Impact Evaluation of Niger's IMAGINE Program

Final Report

September 13, 2011

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Policy Research

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Errata

The original version of this report contained errors in the Math and French test score standard deviations reported in Chapter IV, Table IV.5 and in the village names and treatment status table in Appendix 1. In this version of the report, updated in April 2012, the Math and French test score standard deviations have been corrected. These corrections do not change the discussion in the body of the report, nor do they change any other reported statistics. In addition, the incorrect treatment status was listed for four villages in Appendix 1. The resulting corrections had no other impacts on the report.

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EXECUTIVE SUMMARY

The IMAGINE[1] program was designed to improve educational outcomes of girls in Niger. IMAGINE was funded by the Millennium Challenge Corporation (MCC) and was a component of the three-year Threshold Program in Niger (NTP) dedicated to reducing corruption, registering more businesses, promoting land titling, and increasing girls' school enrollment, attendance, and completion rates. In December 2009, MCC suspended the NTP in the midst of implementation due to undemocratic actions undertaken by the government. While most of the NTP components were not sufficiently implemented to allow for a rigorous evaluation of their intended impacts, the girls' education project had been substantially implemented by that time and is thus the focus of our evaluation.

The girls' education program, locally known as IMAGINE, was implemented in 10 departments in Niger with low girls' enrollment and primary school completion rates. Plan International, a nongovernmental organization, was responsible for implementing IMAGINE under the supervision of USAID, during 2008–2010. The program consisted of constructing 68 primary schools and implementing a set of complementary interventions designed to increase girls' enrollment and completion rates. The schools were based on a prototype that included three classrooms, housing for three female teachers, a preschool, and separate latrines for boys and girls equipped with hand-washing stations. Schools were deliberately located near a water source and a well was installed close by. The complementary interventions included designing and disseminating training modules for teachers, promoting extracurricular activities, providing teacher incentive awards, and conducting a mobilization campaign in support of girls' education. Due to the suspension of the NTP, the IMAGINE program was only partially implemented. Sixty-two functional schools were constructed, but the majority of the complementary activities were not implemented.

This report documents the main findings from the impact evaluation of the IMAGINE program. Overall, IMAGINE had a 4.3 percentage point positive impact on primary school enrollment, no impact on attendance, and no impact on math and French test scores. The program impacts were generally larger for girls than for boys. For girls, the program had an 8 percentage point positive impact on enrollment and a 5.4 percentage point impact on attendance. The program had no impact on girls' math scores, though there is suggestive evidence it may have had a positive impact of 0.09 standard deviations on girls' French test scores. No significant impacts were detected for boys' enrollment, attendance, or test scores. Finally, impacts were larger for younger children (ages 7-10), than for those between the ages of 10 and 12.

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

The evaluation was conducted by an independent research contractor, Mathematica Policy Research. Data for the evaluation were collected by a team of researchers at the University of Ougadougou and University of Niamey, led by Jean Pierre Sawadogo.

A. Overview of the Evaluation

The final report produced by Plan International (2010)[2] documented the extent to which the program was implemented as intended. Our evaluation focuses on assessing the impacts of the program by seeking answers to three key questions: (1) What was the impact of the program on school enrollment and attendance? (2) What was the impact of the program on test scores? and (3) Were the impacts different for girls than for boys?

Impact evaluations estimate the effects of a program by seeking to compare what happened to the beneficiaries of the program relative to what would have happened to them in the absence of the program. In this study, we assessed how children in IMAGINE villages fared relative to how they would have fared had IMAGINE not been implemented. We do not compare children in IMAGINE villages before the intervention and after the intervention, because it is likely that observed improvements could have occurred even in the absence of IMAGINE. The Ministry of Education in Niger has been implementing several initiatives aimed at improving girls' education (including the construction of schools), and primary school enrollment rates in Niger were already increasing prior to the implementation of IMAGINE.

1. Evaluation Design

The evaluation design selected to estimate the impacts of the IMAGINE program was random assignment. The Government of Niger (GON) chose 204 villages to take part in the evaluation based on certain eligibility criteria, such as the number of school-aged girls in the village, access to water within the village, and proximity to a transportation route. Sixty-five schools were randomly selected to receive the IMAGINE program; the remaining 136 served as control villages.[3] Because the villages were randomly assigned treatment status, villages that received the schools (treatment villages) and villages that did not (control villages) did not systematically differ at the outset of the program. Hence, any subsequent differences in outcomes observed between these two groups of villages can be attributed to the program itself and not to other factors. This design, if properly implemented, is methodologically strong and is seen by many as the gold standard of impact evaluation methods.

2. Data Collection

Outcome data on the IMAGINE program were collected in early 2011, approximately two years after random selection occurred and slightly less than a year after school construction was

[2] Final Evaluation of IMAGINE Project (Plan International 2010).

[3] Sixty-eight villages were selected to receive schools. The GON chose three villages outside of the random assignment process prior to Mathematica's involvement in the evaluation. These villages were therefore not included in the evaluation. Two communes were not included in the evaluation because random assignment was not respected. In addition, three villages in the volatile Arlit region were not surveyed due to security concerns. As a result, the evaluation sample consisted of 57 treatment villages and 121 control villages.

terminated. Data on the participant and control groups were collected by a team from the University of Ougadougou and University of Niamey, with oversight from Mathematica. The data collection team consisted of Jean Pierre Sawadogo, Robert Ouedraogo, and Pam Zahonogo from Université Ouaga II, and Maman Nafiou Malam Maman from the Université Abdou Moumouni de Niamey The three main sources of data were a household survey of randomly selected families with school-aged children, math and French tests administered to children living in households interviewed in the household survey, and a school survey administered to school principals or administrators at the three closest primary schools to the village.

B. Implementation

Based on Plan International's final report, the IMAGINE program was largely implemented as intended, except for the complementary interventions. Plan International built in 53 of the 57 treatment villages (for a take-up rate of 93 percent) and built an IMAGINE school in 1 of the 121 control villages (for a crossover rate of less than 1 percent).

IMAGINE had no effect on the availability or number of schools in a village, as schools were widely available in villages prior to program implementation. At the time of data collection, all villages included in this study except for one had at least one school available for children to attend. Hence, IMAGINE schools added to or replaced already-existing school structures rather than built new independent schools.

While IMAGINE did not have an effect on the availability of a school in the village, it did have a positive effect on the number of classrooms available to children in villages where the program was implemented. Moreover, the infrastructure of IMAGINE schools was better than non-IMAGINE schools (Table 1), with greater numbers of classrooms and blackboards and greater percentages with a water supply, separate latrines for boys and girls, and teacher housing. IMAGINE and control schools were found to be comparable in terms of other characteristics measured in our survey, such as percentage of teachers with advanced degrees, number of days open, and the availability of a feeding program.

The implementation findings presented above have important implications for the interpretation of the impact estimates presented next. They suggest that the counterfactual in this evaluation is not the absence of a school in a village, but rather the presence of a lower-quality school.

Table 1. School Characteristics

	IMAGINE Schools	Non- IMAGINE Schools
Infrastructure		
Number of Classrooms[4]	6.2	4.7 ***
Number of Classrooms with Visible Blackboards	5.3	3.1***
Water Supply (%)	74.1	15.4***
Separate Latrines for Boys and Girls (%)	94.4	17.3***
Preschool Facility (%)	44.4	19.0***
Teacher Housing (%)	94.4	4.9***
Other		
Number of Teachers	6.1	4.8***
Number of Female Teachers	3.9	2.3***
Teachers with Advanced Degrees (%)	16.7	18.9
Number of Weeks School Was Open During Last Academic Year	29.3	29.0
Availability of Feeding Program (%)	11.1	8.6
Sample Size (Schools)	**54**	**143**

Source: School survey (MPR 2011).

*Difference statistically significant at the 10 percent significance level.
**Difference statistically significant at the 5 percent significance level.
***Difference statistically significant at the 1 percent significance level.

C. Impacts

Overall, IMAGINE had a small and positive impact on school enrollment for children ages 6-12, but no impact on attendance (Table 2). Based on household survey data, the impact of IMAGINE on enrollment was about 4.3 percentage points for all school-aged children. Based on school survey data, the impact on enrollment was 3.7 percentage points. The impact on whether a child was present on the day we visited the school was not statistically significant. These effects are smaller than those found in comparable interventions in developing countries, which may be partially explained by the presence of schools in nearly all villages included in the sample. Given that in the counterfactual about 74 percent of school-aged children would have enrolled in primary school and 68 percent would have attended school, there was little room available for improvement.

The IMAGINE program had no significant impact on overall math and French test scores (Table 2). Children in treatment villages did not score significantly better than children in control villages on the tests administered during the household survey. The estimated impacts were very small in magnitude (0.03 standard deviations for math and 0.04 standard deviations for French) and

[4]Most IMAGINE schools were built in villages that already had a school and Plan International constructed three classrooms regardless of what existed in the village prior to the program. As such, for many IMAGINE schools, the new classrooms added to an existing number of classrooms, resulting in 6.2 classrooms, on average.

were statistically insignificant. A possible explanation for the lack of impacts on student test scores is the small impacts on enrollment and attendance, meaning students in both groups were in school for relatively similar amounts of time. Because IMAGINE and non-IMAGINE schools were open similar amounts of time and had similar teacher characteristics, the education received once students were in school may have been equivalent across the groups.

Table 2. Impacts of IMAGINE

Outcomes	Estimated Impact
Enrollment (Percentage Points)	
Enrolled in school[a]	4.3**
Enrolled in school[b]	3.7*
Present in school on day of visit[b]	1.7
Test Scores (Standard Deviations)	
Math	0.03
French	0.04
Sample Size (Children)	13,969

Source: Household survey (MPR 2011) and school survey (MPR 2011).

[a]Based on household survey.
[b]Based on survey school.

*Difference statistically significant at the 10 percent significance level.
** Difference statistically significant at the 5 percent significance level.
*** Difference statistically significant at the 1 percent significance level.

The positive impacts of the IMAGINE program were driven by girls (Table 3). Impacts on enrollment were 7.2 percentage points higher for girls than for boys according to the household survey, and 6.5 percentage points higher according to the school survey. Impacts on attendance were 6.9 percentage points higher for girls than for boys according to the school survey. All of these differences were significant at the one percent level. Impacts on math test scores were not significantly different for girls than for boys, but impacts on French test scores did vary by gender and were 0.09 standard deviations for girls (though this latter finding is significant at the 10% significance level and not as robust as the other estimates). The impacts of the program for boys on enrollment, attendance, and test scores were not statistically significantly different from zero.

Table 3. Impact of IMAGINE on Enrollment, Attendance, and Test Scores: By Gender

Outcomes	Impacts for Girls	Impacts for Boys	Difference in Impacts between Girls and Boys
Enrollment (Percentage Points)			
Enrolled according to household[a]	8.1***	0.9	7.2***
Enrolled according to school[b]	7.2***	0.6	6.5***
Child was present on day of visit[b]	5.4**	- 1.6	6.9***
Test Scores (Standard Deviations)			
Math	0.06	0.01	0.05
French	0.09*	0.00	0.09*
Sample Size (Children)	6,709	7,260	13,969

Source: Household survey (MPR 2011) and school survey (MPR 2011).

[a]Based on household survey.

[b]Based on survey school.

*Estimate statistically significant at the 10 percent significance level.
** Estimate statistically significant at the 5 percent significance level.
*** Estimate statistically significant at the 1 percent significance level.

D. Conclusion

Overall, the evaluation revealed that IMAGINE increased enrollment but had little impact on attendance or test scores. The overall impact results mask important differences between boys and girls, however. While the impacts for boys were close to zero and not statistically significant, the impacts for girls on enrollment and attendance were statistically significant. We do not know which specific components of the intervention were most successful in driving such distinct impacts on enrollment and attendance for girls. On the one hand, we can hypothesize that the components designed to appeal to girls (construction of teacher housing, higher numbers of female teachers, and the presence of separate latrines for boys and girls) may be the primary drivers of the observed program effects. On the other hand, the finding seems somewhat surprising given that the complementary interventions (many of which were geared toward promoting girls' schooling) were not fully implemented.

I. INTRODUCTION

The Millennium Challenge Corporation (MCC) funded a three-year Threshold Program in Niger (NTP) to reduce corruption, register more businesses, promote land titling, and increase girls' education outcomes. This ambitious effort involved training civil servants to conduct audits and handle public procurement projects, establishing "one-stop centers" to provide technical assistance to businesses, developing awareness-raising campaigns to encourage communities to take advantage of land reform, and constructing girl-friendly schools.

