or gender with all languages on the same scale. Such analyses would provide more precise estimates of, for example, how one language group may experience more growth than another language group or how girls are performing at a higher ability level in one language compared to another. In addition, a review of the results may lead to conversations that help explain differences in difficulty levels or how well items fit with the model, perhaps leading to future improvements in the assessments.

APPENDIX F

**EGRA LOCAL LANGUAGE SCORES IN TREATMENT VILLAGES FOR GRADE 1
AND GRADE 2 CHILDREN**

LOCAL-LANGUAGE ASSESSMENT SCORES IN NECS TREATMENT VILLAGES FOR GRADE 1 AND GRADE 2 CHILDREN

In addition to the NECS impact evaluation, MCC and USAID requested a descriptive study focusing on reading performance in local languages in NECS schools' early grades. The descriptive study measures reading skills in local languages for students in grades 1 and 2 (CI and CP in Niger) in a sample of intervention schools over a two- or three-year period. Plans call for two or three rounds of data collection, with the exact number to be determined in discussions with stakeholders in the spring of 2015. In the first round of data collection, conducted in May 2014, 1,007 students in grades 1 and 2 from 27 randomly selected NECS intervention schools were administered a short Early Grade Reading Assessment (EGRA). The assessment was administered in the language of instruction at the student's school and comprised five subtasks: letter identification, familiar word reading, invented word reading, oral reading fluency of grade 2–level text, and reading comprehension. Results from Round 1 indicate that reading levels are very low for grade 1 and grade 2 students across all languages and regions.

In this appendix, we use NECS Wave 1 data to calculate some of the same descriptive statistics presented in the *Niger NECS EGRA Descriptive Study Round 1 Report* (Bagby et al. 2014b). We include all reading-related skills that were also included in the NECS impact evaluation wave 1 assessment: receptive vocabulary, expressive vocabulary, oral comprehension, letter identification, familiar word reading, oral reading fluency, and reading comprehension. The sample includes children in the 149 NECS intervention villages in the impact evaluation sample who were enrolled in grade 1 or grade 2 during the previous school year. As with the NECS EGRA Round 1 report, the analysis includes four languages: Hausa, Zarma, Kanuri, and another local language. Even though we have data on a fifth local language, no intervention schools received the NECS intervention in that language. In the sections that follow, we present a description of the test results, including the maximum, minimum, and mean scores for each subtask within each language; the overall scores across languages; and raw mean scores in each language, separated by subtask and grade. As with the NECS EGRA descriptive study, we find low levels of reading proficiency and strong floor effects in the subtasks measuring reading skills, such as letter identification, familiar word reading, oral reading fluency, and reading comprehension. There are fewer floor effects for the oral language skills, which include receptive vocabulary, expressive vocabulary, and oral comprehension.

1. Description of the test results by language

In Table F.1, we show the distribution of scores for each language among children in NECS treatment villages who were enrolled in grade 1 or grade 2 during the previous school year. In general, scores are high for the first two subtasks—receptive oral language and expressive oral language—which ask children to follow given instructions and to identify body parts or objects around them that are pointed out by the test administrator. Out of a maximum 10 points, children scored, on average, between 7.6 and 9.7 across languages on the two subtasks. The mean score for the listening comprehension subtask ranged from 1.8 to 3.7 across languages, with a maximum score of 5. Subtasks 4 through 7, which measure reading skills, exhibit much lower scores. Children were able to identify correctly fewer than one letter per minute, on average, across all languages. The maximum scores show that no child was able to name correctly more than 50 letters

within one minute in any language. Although the maximum scores indicate that some children were able to score relatively well on subtasks 5 through 7, the mean scores show that the majority scored very low. In some languages, not a single child was able to provide a correct answer for the oral reading fluency and reading comprehension subtasks.