After President Mamadou Tandja and the Government of Niger (GON) undertook a series of undemocratic actions to extend the president's term beyond the limit imposed by the country's constitution, MCC suspended the NTP in the midst of implementation. While the girls' education project was not fully implemented by then, it was complete enough to allow for a rigorous evaluation of the impact of the completed interventions. Most of the other NTP activities were not sufficiently implemented by that time to allow for a rigorous evaluation of their intended impacts. As a result, the focus of this report is on the impact of the girls' education component.

The program, locally known as IMAGINE[1], was implemented in 68 villages in 11 departments with low enrollment for girls and primary school completion rates. The U.S. Agency for International Development (USAID) was responsible for overseeing implementation of the program, and engaged international and local nongovernmental organizations (NGOs) to implement it.

Mathematica Policy Research was contracted to conduct an impact evaluation of the program. The evaluation assessed whether, and the extent to which, the program affected school enrollment and performance of children in villages where IMAGINE was implemented.

We present the findings from the school evaluation in this report. In this introductory chapter, we describe the context of education in Niger (Section A), implementation of the IMAGINE program (Section B), and present an overview of the evaluation design (Section C).

A. Context of Primary Schooling in Niger

Prior to the implementation of IMAGINE, the availability of primary schools in Niger was rapidly increasing. The evidence presented here suggests that, even if IMAGINE had not been implemented, access to primary schooling would have improved. Hence a key challenge of the impact evaluation was to assess which improvements in educational outcomes observed in participating villages were due to IMAGINE and which ones would have occurred in its absence.

Households in Niger can enroll their children in primary school free of 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). It is officially compulsory between the ages of

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

7 and 12. Due to various factors, including an inadequate number of schools and resistance by parents, this law has not been enforced, especially in rural areas.

Primary school enrollment and completion rates in Niger remain some of the lowest in the world, despite recent and significant progress. The gross enrollment rate grew from 15 percent in 1970 to 67 percent in 2010 (Table I.1).[2] During the same period, the primary school completion rate grew from 7 percent to 41 percent. Nevertheless, Niger's primary school enrollment rate is one of the lowest in the West African region (Table I.2). These national figures do not show the large disparities that exist between rural and urban areas. Further, the primary school enrollment and completion rates are much lower for girls than boys.

Table I.1. Evolution of Primary Education Indicators: Niger 1975–2010

	Gross Enrollment Ratio–Primary (%)			Completion of Primary Education (%)		
	Primary			Gross Intake Ratio to the Last Grade of Primary		
Academic Year	All	Males	Females	All	Males	Females
2010	67	73	60	41	46	35
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 2011

[2] 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 can exceed 100% when more students are enrolled in a primary school than there are children in this age group due to early or late entrants or repeaters.

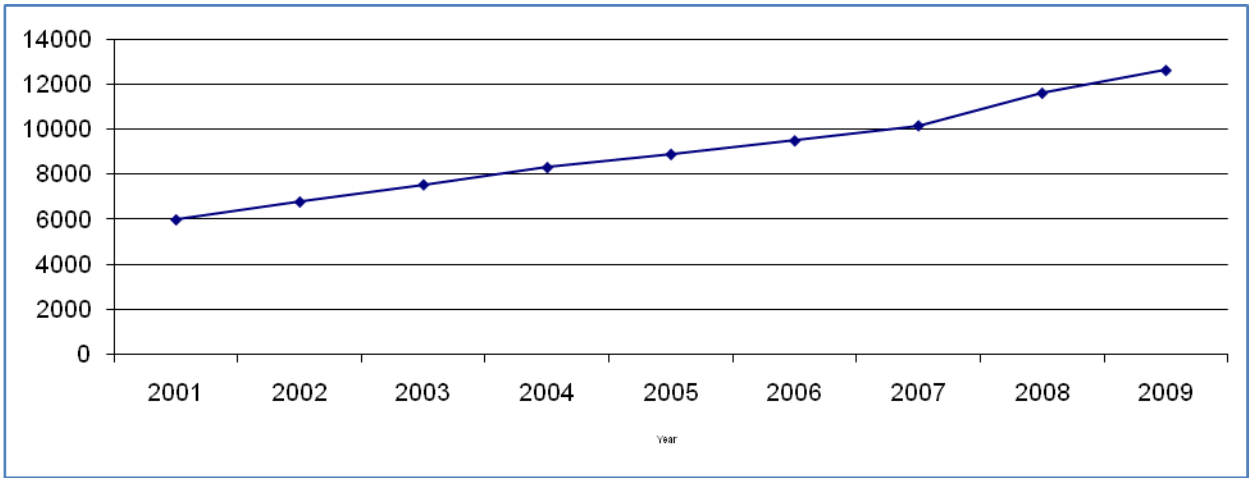
Table I.2. Gross Enrollment Rates in Primary Education: West Africa

Country	2009 Enrollment Rate (%)
Benin	122
Burkina Faso	78
Chad	90
Mali	95
Niger	**62**

Source: UNESCO Institute for Statistics 2011

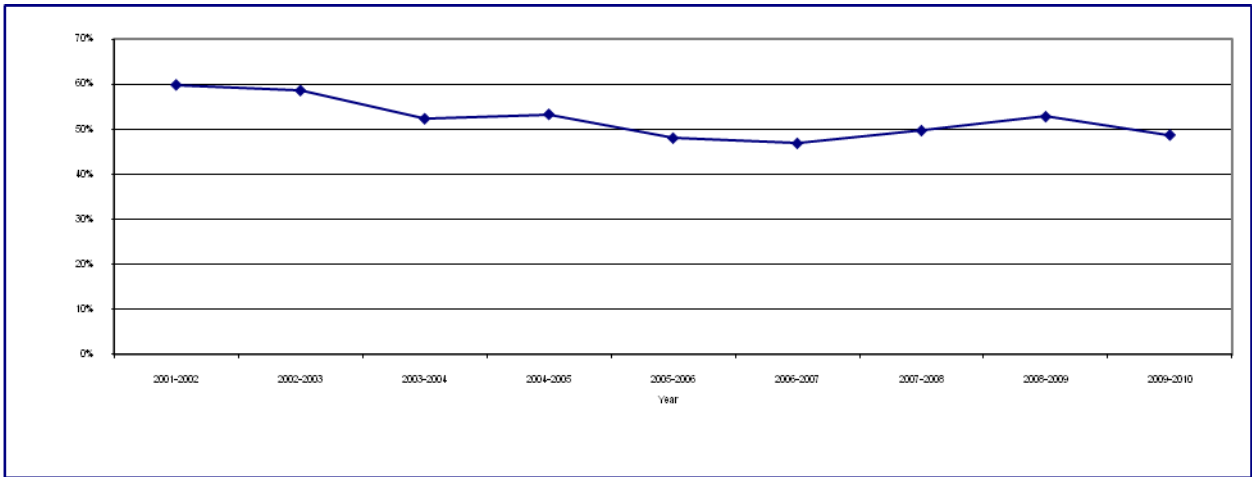
School construction was widespread in Niger prior to the implementation of IMAGINE. Between 2001 and 2010, the number of schools more than doubled, going from 5,975 to 12,623 (Figure I.1). During the same period, the percentage of classrooms constructed of durable material and in good repair remained relatively stable at between 50 percent and 60 percent (Figure I.2). The number of students sharing textbooks decreased significantly in this period as well. For reading, there were 2.5 students per textbook in 2003–2004 compared to 1.1 students per textbook in 2009–2010. For math, there were 3 students per textbook in 2003–2004 compared to 1.5 students per textbook in 2009–2010.

Figure I.1. Number of Schools in Niger



Source: Niger's Ministry of Education 2010

Figure I.2. Average Number of Existing Classrooms Constructed of Durable Material in Niger



Source: Niger's Ministry of Education 2010

Prior to IMAGINE, the government of Niger began several initiatives aimed at improving access to schooling and promoting girls' education. One is a 10-year plan that is intended to improve access, quality in instruction, and learning in schools by the year 2013. The program is commonly known by its French acronym PDDE (*Programme Décennal pour le Développement de l'Éducation*).

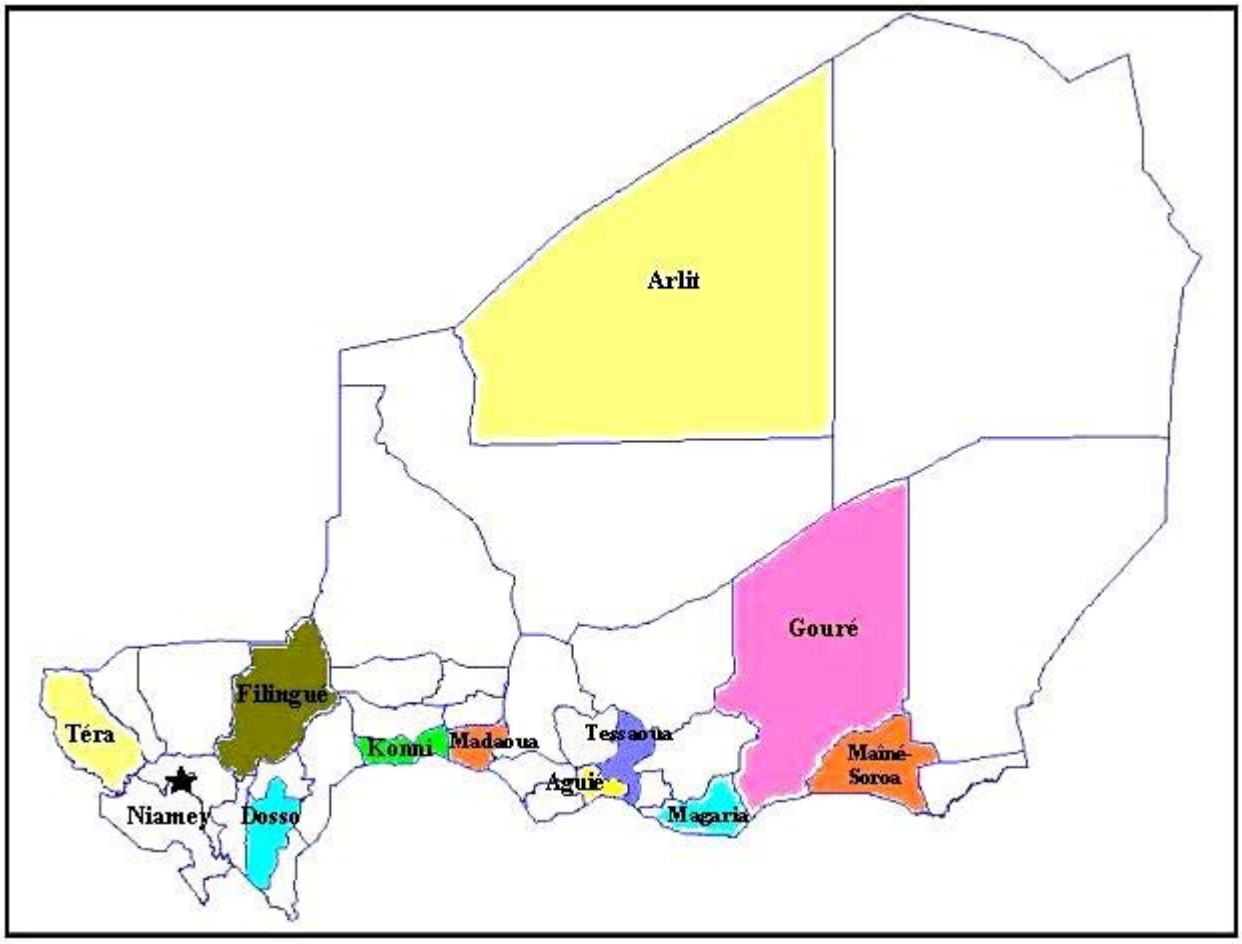
PDDE is structured around three activities: (1) increasing access to education, (2) improving education quality, and (3) capacity building. The first activity includes support for primary school construction and renovation programs in rural areas, improving girl's education, and an adult literacy program. The second component includes improving teacher training in primary education and increasing the availability of textbooks and materials. The third element includes improvements to the Ministry of Education to strengthen its organization and human resources capacity and the capacity of school management committees (*Comite de Gestion des Etablissements Scolaires*). PDDE covers 23 departments (usually referred to as *Zones d'interventions prioritaires*) with low gross enrollment rates for girls or large differences between boys' and girls' gross enrollment rates. The cost for the program is estimated at $300.5 million, and is funded by both multilateral and bilateral donors in order to coordinate their actions in the education sector (The World Bank 2009). The Secretary General of the Ministry of Education leads the overall policy and technical coordination of program, which is administered throughout the country. PDDE is relevant to the evaluation of the IMAGINE program because there is considerable overlap between the departments targeted by PDDE and IMAGINE.

The trends in enrollment rates (Table I.1) and school construction (Figure I.1), along with the existence of PDDE, are of particular importance for interpreting the results of this evaluation, since they suggest that even if IMAGINE had not been implemented, schools would have been constructed and enrollment rates would have increased. In fact, it is likely that some villages that were eligible for IMAGINE but not selected to receive an IMAGINE school would have received a school through the PDDE. This impact evaluation is designed to take into account, and control for, these improvements in the general environment for education in Niger. In other words, any impacts described in this report reflect the net change in communities compared to what would have happened without the IMAGINE program.

B. The IMAGINE Program

The IMAGINE program was to be implemented in 20 communes within 11 departments located in every region except for Niamey (Figure I.3). Within these communes, 68 villages were to receive a variety of IMAGINE interventions for promoting girls' education.

Figure I.3. Implementation of IMAGINE Program by Department



Source: Mathematica 2011

The program design consisted of constructing 68 primary schools and implementing a set of complementary interventions designed to increase girls' enrollment and completion rates. The schools were based on a prototype that included three classrooms, housing for three female teachers, a preschool, and separate latrines for boys and girls equipped with hand washing stations. In addition, schools were deliberately located near a water source. The complementary interventions included:

- **Improving the quality of teaching and children's performance.** This consisted of design and dissemination of training modules for teachers, supplying schools with stationery kits, student manuals and guidebooks for teachers, promotion of

extracurricular activities such as school government, and incentive awards to encourage good performance of teachers and schools.

- **Mobilization campaigns in support of girls' education.** This consisted of the development and planned implementation of a communication strategy to advocate for girls' education, advocacy days, local action plans, capacity building through *Comite de Gestion des Etablissements Scolaires* (or School Management Committee [COGES]), and adult literacy and income generating projects.

The implementation of the IMAGINE project went through several steps:

- March 2008: $23.1 million USD Threshold Agreement signed by MCC and the Government of Niger
- October 2008: Cooperative agreement between USAID and Plan International signed to implement girls' education component. Project stopped on orders from the President of Niger
- November 2008: Intervention zone extended from two to seven regions at the request of the president of Niger
- February 2009: Final selection of the IMAGINE villages
- March 2009: Project construction began
- December 2009: MCC's Board of Directors suspends the Niger threshold program, due to political events that were inconsistent with the criteria used to determine a country's eligibility for MCC assistance.
- April 2010: Termination of all project activities

As the timeline indicates, the project experienced two key disruptions. The first occurred on October 18, 2008 when the project was stopped on orders from the President of Niger. USAID had originally proposed clustering implementation to just two of the country's eight regions (Tillaberi in the West and Zinder in the East), but the President indicated that the program had to be implemented in a wider geographical area. After several weeks of discussion and negotiation between USAID, the GON and MCC a solution was proposed that satisfied the GON's political needs while maintaining the objectives of the project. The project was expanded to seven regions instead of two; however the majority of activities remained in the two originally identified regions. Of the 68 schools, 44 were to be constructed in Tillaberi and Zinder (22 in each region) with the remaining 24 divided among the other five regions. According to USAID, the geographic expansion of the coverage of the project continued to focus on departments and communes with low primary school enrollment and completion rates.

The second was the suspension of the NTP, effective December 31, 2009. Due to the suspension, the IMAGINE program was only partially implemented. At the termination of activities, according to the final report produced by Plan International (2010), only 57 percent of the overall project budget had been expended. Most of the intended construction was complete—62 functional schools were constructed. However, the majority of the complementary activities were not implemented (Table I.3).

Table I.3. Implementation Status of Complementary Activities at NTP Suspension

Planned Activities	Realized Activities	Realization Rate
Improving the Quality of Teaching and Children's Performance		
Elaborate, validate, and disseminate new training modules and didactic materials	Integrated module—spelling and writing—elaborated and validated through a workshop	Partly realized
Train 100 pedagogical inspectors and counselors in gender, spelling, active learning, and evaluation of students performance	52 pedagogical inspectors and counselors trained	52%
Train at least 1,800 teachers on gender, spelling, active learning, evaluation of student performance, and tutoring by pedagogical inspectors and counselors	96 teachers trained	5.33%
Organize two regional training workshops on the integrated module	Two workshops organized	100%
Equip 68 project schools (initially planned) with 7 teacher guidebooks, for a total of 476 guidebooks	476 teacher guidebooks distributed to 68 schools	100%
Training of 110 teachers in spelling and writing	96 teachers (school managers) trained	87.72%
Rewards for 22 teachers and 11 schools	Not realized	0%
Introduction of tutoring	Not realized	0
Practical and productive activities in 198 targeted schools	78 schools	39.39
Teaching of hygiene and sanitation	Not realized	0
Establishment of school governments	135 schools	68.18%
Provision of school stationery kits to 200 targeted schools	200 kits distributed	100%
Provision of school manuals to 68 schools	68 schools each received 350 school manuals	100%
Mobilization Campaigns in Support of Girls' Education		
Formulation of a vision of girls' education at national level	Not realized	0%
Adoption of a communication strategy to advocate for girls' education	Document elaborated and validated but not implemented	0%
Organization of annual regional advocacy day (for three years) on girls' education	Process suspended at internal ToR validation phase	0%

Planned Activities	Realized Activities	Realization Rate
Mobilization of financial and material means for implementation of communication strategy	Information, education and communication materials not conceived and not disseminated	0%
COGES, Student Parents Association (APS), and Educational Mothers Association capacity building	Realized	100%
Development and dissemination of the training modules on social mobilization	Modules and didactic support developed	100%
Elaboration of 198 Local Action Plans (PALs).	155 PALs elaborated	78.28%
Implementation of 155 PALs	155 PALs implemented	100%
Training of regional and departmental education officials (198) on monitoring COGES activities	Partly realized, with 80 regional and departmental education officers trained	Approximately 40%
Implementation of subsidy program to support communities in implementation of their PALs	Not realized	0%
Training of at least 6,000 women in income generating practices	Activity not realized	0%
Literacy of 3,000 members of COGES, APS, and Educational Mothers Association (AME)	Validation of the animators' training manuals	Partly realized–35% started the activities
	35 animators and focal points participated in the initial training; 1,002 learners, of which 711 are women, started the literacy classes in 34 centers	
Organization of annual regional advocacy day (for three years) on girls' education	Process suspended at internal ToR validation phase	0%

Source: Plan International 2010

C. Overview of Evaluation Design

This impact evaluation sought to answer three key questions:

1. What was the impact of the program on school enrollment and attendance?
2. What was the impact of the program on test scores?
3. Were the impacts different for girls than for boys?

The final report, produced by Plan International (2010), documented the extent to which the program was implemented as intended and assessed the extent to which the program's objectives were met. For example, the report concludes that, on average, parity of enrollment between boys and girls improved over the course of the program.

Although assessing program implementation and monitoring the evolution of performance indicators provide helpful information about the program, these activities cannot reliably estimate program impacts. In particular, observed improvements could have occurred even if IMAGINE had not been implemented. As described in Section A, the Ministry of Education has been implementing several initiatives aimed at improving girls' education (including the construction of schools), and primary school enrollment rates in Niger had been increasing prior to the implementation of IMAGINE.

To estimate the program's impacts, we assessed how children in IMAGINE villages fared relative to how they would have fared if IMAGINE had not been implemented. Since we could not directly observe the latter scenario (known as the counterfactual), we selected a group of children in a set of villages where IMAGINE was not implemented to mimic this counterfactual. This group of children constituted the control group. The selection of this group and the application of statistical techniques aimed at ensuring that the group of children in the IMAGINE villages (treatment group) and the control group were comparable constituted the basis of the impact evaluation design.

1. Method to Estimate Impacts

The process by which the Ministry of Education selected the 68 villages for IMAGINE implementation played a crucial role in our choice of evaluation design. In December 2008, Mathematica successfully facilitated a procedure for randomly assigning 65 villages to receive the hard intervention from among 204 villages identified by the Ministry of Education.[3] The criteria used to identify eligible villages to participate in the random selection process were the 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). Through this design, villages were randomly assigned treatment status. This ensured that villages receiving schools (treatment villages) and those that did not (control villages) were not systematically different at the outset of the program. Hence, any subsequent differences in outcomes observed between these two groups of villages can be attributed to the program itself and not to other factors. This design, if properly implemented, is methodologically strong and is seen by many as the gold standard of impact evaluation methods.

Given the use of random assignment to select the beneficiary sites, the basic method to estimate program impacts consists in comparing mean outcomes for the treatment and control groups. Given that the random assignment of villages occurred within communes, it is important to statistically account for the communes in which the children in the sample lived. Hence a regression framework is used to estimate program impacts. The dependent variable is the relevant key outcome for the child (enrollment or test scores, for example), the key explanatory variable is an indicator on whether the child lives in a village that was assigned to receive a school, and commune indicators are included as additional control variables.

[3] Appendix 1 contains a full list of identified villages.

2. Data Collection Strategy

Mathematica oversaw data collection from rural households and schools in Niger. A team of researchers from the University of Niamey and the University of Ouagadougou was selected to carry out data collection activities.

The sample frame comprises households located in 204 villages that participated in the random selection process. After reviewing eligibility of treatment and control villages following random assignment, it was determined that two communes needed to be dropped from the evaluation because random assignment was not respected in them, reducing the number of villages in the survey by 20. Three additional treatment villages were not included in the survey because they were preselected by the Government of Niger and were not part of the random selection. Finally, three control villages in the Arlit department, Agadez region, were not surveyed due to civil unrest and were dropped from the study. As a result, we collected data from 178 villages, comprised of 57 treatment and 121 control villages.

Two questionnaires were developed: household questionnaire and school questionnaire. The household survey included questions on household demographics, children's educational outcomes (such as enrollment and attendance), and parents' perceptions of education. The school survey included questions about school characteristics and children's attendance and enrollment. Following a small pilot study in 10 villages conducted in November 2010, Mathematica refined the questionnaires and data collection procedures. The full data collection occurred in January and February 2011, about two years after random assignment and approximately a year after most schools had been constructed.

Teams of interviewers were organized by linguistic group. Each team was assigned a cluster of villages and surveyed simultaneously throughout the country. The response rate for the household survey was 99.94 percent and for the school survey 100.00 percent. For more details on the data collection strategy, see Chapter II.

3. Description of the Sample

Table I.4 provides an overview of characteristics of the 178 sampled villages, which were used for subsequent analysis. The average household size was nine persons. Almost all of the households had floors made of natural material (usually dirt) and basic roofing material (thatch). In terms of asset ownership, the average household owned 60 percent of a radio, had 50 percent of a mobile phone, 50 percent of a watch, rarely owned a bicycle or motorcycle, had 33 percent of a cart, and 50 percent of a cow. Only three percent of the household heads were female and the average age of the head of household was 46. Household heads were overwhelmingly Muslim (99.4 percent), and few completed primary school (15.8 percent). Of the children in our sample, the average age was 9 years. Just under half of the children were female (48 percent).

Table I.4. Summary of Household and Children Characteristics

	Overall Average
Household	
Household Size	9.1
Floor made mainly out of:	
Natural Material (%)	95.3
Rudimentary Material (%)	3.9
Finished Material (%)	0.7
Roof made mainly out of:	
Natural Material (%)	14.5
Rudimentary Material (%)	84.1
Finished Material (%)	1.4
Assets (number per household):	
Radio	0.59
Mobile Telephone	0.48
Watch	0.53
Bicycle	0.10
Motorcycle	0.11
Animal- drawn cart	0.33
Cattle	0.48
Always lived in village (%)	94.1
Household Head	
Female (%)	3.0
Average Age	46.2
Completed Primary School (%)	15.8
Completed Secondary School (%)	5.0
Completed Madrassa School (%)	0.2
Muslim (%)	99.4
Christian (%)	0.4
Ethnicity is Houssa (%)	63.6
Ethnicity is Dierma Sonrai (%)	19.2
Ethnicity is Kanouri Manga (%)	10.1
Children (Ages 6–12)	
Female (%)	48.0
Average Age	9.0
Baseline enrollment, children 10–12 (%)	75.3
Number of Households	**6,971**
Number of Children	**13,969**

Source: Household Survey (Mathematica 2011)

II. DATA COLLECTION

As part of the Niger Girls' Education Impact Evaluation, Mathematica oversaw data collection from rural households and schools throughout the country. This chapter provides information about the sample and questionnaire designs, data collection and data cleaning processes, and survey response rates.