Table F.1. Description of language test scores obtained in NECS villages

	Subtask 1: Receptive oral language	Subtask 2: Expressive oral language	Subtask 3: Listening comprehension	Subtask 4: Letter identification	Subtask 5: Familiar word reading	Subtask 6: Oral reading fluency	Subtask 7: Reading comprehension
Mean	9.2	8.8	2.6	0.7	0.1	0.1	0.4
Standard deviation	1.7	2.0	1.7	3.2	1.0	2.0	5.6
Minimum	0	0	0	0	0	0	0
Maximum	10	10	5	46	26	54	100
Number of children	1,668	1,668	1,668	1,668	1,668	1,668	1,668
B. Zarma							
Mean	9.7	9.4	3.7	0.7	0.2	0.0	0.1
Standard deviation	1.2	1.4	1.7	3.3	1.6	0.7	1.7
Minimum	0	0	0	0	0	0	0
Maximum	10	10	5	39	22	16	40
Number of children	718	718	718	718	718	718	718
C. Kanuri							
Mean	9.0	8.3	1.8	0.5	0.1	0.0	0.0
Standard deviation	1.8	2.3	1.9	2.5	1.0	0.4	0.0
Minimum	0	0	0	0	0	0	0
Maximum	10	10	5	31	12	7	0
Number of children	323	323	323	323	323	323	323
D. Other local language							
Mean	8.1	7.6	2.7	0.1	0.0	0.0	0.0
Standard deviation	2.8	2.6	1.8	0.5	0.2	0.0	0.0
Minimum	0	0	0	0	0	0	0
Maximum	10	10	5	3	1	0	0
Number of children	41	41	41	41	41	41	41

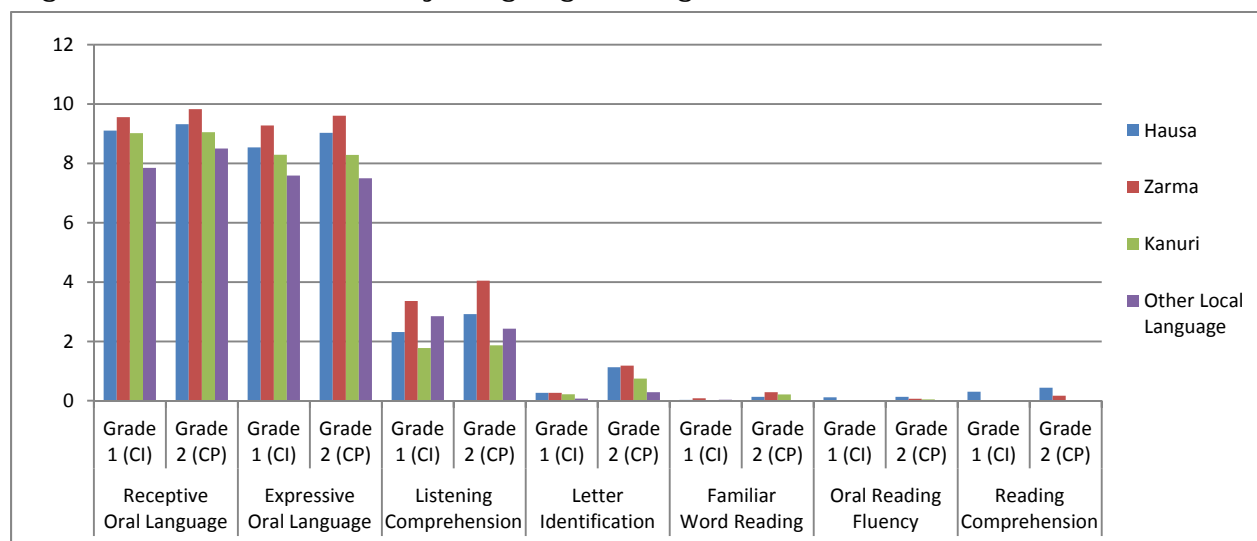Source: NECS Wave 1 data collection, October and November 2013, Household Survey.

Notes: The reported figures are raw scores for children who were enrolled in grade 1 or grade 2 during the previous school year (2012–2013) regardless of their enrollment status at the time of data collection. The sample does not include children who did not agree to take the test.

It is important to point out that we cannot directly compare raw EGRA scores between languages. Even though the tests were developed in the same way for each language, fundamental structural differences between the languages make comparisons misleading and incorrect (RTI International 2009). Specifically, differences in both the complexity of syllables and orthographic depth (the degree to which grapheme-phoneme correspondences are consistent and predictable) affect the rate at which language acquisition occurs (Seymour et al. 2003). For example, it is widely established that early reading skills develop more slowly for English learners than for learners of other European languages (Seymour et al. 2003). Therefore, English-learning children are likely to lag behind when tested on the same skills at the same age as learners of a structurally less complex language, regardless of their exposure to instruction or their innate ability. Even when languages are similar, systematic differences in scores across languages could be a product of numerous factors, including varying degrees of difficulty of the assessment itself or differences in the quality of instruction between languages. Means equating and item response theory (IRT) equating are two statistical methods used to ensure that the measures obtained from each assessment of each skill were comparable. We use IRT to put the assessments in the different local languages on the same scale in Appendix E.

2.   Overall scores

Given the variations in the languages themselves and the assessments, the analysis does not allow us to compare directly the scores between languages. Nonetheless, we present (Figure F.1) the mean scores by language and grade for all seven oral language and reading skills measured (the score is the unadjusted number of items for which a correct response was given). The information provides a useful overview of the trends across the languages.

Figure F.1. Mean scores by language and grade

Source: NECS Wave 1 data collection, October and November 2013, Household Survey.
Notes: In Niger, grade 1 is called CI and grade 2 is called CP.

As mentioned, most children possess strong oral language skills as measured by the first three subtasks—receptive oral language, expressive oral language, and listening comprehension. Reading skills for all four languages, however, were very low and nearly indistinguishable from 0. In general,

scores visually appear to be only slightly higher for students last enrolled in grade 1 versus those last enrolled in grade 2.

Data collection was timed to occur at the start of the 2013-2014 school year, at which time many schools were not in session, although some were. The results presented here are limited to those children who were enrolled in grade 1 or grade 2 in NECS treatment schools during the previous school year, regardless of their plans for enrolling in the next school year. The assessments were administered before the start of most NECS activities; in particular, the early-grade reading activity did not begin until early 2014, several months after data collection took place. Therefore, no child in the sample had been exposed to the early-grade reading aspect of the NECS intervention at the time of data collection.

The scores presented in the appendix are drawn from a sample similar to that used for the Niger NECS EGRA Descriptive Study Round 1 (EGRA Round 1) report; however, children in that study were enrolled in school, and students in grade 1 had been exposed to four months of the early-grade reading component of the NECS intervention. Despite these differences in the samples, we find that scores for oral reading fluency and reading comprehension are similar across all languages to those presented in the EGRA Round 1 report, with mean values close to 0. Scores for letter identification and familiar word reading are higher in the EGRA study, possibly because of the timing of data collection in relation to the school year (the start of school year in the present study versus the end of the school year in the EGRA Round 1 sample) or to the effects of the NECS intervention, which began in grade 1 during the start of 2014 before the EGRA Round 1 data collection occurred. The NECS EGRA Round 1 study did not measure oral language skills, and the NECS impact evaluation wave 1 data collection did not measure invented word reading.

3.　Hausa score analyses

The Hausa language assessment was completed by 1,667 children in 89 villages. In Table F.2, we present mean test scores and standard deviations. Mean scores are high across the first two oral language subtasks, with children scoring between 8.54 and 9.32 out of a possible 10 points. On those subtasks, only 1 to 3 percent of children were not able to provide at least one correct response. Scores begin to decline with the listening comprehension subtask, with children correctly answering, on average, about half of the five questions posed to them. About a fifth of grade 1 children and 15 percent of grade 2 children were not able to answer a single question.

Scores on all reading skills subtasks are very low for both grade 1 and grade 2 children and statistically do not differ significantly from 0. Grade 1 children were able to identify correctly only 0.27 letters per minute, on average, while grade 2 children were able to identify correctly only 1.13 letters per minute, on average. These scores for letter identification are considerably lower than those in the EGRA Round 1 study sample; in that sample, current grade 1 students were able to identify 8.91 letters, on average, and grade 2 students were able to identify 7.70 letters, on average. It is particularly notable that in this study 95 percent of grade 1 and 86 percent of grade 2 children were not able to identify a single letter. Mean scores, excluding the 0 scores, were 5.77 and 8.27 letters per minute for grade 1 and grade 2 children, respectively. Scores in the final three subtasks are similarly low, with only 8 to 21 children providing at least one correct response. Scores for familiar word reading are slightly higher in the NECS EGRA Round 1 study, but scores in both studies approach 0 for oral reading fluency and reading comprehension.