A. Sample Design

The sample frame comprises households located in 204 villages that met the preestablished criteria for participation identified by the Niger Ministry of Education. Eligibility criteria included the number of school-aged girls in the village, access to water within the village, and proximity to a transportation route. To ensure equitable representation, the program was implemented nationwide, in all regions except urban Niamey. Two departments each were selected for the Maradi, Tahoua, Tillabery, and Zinder regions, while one department each was chosen from Agadez, Diffa, and Dosso. In each department, two communes were selected, except for Agadez and Diffa, where only one commune was chosen. Finally, within each commune, except Ouarafane and Aguié, 10 villages were identified that met the set criteria, and each village was randomly assigned to either a treatment or control village. In the communes of Ouarafane and Aguié, 12 villages were identified and then randomly assigned as either treatment or control. After reviewing eligibility of treatment and control villages following this assignment, it was determined that two communes needed to be dropped from the evaluation (see Chapter III for details), reducing the number of villages in the survey by 20 villages. Three additional treatment villages were not included in the survey because they were preselected by the Government of Niger and were not part of the random selection. Finally, three control villages in the Arlit department, Agadez region, were not surveyed due to civil unrest and were dropped from the study. As a result, the final sample size is comprised of 57 treatment and 121 control villages.

A random selection of 40 households with school-age children (5–12-years-old) were targeted to be surveyed in each village that formed the evaluation sample. Households in the study are defined as groups of people living together in a common physical space, working together under the authority of a person called head of household, and taking their meals together or from the same supply of food.

To develop the village-level household sampling frame, data collectors first conducted a complete census of all the households in the village and identified those with school-age children. Following the census, 40 households in each village were randomly selected to be surveyed. Interviewers conducted the random selection process by writing the name of each head of an eligible household on a piece of paper, placing them in a hat, and drawing 40 names. The process was

conducted publicly in each village and yielded a total of 6,971 households, in which 16,351 school-aged children were identified.[4]

In order to collect school data, interviewers used information collected during the household surveys to identify schools regularly attended by children from each village. Interviewers then selected up to three schools within a 10-kilometer radius to be surveyed for each village.[5] Based on the school registers, we were able to match data collected from 197 schools with 10,858 children in the sample. No further sampling was conducted.

B. Questionnaire Design

Mathematica developed two questionnaires: one for households and another for schools. The household questionnaire covered household characteristics, demographics, parents' attitudes towards education, children's educational outcomes (enrollment and attendance), as well as a French and math assessment. The school questionnaires covered school characteristics and included a school roster to collect information on student enrollment and attendance. School officials were only asked to report enrollment and attendance information for a student if the parents indicated in the household survey that their child attended that school. Both surveys were developed and conducted as paper questionnaires. Full versions of the final questionnaires and assessments are included in Appendix 2.

The household questionnaire was based largely on a similar one used for the BRIGHT impact evaluation in Burkina Faso, which drew heavily from other existing questionnaires widely used in developing countries. They include the Demographic and Health Survey (USAID), Multiple Indicator Cluster Survey (UNICEF), and the Living Standards Measurement Study (The World Bank). Mathematica also consulted USAID's EdDataII: Education Data for Decision Making database for country specific information and sample assessment questions. Relying on existing questionnaires provides two important benefits. First, because they have been widely and successfully used in similar developing countries, including Niger, they contributed added confidence in the validity and reliability of their questions. Second, it allows researchers to compare our results with those from these surveys, both in Niger and in other countries. Survey questions were adapted or added, where necessary, to provide more detailed information to specific research questions. The household survey consists of the following modules:

- **Household characteristics.** This module includes information about the head of household, such as religion, ethnicity, and education. Information about the household was also collected, including GPS coordinates, construction materials used, available water sources, and proxies for wealth, such as cattle, mobile telephone, or radio.

[4] The data collection team encountered 11 villages that had fewer than 40 eligible households with school-age children to participate. In these villages, all eligible households were selected. Because of the smaller number of households in these villages, there were 149 fewer households in the sample than initially anticipated.

[5] This strategy could have introduced sampling bias if villages had children attending more than three different schools, however, only 0.13 percent of students surveyed attended a school not included in the sample.

- **Household listing form.** In this module, the respondent provides a complete list of all children between the ages of 5 and 12 residing in the household. Basic information collected about these children included relationship to the head of household, sex, age, and school enrollment and attendance during the 2010–2011 school year. Questions in this section also asked if the child was working and parental attitudes towards the education of the child.
- **Education module.** This module was administered to all children ages 5 to 12 who attended school at any time during the 2010–2011 school year. Questions address access to textbooks, distance to school, and attendance for both teacher and child. Specific information about the school attended, including interventions such as separate latrines, participation in feeding programs, and reasons the parents sent the child to school, were also collected.
- **Math assessment.** This module was administered to all children ages 5 to 12, irrespective of school attendance. Children were shown preprinted cards and asked to identify numbers, count items, indicate which number was the greater of a pair of numbers, and perform simple addition and subtraction.
- **French assessment.** This module was administered to all children ages 5 to 12, irrespective of school attendance. Children were shown preprinted cards and asked to identify letters, read basic words, and pick the correct word to complete a simple sentence.

The school questionnaire was based largely on the one used for the BRIGHT impact evaluation in Burkina Faso, which in turn was based on the World Bank's Standards Measurement Study School Questionnaire. It was modified and updated to address Niger's educational structure. The survey was administered just after the household surveys were completed, on the same day when possible. It consists of the following modules:

- **School information panel.** This module includes general information about the school, such as name, region, commune, and position of respondent.
- **School characteristics.** In this module interviewers collect detailed information about the school including enrollment numbers by grade, type of school (public or private), textbook availability, and whether the school offers food programs.
- **School physical structure.** This module includes questions about the number of classrooms, construction materials, availability of desks and chairs, water supply, separate latrines, preschool, and teacher housing.
- **Former school.** This module has questions that identify the schools and structures that existed in 2007–2008, just before the IMAGINE program was implemented.
- **School personnel.** This module asks respondents to provide information about the teachers at the school including number and gender of teachers, training levels, and participation in gender sensitivity training.
- **School register.** This module contains information on all of the children identified in the household survey as enrolled at this particular school. The first part of the register was to be completed by the interviewer before arriving at the school, while the second

part required the interviewer to verify enrollment and attendance for each child while at the school.

Both the household and school surveys were written in English and French. The local data collection team collaborated with Mathematica to ensure translations were accurate and idiomatic expressions or language usage particular to Niger incorporated. However, French is rarely spoken in rural villages. Faced with the prospect of surveying people of many ethnic groups in their respective local languages, Mathematica decided that the best approach was to hire local interviewers representing the diverse ethnic backgrounds in Niger who were fluent in both French and local dialects, and train them to translate the survey questions as they conducted the interviews. Table II.1 shows the ethnicity of the respondents to the household survey.

Table II.1. Household Questionnaire Respondent Ethnicity

	Frequency	Percentage
Houssa	4,433	63.59
Dierma sonrai	1,337	19.18
Tuareg	240	3.44
Peuhl	252	3.61
Kanouri manga	707	10.14
Arab	1	0.01
Other	1	0.01
Total	**6,971**	**100.00**

Source: Household Survey (Mathematica 2011)

Once the questionnaires were developed, they were tested through a pilot data collection effort for which Mathematica randomly selected 10 villages—five treatment and five control—from the villages that had been deemed ineligible and dropped from the study. Our aim was to survey households and schools in these villages in order to identify potential problems with the survey questionnaires and data collection procedures. The pilot test was conducted in November 2010. The pilot called for interviewer training, conducting a census and random household selection in each village, identification of schools, administering household and school surveys, and data entry, cleaning, and delivery. A team from Mathematica traveled with the interviewers and observed them in both treatment and control villages, visited the schools and facilities, and held a debriefing session with interviewers.

Based on the results of the pilot test, several changes were made to the questionnaires. First, we decided to drop a rudimentary stratification technique—access to beast of burden—that was used in the village census as a proxy for wealth to indentify eligible households for the survey. The stratification was deemed to be unnecessarily time consuming and burdensome, as similar proxies were gathered during the household survey. We also streamlined both questionnaires by removing questions that were redundant or unnecessary to conduct the impact analysis. Finally, we improved our procedures to allow for better matching between children in the household and school surveys. Data collectors copied key identifying information collected during the household survey, including household id, child id, name, sex, and age, to the attendance roster on the school survey before

visiting each school. This demographic information was used to identify the correct child during the school visit and the id numbers were used to link household and school data.

C. 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. (The RFP is attached as Appendix 3.) Three proposals were received. After evaluating the proposals and interviewing representatives from each firm, we selected a team comprised of researchers from the University of Ouagadougou in collaboration with the University of Niamey. The selected researchers were Jean Pierre Sawadogo, Robert Ouedraogo, and Pam Zahonogo from Université Ouaga II, and Maman Nafiou Malam Maman from the Université Abdou Moumouni (University of Niamey). 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 the 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, the university team conducted interviewer training sessions that covered identifying schools, conducting a village census and random selection of eligible households, basic interviewing procedures, and a review of each question to ensure that interviewers understood its intent. Interviewers then were organized by linguistic group and worked together to determine how best to translate questions into the local languages.

Data collection took place in January and February 2011, about a year after the program implementation was suspended. The data collection team hired 54 interviewers to collect household and school data. They were organized by linguistic groups into 18 teams, with each team led by an experienced field supervisor. The teams were then assigned a cluster of villages and surveys were conducted simultaneously throughout the country.

The household survey was conducted with the head of household or another member of the household who was knowledgeable. The interviewee was most often the male head of household—4,752 interviews, or 68.18 percent, were conducted with the head of household. Out of those, 4,614, or 96.99 percent, were male. A total of 6,971 households were surveyed.

When possible, the school survey was conducted with the school director. Before the interview, the interviewer was required to populate the "school register" with children reportedly enrolled in school in the household survey. This process allowed for easy matching between children in the household and school surveys. The interviewer was asked to gather attendance information, particularly on the day of the visit and personally called the roll and noted absences. A total of 197 schools were surveyed.

D. Data Sources

Several data sources were used in this evaluation. Foremost, Niger's Ministry of Education compiled a list of villages that met the eligibility criteria within target communes. This list formed the basis of the sample frame, and was used to assign villages in each commune as either treatment or control. Background data, such as the number of male and female teachers, and number of books, was also collected on treatment villages by Plan International prior to the interventions. Mathematica conducted a village census, which was used to identify households with school-age children and to select a random sample for the survey. The household questionnaire provided information about household characteristics, parent perceptions of education, and children's educational outcomes. Lastly, the school survey described school characteristics, as well as verified information on student attendance and enrollment.

Table II.2. Data Sources

1.	List of selected villages, Niger Ministry of Education (2009)
2.	Plan International Report (2009)
3.	Village Census Form (Mathematica 2011)
4.	Household Survey (Mathematica 2011)
5.	School Survey (Mathematica 2011)

E. Data Cleaning

Following completion of data collection activities, the local data collection firm entered and cleaned the data using SPSS statistical analysis software. A team from Mathematica worked with the data collectors and oversaw the process. To verify that data were entered correctly, we spot-checked original questionnaires to ensure that the data collection was conducted according to protocol. Then, we randomly chose hard copy surveys from entire villages from different regions to check for quality and completeness. Finally, we compared data entered on the hard copies against data entered into the database. During this time, we also conducted preliminary checks on the data set for out-of-scope responses, item nonresponse, and inconsistent patterns. In addition, we tested and confirmed the ability to merge the household and school data.

F. Response Rate

The response rate for the household survey was 98.25 percent, which was calculated by dividing the total number of fully completed household interviews (6,967) by the total number of households sampled from the selected villages (7,091). This response rate includes the 3 villages that were included in the original sample, but were not surveyed because of security issues. Excluding those villages from the calculation, the response rate for the household survey was 99.94 percent, which was calculated by dividing the total number of fully completed household interviews (6,967) by the total number of households sampled from the surveyed villages (6,971). The response rate for the school survey was 100 percent. This calculation does not include schools that serve villages not surveyed, as that number is unknown.

III. IMPACT EVALUATION DESIGN

To assess the impact of the IMAGINE program, we selected an evaluation design that was methodologically rigorous and feasible to implement in the field. In this chapter, we describe the evaluation questions and key outcome indicators (Section A), the process used to select beneficiary villages (Section B), the statistical method to estimate program impacts given the evaluation design (Section C), and the results of analyses conducted to verify the appropriateness of the chosen evaluation design (Section D).

A. Evaluation Questions

This impact evaluation sought to answer three key questions:

1. What was the impact of the program on school enrollment and attendance?
2. What was the impact of the program on test scores?
3. Were the impacts different for girls than for boys?

We collected two measures of school enrollment. For the first measure, a child was defined as enrolled if parents reported in the household survey that the child attended school or preschool (any school) at any time during the 2010–2011 academic year. For the second measure of enrollment, a child was defined as enrolled if the school where the parent indicated the child was enrolled confirmed that the child was indeed currently enrolled at that school. We also used two key measures of attendance. The first one recorded whether the child was present on the day of our visit, according to the interviewer. The second one recorded whether the child was in school a week prior to our visit, according to school records. We present impact estimates of IMAGINE on the two enrollment and two attendance measures in Chapter IV, Section C.

As described in Chapter II, we sought to administer math and French tests to all children aged 5 to 12 who lived in the households we interviewed during the household survey. Test scores were normalized by taking the raw score for each age group, subtracting the mean for that age group, and then dividing by the standard deviation. Hence, the test score impact estimates we present in this report are measured in standard deviations. To account for the fact that older children may do better in these tests than younger children, we included age dummy variables as controls in our regressions.

B. Process Used to Select Beneficiary Villages

The evaluation design selected to estimate the impacts of the IMAGINE program was random assignment—schools were assigned randomly to villages, which should ensure that the villages that received the schools (treatment villages) and the ones that did not (control villages) do not systematically differ at the outset of the program. Hence, any subsequent differences in outcomes observed between these two groups of villages should be attributable to the program and not to other factors. This design, if properly implemented, is methodologically strong and is seen by many as the gold standard of impact evaluation methods. The remainder of this section details how the random assignment design was implemented.

In December of 2008, the GON agreed with USAID that the implementation of the IMAGINE program would consist in building schools in 68 villages located in 20 communes in Niger. Three of these villages had already been selected prior to Mathematica's involvement in the

project. We agreed with MCC, GON, USAID, and other key stakeholders that selection of the remaining 65 villages would be done randomly among sets of villages deemed eligible to receive the program within each commune.[6] Table III.1 indicates the list of communes participating in the project along with the number of villages in each commune that participated in the random assignment process.

Table III.1. Results from Random Assignment Process

Regions	Departments	Communes	Total Villages	Treatment Villages	Control Villages
Agadez	Arlit	Arlit	10	2	8
Diffa	Maîné Soroa	Mainé Soroa	10	2	8
Dosso	Dosso	Mokko	10	2	8
		Kardjibangou	10	2	8
Maradi	Tessaoua	Tessaoua	10	2	8
		Ourafane	12	2	10
	Aguié	Aguié	12	2	10
		Gazaoua	10	2	8
Tahoua	Konni	Alléla	10	2	8
		Malbaza	10	2	8
	Madaoua	Bangui	10	2	8
		Ourno	10	2	8
Tillaberi	Filingué	Filingué	10	6	4
		Ballayara	10	5	5
	Téra	Dargol	7	3[a]	4
		Gorouol	10	5	5
Zinder	Gouré	Gouré	10	6	4
		Guidiguir	10	5	5
	Magaria	Magaria	10	6	4
		Bandé	10	5	5
Total	**11**	**20**	**201**	**65**	**136**

[a]Prior to random assignment, three villages in this commune were designated to receive an IMAGINE school.

[6] The eligibility criteria included the number of school-aged girls in the village, access to water, and proximity to a transportation route.

Overall, the GON chose 201 villages, from which 65 were randomly selected to receive the IMAGINE program and the remaining 136 were selected as control villages.[7] The random assignment was conducted in December of 2008 in a public ceremony involving representatives from Mathematica, GON, MCA, USAID and Plan International. It is important to note that the random assignment was conducted within each of the 20 communes, and that the fraction of treatment villages varied by commune.[8] Appendix 1 contains the list of villages that were selected as treatment and controls for each of the communes.

In practice, the evaluation did not include all of the originally planned for villages. After random assignment, USAID and Plan International undertook a "ground truthing" effort in which each selected village was visited to determine eligibility. As a result, in 4 of the 20 communes, program implementation was not fully consistent with the plan that resulted from random assignment. These were communes in which one or more villages selected to receive an IMAGINE school were replaced with another village. In each situation, Plan International attempted to replace the ineligible village with the next eligible village that was drawn during the random assignment meeting. Two of the communes (Kardjibangou and Goure) were dropped from the evaluation because the deviation from random assignment was deemed very severe.[9] Hence, we did not collect follow-up data in these two communes. The other two communes were kept in the evaluation because the deviation from random assignment was not deemed severe enough.[10] Finally, because of political unrest in the commune of Arlit at the time of data collection, the interviewers could not collect data in three control villages in this commune. Tables IV.11 and IV.12 show the results of the sensitivity analysis estimating program impacts excluding the three communes mentioned above.

[7] In theory, the 65 villages in the treatment group were going to receive a school and a package of soft interventions and the 136 villages in the control group were going to receive the package of soft interventions only. So in principle, the impact estimates from this evaluation were going to measure the incremental effect of having a girl-friendly school over and above the package of soft interventions. However, in practice, given that the soft interventions were only partially implemented (see Chapter I), the impact estimates are probably most reflective of the impact of girl-friendly schools relative to what would have happened in the absence of the IMAGINE program.

[8] This variation is mainly due to historical reasons. Originally, the IMAGINE program was going to be implemented in the Tilaberri and Zinder regions only. When the GON decided to expand the number of regions for the program, the eight communes located in Tilaberri and Zinder were selected to receive a higher number of schools than those located in the new regions. Indeed, as can be seen from Table III.1, the fraction of treatment villages in these eight communes was between 50 and 60 percent but only around 20 percent for the other communes in the project.

[9] In the commune de Kardjibangou, 2 villages were assigned from the 10 identified. One of those, Son Allah Koira, was determined to be ineligible. It was replaced with number 10 on the list (Bolbol Goumandy) after determining no other village in that commune met the eligibility requirements. That left no control villages in this commune. In the commune de Gouré, 6 villages were assigned from the 10 identified. Of those, Adoumchi and Sissia were determined to be ineligible and were replaced by Kangouri (the seventh and next village on the list) and Tillimidiss (the ninth village on the list). The eighth village on the list, Garbana, was determined to be ineligible as well, leaving only one control in this commune. The principal reason that villages were determined to be ineligible was that they already had at least three classrooms built with durable materials.

[10] In the commune de Gorouol, 5 villages were assigned from the 10 identified. Of those, Jean Marie Ducroz de Doibel was determined to be ineligible. It was replaced with Goungo (the sixth and next village on the list). That left 4 control villages in this commune. In the commune de Guidiguir, 5 villages were assigned from the 10 identified. Of those, Arifadi was determined to be ineligible and was replaced by Mairam (the seventh village on the list) after determining that the sixth village (Chergouna) was also ineligible. That left 3 control villages in this commune.

In the end, the evaluation sample went from 201 villages (65 treatment and 136 control) to 178 villages (57 treatment and 121 control). The actual school construction was very consistent with the planned construction for this sample. Indeed, Plan International built schools in 53 of the 57 treatment villages (for a take-up rate of 93 percent) and only built an IMAGINE school in one 121 control village (for a crossover rate of less than 1 percent). See Table III.2 for details.

Table III.2. Random Assignment vs. Actual School Construction in Evaluation Sample

		Random Assignment		
		Treatment	Control	Total
Actual School Construction	IMAGINE school was constructed	53	1	54
	IMAGINE school *not* constructed	4	120	124
Total		**57**	**121**	**178**

C. Statistical Method to Estimate Program Impacts

Given the use of random assignment to select the beneficiary sites, the basic method to estimate program impacts consists of comparing mean outcomes for the treatment and control groups. Given that the random assignment occurred within communes, it is important to statistically account for the communes in which the children in the sample live. Hence, a regression framework is used to estimate program impacts. The dependent variable is the relevant key outcome for the child (enrollment or test scores, for example), the key explanatory variable is an indicator of whether the child lives in a village that was randomly assigned to receive a school, and commune indicators are included as additional control variables. Given that random assignment was used, we did not include other explanatory variables in the regressions for our main impact estimations. We conducted some sensitivity analysis in Chapter IV.G and confirmed that the inclusion of additional explanatory variables did not affect the findings that arose from our main impact estimations. Figure III.1 presents a more technical description of the impact estimation method.

Figure III.1 Mathematical Representation of Impact Estimation Method

Mathematically, we calculate the impact of the IMAGINE program by estimating the following regression equation:

$$Y_{ihj} = \beta_0 + \beta_1 IMAGINE_j + \delta_1 COMM_1 + \ldots + \delta_{18} COMM_{18} + u_{ihj} \quad (1)$$

In this equation, *i* indicates the individual child in household *h* in village *j*. The variable Y_{ihj} represents the outcome of interest (test scores, enrollment, attendance, etc.). The variable $IMAGINE_j$ is an indicator variable for whether or not a village was randomly assigned to receive an IMAGINE school. It takes the value of 1 for the 57 villages that should have received an IMAGINE school according to the random assignment process, and a value of 0 otherwise. The coefficient β_1 represents the impact of the program.

The variables $COMM$ are indicator variables for 17 of the 18 communes that are part of the evaluation sample (one dummy variable needs to be omitted to avoid perfect collinearity). Technically, the regression is estimated using commune fixed effects (instead of controlling for the dummy variables individually). Standard errors are clustered at the village level using the standard Huber- White estimator to account for correlations in children's characteristics within villages.

IMPACTS BY GENDER

To assess whether the impact of the program was different for girls than boys, we estimated a similar regression than the one described above but added a female dummy variable and an interaction between the female and treatment indicators as explanatory variables. The coefficient on the interaction variable (β_3) represents the difference in impacts between girls and boys.

$$Y_{ihj} = \beta_0 + \beta_1 IMAGINE_j + \beta_2 FEMALE_j + \beta_3 FEMALE_j * IMAGINE_j + \delta_1 COMM_1 + \ldots + \delta_{18} COMM_{18} + u_{ihj}$$

Use of weights. Given that the fraction of treatment villages varied by commune (Table III.1), we explored using weights to reflect the fact that some treatment villages had a higher probability of being selected than others. We conducted all of our analyses under three different sets of weights:

1. **Unweighted.** Every village received the same weight. Under this scenario, impact estimates approximately represent the average impacts for the average village.[11]
2. **Weighted at village level.** Every village received a weight equivalent to the inverse of the probability of selection into their group (treatment or control). For example, in the commune of Mainé Soroa, where two treatment and eight control villages were selected, each treatment village got a weight of 5 and each control village a weight of 1.25.[12]

[11] This is not exactly right because household sizes differ across villages (though not much).

[12] The probability of selection for the treatment villages was 0.2 (i.e., 2 out of 10), and the corresponding weight is the inverse of this (i.e., 1/0.2) and equal to 5. Analogous calculations were done for the control villages.

3. **Weighted at village and household levels.** Every household received a weight equivalent to the inverse of the probability of selection in their village and their group (treatment or control). In most villages, we have data for 40 households, but in some it for fewer households. These weights weigh down households in villages with fewer than 40 households because they have a higher probability of being selected. Given that we had data on 40 households for 93.82 percent of the villages, this set of weights did not make a big difference relative to the weights in scenario #2 above.

The results presented in Chapter IV assume no weights (scenario #1). We conducted analyses to assess the extent to which the impact findings vary when using weights described under scenarios #2 and #3. By and large, the magnitude of the impact estimates does not vary much across the different weighting schemes, although the statistical significance varies somewhat (see details in Chapter IV Section G).

D. Assessing the Evaluation Design

While the random assignment design is well suited, in principle, to estimate the impact of the IMAGINE program, we performed some statistical analyses to verify its appropriateness. The main conclusions of the analysis are as follows:

1. The treatment and control groups look similar on a host of background characteristics. The goal of random assignment is to produce two groups (treatment and control) that are identical to each other (in a statistical sense) in everything except exposure to the program. Comparison between treatment and control groups based on actual data reveal that the two groups do indeed look similar to each other on a host of household characteristics, including construction material of the dwelling, ownership of assets, education and ethnicity of household head, and age and gender of children (Table III.3).[13] The two groups also tend to be very similar in terms of village characteristics such as population, number of school-aged children, and number of school-aged girls (Table III.4). Overall, the differences between the groups tend to be very small in magnitude and rarely statistically significant.[14]

2. The treatment and control groups look similar in terms of education characteristics at baseline. While we do not have a baseline survey to measure accurately the key outcomes of the evaluation, we were able to compare the treatment and control groups in terms of two key characteristics that we collected during the follow-up survey: school availability and school enrollment for 10–12-year-old children. In terms of school availability,

[13] Ideally, this type of analysis should be done with baseline data. Given that there was no baseline survey in the evaluation, it was done using data collected in the follow-up survey on characteristics that one would not expect the program to have affected (such as demographics or socioeconomics) and retrospective data collected at follow-up.

[14] Of all the characteristics tested, the only one in which the treatment and control groups exhibited a statistically significant difference was the percentage of households with roof made out of natural material. The difference is small in magnitude and likely to be due to chance (given the large number of tests conducted). We also estimated regressions in which the dependent variable was the IMAGINE indicator and the explanatory variables consisted of the background characteristics displayed in Tables III.3 and III.4. We conducted three regressions (at the village, household, and child level) and the p-value for the joint significance of the explanatory variables in these regressions were 0.146, 0.103, and 0.254, which represent further evidence that random assignment did indeed create treatment and control groups that were not systematically different from each other.