Table F.2. Raw mean scores in Hausa by grade, separated by subtask, NECS treatment villages only

	All children		Percentage of children scoring zero	Excluding children scoring zero		
	Mean score	Standard deviation		Mean score	Standard deviation	Sample size
Subtask 1: Receptive oral language						
Grade 1 (CI)	9.11	1.73	2	9.30	1.10	829
Grade 2 (CP)	9.32	1.56	1	9.46	1.08	808
Subtask 2: Expressive oral language						
Grade 1 (CI)	8.54	2.11	3	8.83	1.43	819
Grade 2 (CP)	9.03	1.84	3	9.28	1.09	798
Subtask 3: Listening comprehension						
Grade 1 (CI)	2.32	1.71	21	2.94	1.37	666
Grade 2 (CP)	2.92	1.72	15	3.45	1.30	694
Subtask 4: Letter identification						
Grade 1 (CI)	0.27	1.61	95	5.77	5.03	39
Grade 2 (CP)	1.13	4.16	86	8.27	8.24	112
Subtask 5: Familiar word reading						
Grade 1 (CI)	0.03	0.43	99	4.50	2.66	6
Grade 2 (CP)	0.13	1.36	98	7.07	7.44	15
Subtask 6: Oral reading fluency						
Grade 1 (CI)	0.12	2.14	100	24.54	22.19	4
Grade 2 (CP)	0.13	1.81	99	17.67	12.83	6
Subtask 7: Reading comprehension						
Grade 1 (CI)	0.31	5.27	100	86.67	23.09	3
Grade 2 (CP)	0.44	6.00	99	72.00	30.33	5
Sample size: Students in grade 1 (CI)	847					
Sample size: Students in grade 2 (CP)	820					
Sample size: Villages	89					

Source: NECS Wave 1 data collection, October and November 2013, Household Survey.

Notes: The reported figures are raw scores for children in NECS treatment villages who were enrolled in grade 1 or grade 2 during the previous school year (2012–2013) regardless of their enrollment status at the time of data collection. The sample does not include children who did not agree to take the test.

4. Zarma score analyses

The Zarma language assessment was completed by 718 children in 37 villages. In Table F.3, we present mean test scores and standard deviations. Mean scores in the receptive oral language and expressive oral language subtasks are between 9.28 and 9.83 for grade 1 and grade 2 children, respectively, out of a possible 10. The scores indicate that most children were able to follow instructions and identify correctly the objects pointed out as well as named by the test administrator. In each subtask, fewer than 2 percent of grade 1 children and fewer than 1 percent of grade 2 children were not able to provide a single correct response. Mean scores are a bit lower for the listening comprehension subtask, with grade 1 children answering an average of 3.36 questions correctly and grade 2 children answering an average of 4.05 questions correctly.

Scores are much lower for the reading skills subtasks. Grade 1 children were able to identify only 0.27 letters per minute, on average, while grade 2 children identified only 1.18 letters per minute. These mean scores are not significantly different from 0. Among grade 1 and grade 2 children, 97 and 85 percent of students, respectively, could not name a single letter within one minute. The results differ substantially from the EGRA Round 1 sample wherein the average score

is between 3.5 and 5 letters per minute, and only 45 percent of students could not name a single letter. In the NECS impact evaluation wave 1 sample mean scores, excluding the 0 scores, are 8.73 and 7.92 for grade 1 and grade 2 children, respectively. Scores on the remaining three reading skills subtasks are similarly low, with no grade 1 children able to provide a correct response in the oral ready fluency or reading comprehension subtask.