95.1 percent of schools in treatment villages and 93.3 percent of schools in control villages reported being open during the 2007–2008 school year (i.e., prior to the implementation of the IMAGINE program). This difference is small and not statistically significant, which is consistent with a random assignment that was well implemented. The wide availability of schools in the villages before program implementation has implications for the interpretation of the impact findings discussed in Chapter IV. In terms of baseline enrollment, we constructed a measure of school enrollment status in 2008 (the year before the program started) for children in the sample age 10–12 years old at the time of the follow-up survey. Treatment and control groups were very similar along this dimension as well (see bottom of Table III.3), suggesting that the educational environment was similar for the two groups at baseline.

3. The actual school construction was very consistent with the plan set up during random assignment for the evaluation sample. Indeed, as reported earlier, Indeed, Plan built schools in 53 of the 57 treatment villages and only built an IMAGINE school in 1 of the 121 control villages (Table III.2).

These conclusions are indicative that random assignment was properly implemented, and strengthens the credibility of the impact findings presented in our next Chapter.

Table III.3. Comparison Between Treatment and Control Groups of Household and Child Characteristics

	Treatment Group	Control Group	Difference	p- Value of Difference
Household				
Household Size	9.14	8.89	0.257	0.193
Floor made mainly out of:				
Natural Material (%)	93.7	94.9	- 1.2	0.202
Rudimentary Material (%)	5.6	4.5	1.1	0.235
Finished Material (%)	0.8	0.6	0.1	0.730
Roof made mainly out of:				
Natural Material (%)	18.7	16.1	2.6*	0.079
Rudimentary Material (%)	79.7	82.3	- 2.5	0.111
Finished Material (%)	1.5	1.6	0.0	0.916
Assets				
Radio (%)	57.7	59.6	- 1.9	0.310
Mobile Telephone (%)	52.4	49.4	3.0	0.159
Watch (%)	53.4	55.4	- 1.9	0.263
Bicycle (%)	10.2	9.1	1.1	0.352
Motorcycle (%)	10.3	10.2	0.1	0.937
Animal- drawn cart (%)	33.8	34.1	- 0.3	0.905
Cattle (%)	51.6	48.6	3.0	0.237
Always lived in village (%)	94.6	95.2	- 0.5	0.532
Household Head				
Female (%)	3.5	3.7	- 0.2	0.721
Average Age	46.46	46.32	0.14	0.766
Completed Primary School (%)	15.5	15.0	0.5	0.764
Completed Secondary School (%)	5.7	4.5	1.2	0.214
Completed Madrassa School (%)	0.2	0.2	- 0.1	0.604
Muslim (%)	99.0	99.5	- 0.5	0.161

	Treatment Group	Control Group	Difference	p- Value of Difference
Christian (%)	0.7	0.5	0.2	0.471
Ethnicity is Houssa (%)	55.0	57.2	- 2.2	0.371
Ethnicity is Dierma Sonrai (%)	22.6	25.1	- 2.6	0.324
Ethnicity is Kanouri Manga (%)	11.0	12.4	- 1.4	0.378
Children (Ages 6- 12)				
Female (%)	48.9	47.8	1.1	0.300
Average Age	8.98	9.03	- 0.05	0.235
Baseline enrollment - children 10- 12 (%)	77.3	75.1	2.2	0.379
Number of households	**2,266**	**4,705**		
Number of children (ages 6- 12)	**4,496**	**9,473**		

Source: Household Survey (Mathematica 2011)

Note: Control group means are regression adjusted

*Difference statistically significant at the 10% significance level, two- tailed test.
**Difference statistically significant at the 5% significance level, two- tailed test.
***Difference statistically significant at the 1% significance level, two- tailed test.

Table III.4. Comparison Between Treatment and Control Groups of Village Characteristics

	Treatment Group	Control Group	Difference	P- Value of Difference
Population				
Number of households	124.07	119.98	4.09	0.609
Number of people	964.95	920.78	44.16	0.505
Demographics				
Number of households with				
School- aged children	96.70	93.63	3.07	0.626
School- aged girls	75.68	73.94	1.75	0.747
School- aged boys	76.67	75.51	1.15	0.832
Percent of households with				
School- aged children (%)	78.4	78.3	0.1	0.924
School- aged girls (%)	61.3	61.4	- 0.1	0.943
School- aged boys (%)	62.4	62.5	- 0.2	0.902
School Availability				
School open at baseline (%)	95.1	93.3	1.8	0.633
Sample Size	**57**	**121**		

Source: Village Census (Mathematica 2011) and School Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Coefficient statistically significant at the 10% significance level, two- tailed test.
**Coefficient statistically significant at the 5% significance level, two- tailed test.
***Coefficient statistically significant at the 1% significance level, two- tailed test.

E. Assessing the Generalizability of Results

As described in Section B, 2 of the 20 communes (Kardjibangou and Gouré) were excluded from the evaluation due to severe deviation from random assignment. Villages in these communes were part of the IMAGINE project but not part of our study. This section assesses the extent to which the results of the evaluation (based on the other 18 communes) can generalize to all the communes in which the program was implemented. At the outset, it is important to note that the evaluation included 90 percent of the communes and about 90 percent of the villages that formed part of the IMAGINE project. Hence, the exclusion of the two communes is unlikely to have affected substantially the impacts presented in this report.

We compare the two sets of communes (18 included and 2 excluded) in terms of background characteristics. While we did not collect follow-up data the excluded communes, we did use 9 of their villages[15] as sites for our pilot survey, which allows us to have a reasonable set of common background characteristics to compare.

By and large, villages in the 2 excluded communes look relatively similar to the 18 included in the study (Table III.5). Household size, main dwelling floor and roof materials, and assets were very similar across the two sets of communes. Households in the excluded communes were slightly larger and more likely to report their roofs were made from natural rather than rudimentary materials. Fewer households in the excluded communes reported having radios, whereas more households reported having animal-drawn carts and cattle. Age and sex of the head of household and of their children are similar across the two sets of communes.

The two characteristics in which the communes differed were education of the head of the household and ethnicity (Table III.5). Approximately 6.2 percent fewer heads of household reported completing primary school in the excluded communes, but 20.2 percent more reported completing Madrassa schooling. In terms of ethnicity, households in the excluded communes were more likely to be Dierma Sonrai or Kanouri Manga, whereas those included in our study were mainly Houssa.

[15] These 9 villages were randomly chosen from the 20 villages that were part of the random assignment process and were located in the two communes. In Kardjibangou, 5 villages were selected (2 treatments and 3 controls), and in Gouré 4 villages were selected (2 treatments and 2 controls).

Table III.5. Participating Communes vs. Excluded Communes

	18 Communes in Evaluation	2 Excluded Communes	Difference
Village[a]			
Number of households	121.10	100.33	20.77
Percent of Households with school- aged children (%)	79.84	78.07	1.77
Household			
Household Size	9.13	9.29	- 0.16
Floor made mainly out of:			
Natural Material (%)	95.3	99.6	- 4.3
Rudimentary Material (%)	3.9	0.4	3.6
Finished Material (%)	0.7	0.0	0. 7
Roof made mainly out of			
Natural Material (%)	14.5	48.1	- 33.6
Rudimentary Material (%)	84.1	50.8	33.3
Finished Material (%)	1.4	1.2	0.3
Assets			
Radio (%)	58.8	53.7	5.1
Mobile telephone (%)	47.9	48.9	- 1.0
Watch (%)	52.7	56.3	- 3.6
Bicycle (%)	10.1	6.7	3.4
Motorcycle (%)	11.2	9.3	2.0
Animal- drawn cart (%)	32.6	40.4	- 7.7
Cattle (%)	47.5	52.6	- 5.1
Always lived in village (%)	94.1	97.0	- 2.9
Household Head			
Female (%)	3.0	5.9	- 2.9
Average Age	46.17	46.14	0.04
Completed Primary School (%)	15.8	9.6	6.2
Completed Secondary School (%)	5.0	3.7	1.3
Completed Madrassa School (%)	0.2	20.4	- 20.2
Muslim (%)	99.4	100.0	- 0.6
Christian (%)	0.4	0.0	0.4
Ethnicity is Houssa (%)	63.6	15.8	47.8
Ethnicity is Dierma Sonrai (%)	19.2	39.6	- 20.4
Ethnicity is Kanouri Manga (%)	10.1	31.5	- 21.4
Children			
Female (%)	48.0	45.3	2.7
Average Age	8.96	8.67	0.29
Number of Households	**6,971**	**270**	
Number of Children	**13,969**	**664**	

Sources: Village Census (Mathematica 2011) and Household Survey (Mathematica 2011)

[a]Based on village census. Other numbers in the table are based on household survey.

*Difference statistically significant at the 10% significance level, two- tailed test.
**Difference statistically significant at the 5% significance level, two- tailed test.
***Difference statistically significant at the 1% significance level, two- tailed test.

The fact that the two sets of communes are similar in terms of most characteristics suggests that the impacts for the excluded communes might be similar to those found in this evaluation. The larger differences in ethnicity and head of household education, however, may limit the generalizability of our results if ethnicity and educational attainment of the head of household can be correlated with the impacts of the IMAGINE program.

We now attempt to assess how the differences observed may affect the impact of the IMAGINE program, though this exercise is by nature highly speculative. The large differences across communes in terms of ethnicity are not surprising, as ethnic groups in Niger are clustered in different geographic areas. The Kardjibangou commune is located in the Dosso region (Southwest) and is primarily Dierma Sonrai. The Gouré commune is located in Zinder region (Southeast) and is primarily Kanouri Manga. According to the country's Poverty Reduction Strategy Paper[16], religion and urbanicity are more critical than ethnicity to predicting culture, wealth, and education. Because the two sets of communes are very similar in terms of religion (nearly all Muslim) and urbanicity (exclusively rural), this suggests that the differences in ethnicity are unlikely to play a major role in changing the impact of the IMAGINE program.

The difference in educational attainment for the head of household in the excluded communes, however, may have stronger implications in terms of generalizability. The educational attainment of the head of household is typically correlated with child schooling. Because more parents in the two excluded communes have completed primary or Madrassa schooling, their children may have been more likely to attend school already, which could result in a smaller impact of the IMAGINE program. Conversely, if Madrassa school is not considered a substitute for primary school, the extremely low primary school completion rate in the two excluded communes would predict a lower baseline enrollment rate and could potentially imply a higher impact of IMAGINE. Nevertheless, as indicated at the beginning of this section, the fact that the evaluation included the vast majority of the villages that formed part of the IMAGINE project suggests that even the differences in education of the head of the households had important implications for the impacts in the two excluded communes, this is unlikely to have affected substantially the impacts presented in this report.

Overall, the analysis above is suggestive that the results from this report are generalizable to the villages selected for the IMAGINE project, which are not necessarily representative of all villages in Niger.

[16] International Monetary Fund. "Accelerated Development and Poverty Reduction Strategy: 2008–2012." Niger Poverty Reduction Strategy Paper: http://www.imf.org/external/pubs/ft/scr/2008/cr08149.pdf, accessed on August 1, 2011.

IV. IMPACTS

In this chapter, we present our estimates of the impacts of the Niger IMAGINE program. We begin by reporting the extent to which IMAGINE affected both the availability (Section A) and the quality of school infrastructure (Section B). Next, we report impact estimates of the impact of the IMAGINE program on the key outcomes of interest identified for this study: school enrollment and attendance (Section C) and test scores (Section D). We then present impact estimates separately for boys and girls (Section E) and also present findings related to several other impact-related questions (Section F). We then present the results of various sensitivity analyses conducted to verify the extent to which our results are robust to different sets of specifications (Section G). Finally, we conclude with a summary, recapping our main results (Section H).

A. Availability of School Infrastructure in the Village

One key goal of the IMAGINE program was to increase the supply of school infrastructure available in the villages. This section assesses the extent to which this goal was reached by examining the effect of the program on two key variables: presence of a school in the village and number of classrooms available in the village.

IMAGINE had no effect on the availability or number of schools in a village. As reported in Chapter III, schools were widely available prior to program implementation. The average number of schools per village was slightly greater than one and comparable for treatment and control groups (Table IV.1). Because schools were already common in villages and the number of schools available in treatment and control villages is the same, we conclude that IMAGINE schools added to or replaced existing school structures rather than new and independent schools being built.

Table IV.1. School and Classroom Availability

	Treatment Group	Control Group	Difference	Sample Size
School available in child's village (%)	100.0	99.2	0.8	16,351
Number of schools per village	1.070	1.072	- 0.002	178
Number of classrooms per village	6.61	4.96	1.66**	178
Number of classrooms made with finished material per village	5.44	2.14	3.30***	178

Source: Village Census (Mathematica 2011) and School Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Difference statistically significant at the 10% significance level, two- tailed test.
**Difference statistically significant at the 5% significance level, two- tailed test.
***Difference statistically significant at the 1% significance level, two- tailed test.