Table F.3. Raw mean scores in Zarma by grade, separated by subtask, NECS treatment villages only

	All children			Excluding children scoring zero		
	Mean score	Standard deviation	Percentage of children scoring zero	Mean score	Standard deviation	Sample size
Subtask 1: Receptive oral language						
Grade 1 (CI)	9.56	1.50	2	9.72	0.84	356
Grade 2 (CP)	9.83	0.83	1	9.88	0.38	353
Subtask 2: Expressive oral language						
Grade 1 (CI)	9.28	1.65	2	9.46	1.02	355
Grade 2 (CP)	9.61	1.00	1	9.66	0.70	353
Subtask 3: Listening comprehension						
Grade 1 (CI)	3.36	1.89	15	3.95	1.36	308
Grade 2 (CP)	4.05	1.34	4	4.23	1.05	340
Subtask 4: Letter identification						
Grade 1 (CI)	0.27	1.97	97	8.73	7.67	11
Grade 2 (CP)	1.18	4.14	85	7.92	7.89	53
Subtask 5: Familiar word reading						
Grade 1 (CI)	0.08	1.12	99	15.00	1.41	2
Grade 2 (CP)	0.29	1.97	97	11.33	5.55	9
Subtask 6: Oral reading fluency						
Grade 1 (CI)	0.00	0.00	100	--	--	0
Grade 2 (CP)	0.07	0.95	99	12.00	5.66	2
Subtask 7: Reading comprehension						
Grade 1 (CI)	0.00	0.00	100	--	--	0
Grade 2 (CP)	0.17	2.37	99	30.00	14.14	2
Sample size: Students in grade 1 (CI)	363					
Sample size: Students in grade 2 (CP)	355					
Sample size: Villages	37					

Source: NECS Wave 1 data collection, October and November 2013, Household Survey.

Notes: The reported figures are raw scores for children in NECS treatment villages who were enrolled in grade 1 or grade 2 during the previous school year (2012–2013) regardless of their enrollment status at the time of data collection. The sample does not include children who did not agree to take the test. -- = No observations.

5.   Kanuri score analyses

The Kanuri language assessment was completed by 333 children in 19 villages. In Table F.4, we present mean scores for the oral language subtasks, which are fairly high. In the receptive oral language subtask, children in grades 1 and 2 were able to follow correctly an average of about 9 out of 10 instructions read to them. In the expressive oral language subtask, children correctly identified an average of 8.29 objects out of 10. For each subtask, between 1 and 5 percent of children were not able to provide a single correct response. Mean scores for the final oral language subtask (listening comprehension) are lower, with an average of 1.78 and 1.87 for grade 1 and grade 2 children, respectively, out of a possible 5. Forty-three percent of children scored 0 on this subtask, and the average score, excluding 0 scores, is higher at 3.12 and 3.31 for grade 1 and grade 2, respectively.

Scores on all reading skills subtasks are very low. Grade 1 children were able to name correctly an average of 0.22 letters per minute while grade 2 children were able to name 0.75 letters per minute. These scores do not differ statistically from 0. Overall, 94 percent of grade 1 children and 88 percent of grade 2 children could not identify a single letter. Consistent with our findings for the other languages, scores on the letter identification subtask are lower for the NECS wave 1 impact evaluation sample than for the EGRA Round 1 sample, wherein students identified around 4 letters per minute. However, in neither sample are the scores significantly different from 0. Mean scores, excluding 0 scores, are 3.89 letters per minute for grade 1 and 6.0 letters per minute for grade 2. Almost no children were able to provide a correct response for the final three reading skills subtasks.

Table F.4. Raw mean scores in Kanuri by grade, separated by subtask, NECS treatment villages only

	All children		Percentage of children scoring zero	Excluding children scoring zero		
	Mean score	Standard deviation		Mean score	Standard deviation	Sample size
Subtask 1: Receptive oral language						
Grade 1 (CI)	9.02	1.60	1	9.13	1.25	158
Grade 2 (CP)	9.05	1.93	3	9.34	1.06	156
Subtask 2: Expressive oral language						
Grade 1 (CI)	8.29	2.11	3	8.56	1.51	155
Grade 2 (CP)	8.29	2.42	5	8.72	1.54	153
Subtask 3: Listening comprehension						
Grade 1 (CI)	1.78	1.85	43	3.12	1.34	91
Grade 2 (CP)	1.87	1.91	43	3.31	1.29	91
Subtask 4: Letter identification						
Grade 1 (CI)	0.22	1.13	94	3.89	3.06	9
Grade 2 (CP)	0.75	3.35	88	6.00	7.83	20
Subtask 5: Familiar word reading						
Grade 1 (CI)	0.00	0.00	100	--	--	0
Grade 2 (CP)	0.21	1.44	98	8.50	4.04	4
Subtask 6: Oral reading fluency						
Grade 1 (CI)	0.00	0.00	100	--	--	0
Grade 2 (CP)	0.04	0.55	99	7.00	NA	1
Subtask 7: Reading comprehension						
Grade 1 (CI)	0.00	0.00	100	--	--	0
Grade 2 (CP)	0.00	0.00	100	--	--	0
Sample size: Students in grade 1 (CI)	161					
Sample size: Students in grade 2 (CP)	162					
Sample size: Villages	19					

Source: NECS Wave 1 data collection, October and November 2013, Household Survey.