While IMAGINE did not have an effect on the availability of schools, it did have a positive effect on the number of classrooms available to children in villages where the program was implemented. To interpret the magnitude of this effect, it is useful to think about a hypothetical scenario in which in the absence of the program, no classroom building would have taken place. If this were the case, we would expect the effect of IMAGINE on the number of classrooms in a village to be 3 (since the program consisted in building 3 classrooms). However, the effect was only 1.66 classrooms (Table IV.1), which suggests that the program displaced the construction of

classrooms in the treatment villages. In other words, while the program built 3 classrooms, 1.66 of them would have been constructed regardless in the absence of the program. It is worth noting, however, that IMAGINE generated a 3.30 increase in the number of classrooms with finished material (Table IV.1). This suggests that IMAGINE did affect the quality of the school infrastructure, an issue we turn to in the next section.

B. Quality of School Infrastructure

The number of schools may not have increased as a result of IMAGINE, but the quality of school infrastructure greatly improved. In this section, we compare the infrastructure characteristics of IMAGINE and non-IMAGINE schools. Our main findings regarding school infrastructure are:

- **The infrastructure of IMAGINE schools is better than non-IMAGINE schools (Table IV.2).** On average, IMAGINE schools have more classrooms, usable classrooms, and classrooms with blackboards than non-IMAGINE schools. IMAGINE schools were also significantly more likely to have a water supply, separate latrines for boys and girls, a preschool facility, and teacher housing. They were more likely to offer complete sets of textbooks to their students, and they used French as the language of instruction almost exclusively.

- **Teachers have similar education levels at IMAGINE and non-IMAGINE schools, but IMAGINE schools reported having more teachers, more female teachers, and teachers slightly less likely to be in the very early stages of their careers (Table IV.2).** Teachers in IMAGINE and non-IMAGINE schools look similar in terms of their educational characteristics. No significant differences existed in the percentage of teachers with advanced degrees. Non-IMAGINE schools reported slightly higher percentages of teachers with less than five years of experience (60.2 percent as compared to 53.4 percent, significant at the 5 percent level) and slightly lower percentages of teachers with 5–10 years of experience (26.0 percent as compared to 33.0 percent, significant at the 10 percent level). Both sets of schools reported similar percentages of teachers with 10 or more years of experience. However, IMAGINE schools reported an average of 1.3 additional teachers per school, including an average of 1.6 more female teachers. Teachers at IMAGINE schools were reported to have better attendance by their school administrations than teachers at control schools, although parental reports on teacher attendance did not confirm this pattern.[17]

[17] Administrations at IMAGINE schools reported that its typical teacher was frequently absent less than those at non-IMAGINE schools—18.5 percent reported the typical teacher to be absent more than once per month, whereas 35.4 percent of administrations at control schools reported the typical teacher to be absent that frequently. However, according to the household survey, parents reported no difference in teacher attendance patterns between IMAGINE and non-IMAGINE schools.

- **IMAGINE and control schools are comparable in terms of other characteristics measured in our survey, such as number of weeks open and the availability of a feeding program (Table IV.2).** IMAGINE and control schools reported being open similar numbers of days each month during October 2010–January 2011. They also reported being open a similar number of weeks during the previous academic year (29.3 and 29.0, respectively). Approximately 10 percent of schools in each group reporting the presence of a feeding program, with no statistical significant difference between the two groups.

Table IV.2. School Characteristics

	IMAGINE Schools	Non- IMAGINE Schools	Difference
Infrastructure			
Number of:			
Classrooms	6.204	4.669	1.535***
Usable classrooms	6.111	4.612	1.499***
Classrooms made of finished materials	5.185	2.079	3.107***
Blackboards	6.037	4.401	1.636***
Visible blackboards	5.333	3.078	2.255***
Classrooms usable in the rain	4.963	2.059	2.904***
Percent of Schools with:			
Water supply (%)	74.1	15.4	58.7***
Latrines (%)	100.0	28.1	71.9***
Separate latrines (%)	94.4	17.3	77.2***
Preschool facility (%)	44.4	19.0	25.4***
Teacher housing (%)	94.4	4.9	89.5***
Feeding program (%)	11.1	8.6	2.5
Canteen (%)	5.6	6.7	- 1.1
Dry rations offered (%)	5.6	4.1	1.5
Teachers			
Total	6.093	4.777	1.316***
Female	3.907	2.340	1.567***
Teachers with advanced degrees (%)	16.7	18.9	- 2.2
Teachers with less than 5 years experience (%)	53.4	60.2	- 6.8**
Teachers with 5 but less than 10 years experience (%)	33.0	26.0	7.0*
Teachers with 10 or more years experience (%)	13.6	13.8	- 0.2
Other			
School is public (%)	100.0	97.3	2.7**
School over- enrolled[18] (%)	15.4	20.2	- 4.9
Language of instruction is French for all subjects (%)	90.7	92.8	- 2.1
Mathematics instruction is in French (%)	100.0	96.6	3.4**
Reading instruction is in French (%)	100.0	96.1	3.9**
Conversation instruction is in French (%)	90.7	92.8	- 2.1
Average number of weeks school was open during the last academic year	29.26	29.04	0.22
Average number of days school was open in October	10.94	7.80	3.14**
Average number of days school was open in November	19.42	17.89	1.5
Average number of days school was open in December	16.55	16.34	0.21

[18] A school is considered over-enrolled if it reported that not all students who wanted to enroll were admitted during the current school year.

	IMAGINE Schools	Non- IMAGINE Schools	Difference
Average number of days school was open in January	19.32	19.62	- 0.31
School open in October (%)	70.4	54.5	15.9**
Typical teacher reported to be absent more than once per month (%)	18.5	35.4	- 16.8**
Complete set of textbooks (%)	70.4	58.8	11.5*
Complete set of textbooks, sole use (%)	22.2	7.6	14.6**
Sample Size (Schools)	**54**	**143**	

Source: School Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Difference statistically significant at the 5% significance level, two- tailed test.
**Difference statistically significant at the 5% significance level, two- tailed test.
***Difference statistically significant at the 1% significance level, two- tailed test.

Given the findings from these two sections, it is important to note that the counterfactual in this study is not the absence of a school in a village, but rather the presence of a lower-quality school. The impacts of the program should therefore be interpreted as the result of providing increased access to a larger number of classrooms and better school infrastructure relative to what would have been available in the absence of the program.

C. Impacts on School Enrollment and Attendance

The IMAGINE program had small and positive impacts on school enrollment. Based on information from the household survey, children living in treatment villages were 4.3 percentage points more likely to be enrolled in school than their control village counterparts (Table IV.3). This finding is statistically significant at the 5 percent level. The impact on enrollment based on information from the school survey was 3.7 percentage points, significant at the 10 percent level. This implies that IMAGINE was responsible for increasing enrollment from 74.4 percent to 78.7 percent, according to the household survey, or from 73.1 percent to 76.9 percent, according to the school survey.

While the impacts of school enrollment were small but statistically significant, the impacts of the IMAGINE program on attendance were not significant. According to school records, 70.0 percent of children in treatment villages and 68.3 percent of children in control villages were present at school on the day of the survey. Also, 71.1 percent of children in treatment villages and 68.8 percent of children in control villages were reported to have been present one week prior to the day of the survey. These differences are small and not statistically significant.

Table IV.3. Impact of IMAGINE on School Enrollment and Attendance

	Treatment Group	Control Group	Impact	Sample Size
Enrollment				
Enrolled according to household (%)	78.7	74.4	4.3**	13,969
Enrolled according to school (%)	76.9	73.1	3.7*	13,967
Attendance[a]				
Child was present on day of visit (according to school) (%)	70.0	68.3	1.7	13,894
Child was present on week prior to day of visit (according to school) (%)	71.1	68.8	2.2	13,869

Sources: Household Survey (Mathematica 2011) and School Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

[a]For non- enrolled children, attendance is coded as zero.

*Impact statistically significant at the 10% significance level, two- tailed test.
**Impact statistically significant at the 5% significance level, two- tailed test.
***Impact statistically significant at the 1% significance level, two- tailed test.

The impact estimates outlined above seem small given the magnitude of the intervention. The relatively small magnitude of the estimate may be partially explained by the presence of schools in nearly all villages included in the sample. Given that in the counterfactual about 75 percent of school-aged children would have enrolled in primary school, there was not a huge room for improvement in enrollment. No aspects of the interventions were specifically targeted to improve attendance, so it is perhaps not surprising that no impacts were detected.

D. Impacts on Test Scores

The IMAGINE program had no significant impact on math and French test scores (Table VI.4). Children in treatment villages did not score significantly better than children in control villages on the tests administered during the household survey. The estimated impacts were very small in magnitude (0.028 standard deviations for math and 0.044 standard deviations for French) and statistically insignificant.

Table IV.4. Impact of IMAGINE on Test Scores

Test Scores	Treatment Group	Control Group	Impact	Sample Size
Math (std dev)	0.015	- 0.013	0.028**	13,686
French (std dev)	0.048	0.004	0.044*	13,697

Source: Household Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Impact statistically significant at the 10% significance level, two- tailed test.
**Impact statistically significant at the 5% significance level, two- tailed test.
***Impact statistically significant at the 1% significance level, two- tailed test.

While the IMAGINE intervention did not directly target student test scores, several of its components could be expected to have a positive impact. Students attending IMAGINE schools were more likely to have a visible blackboard in their classroom, which could improve teacher instruction. IMAGINE schools also had greater numbers of classrooms, usable classrooms, and

classrooms usable in the rain, which could increase the amount of instruction time a student receives. IMAGINE schools also had significantly higher levels of complete sets of textbooks for both group and individual use, thus providing additional educational resources to students.

On the other hand, there are reasons for why the aspects of the intervention would not have a measurable impact on student test scores. First, there were no large measurable differences in teacher experience, education, or quality. Second, since the program had a small impact on enrollment and little impact on attendance, and schools in treatment and control villages reported being open a similar number of weeks, students in both groups were in school for relatively similar amounts of time. Third, improvements in test scores may take longer to achieve than those in other outcomes, such as enrollment. The math and French assessments were conducted in January and February of 2011, about a year after most IMAGINE schools opened for the first time. Finally, another potential contributor to the absence of test score impacts could be that the "soft" components of the interventions, such as teacher training or community education, were not implemented and thus the interventions would have a more direct and immediate impact on student test scores than the components of the intervention that were completed.

E. Impacts by Gender

Historically, schools in Niger enroll greater numbers of male students than female students. Parents may be reluctant to enroll their female children in school due to a variety of reasons including cultural values and the large role girls often play in household chores. Part of the mission of the IMAGINE program was to make schools more accessible for girls through the construction of separate latrines for boys and girls and of teacher housing specifically for female teachers.

While the impact estimates reported earlier on enrollment were modest, they are more striking when broken down by gender. The positive impacts of the program were driven by girls. Impacts on enrollment were 7.2 percentage points higher for girls than boys according to the household survey and 6.5 percentage points higher according to the school survey (Table IV.5). Both results are significant at the 1 percent level. Impacts on attendance were 6.9 percentage points higher for girls than for boys according to the school survey, significant at the 1 percent level.

Impacts on math test scores were not significantly different for girls than for boys, but impacts on French test scores were 0.093 standard deviations higher for girls than for boys, significant at the 10 percent level. This latter result was not very robust to alternative specifications (see Section G). The impacts of the program for boys on enrollment and test scores were not statistically significantly different from zero.

Table IV.5. Impact of IMAGINE on Enrollment, Attendance, and Test Scores: by Gender

	Sub-Group	IMPACT	P- Value of Impact	Impacts for Girls - Impacts for Boys	P- Value of Difference	Sample Size
Enrollment						
Enrolled according to household (%)	girls	8.1***	0.001	7.2***	0.001	13,969
Enrolled according to household (%)	boys	0.9	0.680			
Enrolled according to school (%)	girls	7.2***	0.004	6.5***	0.002	13,967
Enrolled according to school (%)	boys	0.6	0.791			
Attendance						
Child was present on day of visit (%)	girls	5.4**	0.039	6.9***	0.000	13,894
Child was present on day of visit (%)	boys	- 1.6	0.559			
Child was present one week prior to day of visit (%)	girls	5.3**	0.036	5.9***	0.005	13,869
Child was present one week prior to day of visit (%)	boys	- 0.6	0.816			
Test Scores						
Math (std dev)	girls	0.1	0.224	0.0	0.273	13,686
Math (std dev)	boys	0.0	0.874			
French (std dev)	girls	0.1*	0.056	0.1*	0.057	13,697
French (std dev)	boys	0.0	0.997			

Sources: Household Survey (Mathematica 2011) and School Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Difference statistically significant at the 10% significance level, two- tailed test.
**Difference statistically significant at the 5% significance level, two- tailed test.
***Difference statistically significant at the 1% significance level, two- tailed test.