Notes: The reported figures are raw scores for children in NECS treatment villages who were enrolled in grade 1 or grade 2 during the previous school year (2012–2013) regardless of their enrollment status at the time of data collection. The sample does not include children who did not agree to take the test. NA = not applicable. -- = no observations.

6.   Other local-language score analyses

Forty-one children in four villages completed the other local language assessment in NECS intervention villages. In Table F.5, we present the mean test scores and standard deviations. Children demonstrated relatively good oral language skills. In the receptive and expressive oral language subtasks, children in both grades scored between 7.50 and 8.50 out of a possible 10

points. About 7 percent of children scored 0, and, excluding 0 scores, the mean scores rise to 8.08 to 9.15 across the two grades and subtasks. In the listening comprehension subtask, children correctly answered about half of the five questions posed to them, on average. Nearly 15 percent of grade 1 children and 29 percent of grade 2 children scored 0. The mean scores, excluding 0 scores, are 3.35 and 3.40 for grade 1 and grade 2 children, respectively.

Mean scores are low for all reading skills subtasks. Grade 1 children were able to identify only 0.07 letters per minute, and grade 2 children were able to identify only 0.29 letters per minute, on average. Only two children in each grade were able to identify at least one letter, and the mean score for those children is only one letter per minute and two letters per minute for grade 1 and grade 2, respectively. Only one child responded to the familiar word reading subtask, and no children provided an answer to the final two reading skills subtasks. Although scores are higher for the letter identification subtask in the EGRA Round 1 data, scores for the other subtasks are similarly close to 0.

Table F.5: Raw mean scores in local language other than Hausa, Zarma, and Kanuri by grade, separated by subtask, NECS treatment villages only

	All children			Excluding children scoring zero		
	Mean score	Standard deviation	Percentage of children scoring zero	Mean score	Standard deviation	Sample size
Subtask 1: Receptive oral language						
Grade 1 (CI)	7.85	2.92	7	8.48	1.92	25
Grade 2 (CP)	8.50	2.68	7	9.15	1.14	13
Subtask 2: Expressive oral language						
Grade 1 (CI)	7.59	2.65	7	8.20	1.55	25
Grade 2 (CP)	7.50	2.74	7	8.08	1.75	13
Subtask 3: Listening comprehension						
Grade 1 (CI)	2.85	1.85	15	3.35	1.53	23
Grade 2 (CP)	2.43	1.74	29	3.40	0.84	10
Subtask 4: Letter identification						
Grade 1 (CI)	0.07	0.27	93	1.00	0.00	2
Grade 2 (CP)	0.29	0.83	86	2.00	1.41	2
Subtask 5: Familiar word reading						
Grade 1 (CI)	0.04	0.19	96	1.00	NA	1
Grade 2 (CP)	0.00	0.00	100	--	--	0
Subtask 6: Oral reading fluency						
Grade 1 (CI)	0.00	0.00	100	--	--	0
Grade 2 (CP)	0.00	0.00	100	--	--	0
Subtask 7: Reading comprehension						
Grade 1 (CI)	0.00	0.00	100	--	--	0
Grade 2 (CP)	0.00	0.00	100	--	--	0
Sample size: Students in grade 1 (CI)	27					
Sample size: Students in grade 2 (CP)	14					
Sample size: Villages	4					

Source: NECS Wave 1 data collection, October and November 2013, Household Survey.

Notes: The reported figures are raw scores for children in NECS treatment villages who were enrolled in grade 1 or grade 2 during the previous school year (2012–2013) regardless of their enrollment status at the time of data collection. The sample does not include children who did not agree to take the test. NA = not applicable. -- = no observations.

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