We do not know which specific components of the intervention were most successful in driving such distinct impacts on enrollment and attendance for girls. Because no measurable impacts were found for boys, it is possible that the components of IMAGINE schools specifically designed to attract female students (and not students of both genders) were responsible for these differentiated impacts. The components include the construction of female teacher housing, which resulted in higher numbers of female teachers in IMAGINE schools, and the presence of separate latrines for boys and girls. Yet the finding may be somewhat surprising given that the soft interventions (many of which were geared toward promoting girls' schooling) were not fully implemented.

F. Other Impact- Related Questions

In addition to key questions already addressed, we also explored the following questions: (1) Did impacts of the program vary by age? (2) Did the program impact previously enrolled students differently than those not previously been enrolled? (3) Did parental attitudes toward education change as a result of IMAGINE? (4) What are the main factors affecting a parent's decision to send their child to school in Niger?

1. Did impacts of the program vary by age?

Because the IMAGINE schools were targeted at primary school-age children, we also estimated the impacts of the program broken down separately for children ages 6 to 12 (Table IV.6). This table estimates the impacts of the program on enrollment according to the household and test scores for

children at each age. Enrollment impacts are larger and statistically significant at the 5 percent level for ages 7 to 10, ranging from 5.1 to 6.1 percentage points. Math and French test scores were statistically significant at the 5 percent level for age 7 only, with an impact of 0.13 standard deviations in math and 0.15 standard deviations in French.

Table IV.6. Impact of IMAGINE on Enrollment and Test Scores: By Age

	Age	Treatment Group	Control Group	Impact	Sample Size
Enrollment					
Enrolled According to Household (%)	6	54.9	50.4	4.5	1,762
	7	80.4	74.3	6.1**	2,264
	8	84.9	79.3	5.5**	2,372
	9	88.2	83.1	5.1**	1,842
	10	83.5	77.9	5.6**	2,141
	11	81.9	83.7	-1.9	1,288
	12	73.6	72.2	1.4	2,300
Test Scores					
Math (std dev)	6	0.081	-0.012	0.093	1,714
	7	0.105	-0.024	0.130**	2,215
	8	0.036	-0.009	0.045	2,329
	9	0.003	0.015	-0.011	1,819
	10	-0.007	0.016	-0.023	2,100
	11	-0.086	-0.021	-0.066	1,265
	12	-0.053	-0.020	-0.032	2,244
French (std dev)	6	0.073	-0.007	0.080	1,716
	7	0.142	-0.012	0.154**	2,220
	8	0.086	0.038	0.047	2,329
	9	0.003	-0.004	0.007	1,819
	10	0.019	0.027	-0.008	2,101
	11	-0.049	0.003	-0.052	1,266

Source: Household Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Impact statistically significant at the 10% significance level, two- tailed test.
**Impact statistically significant at the 5% significance level, two- tailed test.
***Impact statistically significant at the 1% significance level, two- tailed test.

These results imply that the impact of the IMAGINE program was larger and more significant on younger children than older children. The observation of differentiated impacts by age could be explained by differences in parents' preferences for schooling. Parents may be reluctant to enroll older children in school for the first time, or they may place greater value in older children's assistance in household activities. Parents with younger children may not face those same constraints or attitudinal barriers and be more inclined to send younger children to school as a result of IMAGINE.

2. Did the program impact previously enrolled students differently than those not previously been enrolled?

As described in Chapter III, Section D.2, we constructed a measure of baseline enrollment for students 10 to 12 years of age. The variable is an imperfect measurement of baseline enrollment, but it gave us a reasonably good sense of which students were enrolled in school prior to IMAGINE implementation.

The impact of IMAGINE on enrollment was 2 percentage points greater for those who had been previously enrolled than for those who had not been enrolled at baseline, significant at the 5 percent level (Table IV.7). The impact on attendance and math test scores was statistically the same for both groups The impact on French test scores was lower for those that had been previously enrolled, suggesting that the program had a greater impact for children who had not been in school and could perhaps gain more from being in school.

Table IV.7. Impacts by Enrollment at Baseline

	Difference in Impacts Between Children Enrolled and Children Not Enrolled at Baseline	P- Value of Difference	Sample Size
Enrollment according to household (%)	2.0**	0.039	5712
Enrollment according to school (%)	3.3***	0.007	5712
Attendance according to school (%)	0.4	0.816	5710
Math Test (std dev)	0.11	0.332	5594
French Test (std dev)	- 0.16**	0.039	5598

Sources: Household Survey (Mathematica 2011) and School Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Coefficient statistically significant at the 10% significance level, two- tailed test.
**Coefficient statistically significant at the 5% significance level, two- tailed test.
***Coefficient statistically significant at the 1% significance level, two- tailed test.

3. Did parental attitudes toward education change as a result of IMAGINE?

Parental attitudes toward education were measured by asking survey respondents the highest level of schooling they would *like* their child to complete and the highest level of schooling they *think* their child will complete. Significant differences between treatment and control villages were found for both measures, with parents in treatment villages desiring and expecting higher educational outcomes for their children (Table IV.8). On average, the difference in parents' desire for their children to attend secondary or more advanced schooling is 4.3 percentage points, and the difference in parents' expectations is 4.6 percentage points—both significant at the 5 percent level.

Table IV.8. Impact of IMAGINE on Parental Attitudes toward Schooling

	Treatment Group	Control Group	Impact	Sample Size
Attitudes Toward Schooling				
Like child to attend secondary or advanced (%)	79.4	75.0	4.3**	13,957
Think child will attend secondary or advanced (%)	77.8	73.3	4.6**	13,787
Attitudes Toward Schooling – Females				
Like child to attend secondary or advanced (%)	77.5	70.4	7.1***	6,703
Think child will attend secondary or advanced (%)	75.8	68.8	7.0***	6,620
Attitudes Toward Schooling – Males				
Like child to attend secondary or advanced (%)	81.1	79.2	1.9	7,254
Think child will attend secondary or advanced (%)	79.8	77.4	2.5	7,167
Attitude Gap				
Wants child to achieve more school than expects (%)	9.3	9.3	0.0	13,786

Source: Household Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Impact statistically significant at the 10 significance level, two- tailed test.
**Impact statistically significant at the 5% significance level, two- tailed test.
***Impact statistically significant at the 1% significance level, two- tailed test.

Parents continue to desire and expect higher levels of schooling for male children than for females. However, we once again observe a gap in impacts of IMAGINE for male and female children. There is no statistical difference between treatment and control villages in parental attitudes toward schooling for boys, but approximately seven percent more girls in treatment villages had parents who think they will or would like them to attend secondary or advanced schooling than in control villages. The soft interventions that were not implemented included strategies to change parents' attitudes toward girls' schooling. None of the implemented components of the intervention were specifically dedicated to attitudes toward girls' schooling, however, making the source of this impact unclear. Perhaps the construction of new schools with girl-friendly features or the greater presence of female teachers was enough to change the attitude of parents toward girls' schooling.

4. What are the main factors affecting a parent's decision to send their child to school?

The distance from home to school is one of the two most important reasons parents indicated for enrolling their child in school (Table IV.9)—78 percent of parents in treatment villages and 74 percent in the control villages. Textbooks were also identified as a leading factor among parents in sending their children to school in both treatment and control villages. Separate latrines for boys and girls play a much larger role for parents in treatment villages, presumably because separate latrines are more common.

Table IV.9. Parents' Reasons for Enrolling Children in School

	Treatment Group		Control Group	
Reason	Most Important (%)	Among Two Most Important (%)	Most Important (%)	Among Two Most Important (%)
Distance to School	63.06	77.86	59.71	74.00
Textbooks	9.57	48.56	8.27	43.69
School Canteen	4.36	9.70	4.91	7.14
Dry Rations	2.95	5.12	1.42	2.28
Separate Bathrooms for Boys and Girls	3.70	14.92	1.10	4.28
Other	16.36	43.84	24.59	68.61
State-Chosen School	2.98	5.66	7.36	7.65
Knowledge	10.12	18.75	14.34	33.76
Chances for Child to Succeed	3.26	14.03	2.50	17.98
Civic Duty	0.00	4.12	0.24	4.02
Quality of Teaching	0.00	1.28	0.07	5.12
School in this Village	0.00	0.00	0.01	0.01
Bilingual School	0.00	0.00	0.07	0.07
Sample Size	**3,625**	**3,129**	**7,108**	**6,536**

Source: Household Survey (Mathematica 2011)

Note: Italicized categories were write- in responses.

We also asked parents whose children were not enrolled in school the main reason why they made that choice (Table VI.10). The responses were similar across treatment and control groups, with the two most common reasons having to do with the age of the child—either too young or too old. Very few parents reported the school being too far away or lack of a school in the village being a major reason not enrolling their children. This is not surprising given that the vast majority of children in this study lived in a village where there was a school available.

Table IV.10. Parents' Reasons for Not Enrolling Children in School

Reason	Treatment Group (%)	Control Group (%)
Child Too Young	51.94	46.57
Child Too Old	14.10	15.97
Household Work	12.76	11.01
Avoid Debauchery	2.86	3.59
Taking Care of Siblings	3.81	2.05
Work for Income	2.35	1.42
School Too Far	0.70	0.53
No Separate Latrines for Girls and Boys	0.06	0.00
Other	11.11	18.15
Sample Size	**1,575**	**3,951**

Source: Household Survey (Mathematica 2011)

Overall, the main reasons parents cited for enrolling or not enrolling their children in school were remarkably similar across treatment and control groups. Parents in all villages value travel distance and access to textbooks when deciding whether or not to send their children to school. Parents justify not sending their children to school because they feel they are not an appropriate age.

Because the IMAGINE program built schools in already-existing villages, the program did not have much of an impact on the distance most children would need to travel to attend school. The program did offer greater accessibility to textbooks, however, and this aspect of the intervention could have contributed to increased enrollment in treatment villages. The program was unable to do much to change the reasons parents highlighted for not enrolling their children in school. Because age was the most commonly-cited reason, providing parent education on the benefits of sending children to school and describing the various options for older and younger children could be considered as a future soft intervention.

G. Robustness of Results

1. Sensitivity of Results to Different Regression Specifications

The regression estimates presented here are robust to an extensive set of alternative specifications. The following tables present impact estimates based on key regression specifications used to assess the robustness of the results. Table IV.11 shows the regression robustness tests run on enrollment measured at the household level and Table IV.12 at the school level. The first row of these tables provide estimates of the impact of IMAGINE, and each columns represents a different set of regression specifications. Given that the coefficients reported in the first row in each table do not show much variation, the estimated impacts of the IMAGINE program are not very sensitive to which of the regression specifications are used.

Table IV.11. Impact of IMAGINE on Enrollment According to Household: Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.043**	0.046**	0.047**	0.043***	0.046***	0.047***
	(0.020)	(0.019)	(0.019)	(0.009)	(0.009)	(0.009)
Constant	0.733***	0.681***	0.626***	0.733***	0.681***	0.626***
	(0.010)	(0.196)	(0.209)	(0.005)	(0.150)	(0.155)
Socio- demographic controls[a]	No	Yes	Yes	No	Yes	Yes
Village- Level controls[b]	No	No	Yes	No	No	Yes
Std Errors clustered by village	Yes	Yes	Yes	No	No	No
Std Errors clustered by hh	No	No	No	Yes	Yes	Yes
Sample Size	13,969	13,963	13,963	13,969	13,963	13,963
R- squared (adjusted)	0.0804	0.0937	0.0958	0.0804	0.0937	0.0958

Sources: Village Census (Mathematica 2011) and Household Survey (Mathematica 2011)

[a]Sociodemographic Controls include: Total number of household members, the household flooring and roofing material, household assets, whether the household has always lived in current place of residence, and the head of household's sex, age, schooling, religion and ethnicity.

[b]Village- Level Controls include: Number of people in the village, percentage of households with school-aged boys, percentage of households with school- aged girls, and percentage of households with children.

*Coefficient statistically significant at the 10% significance level, two- tailed test.
**Coefficient statistically significant at the 5% significance level, two- tailed test.
***Coefficient statistically significant at the 1% significance level, two- tailed test.

Table IV.12. Impact of IMAGINE on Enrollment According to School: Sensitivity Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.037*	0.040*	0.041**	0.037***	0.040***	0.041***
	(0.022)	(0.021)	(0.020)	(0.010)	(0.010)	(0.010)
Constant	0.720***	0.680***	0.622***	0.720***	0.680***	0.622***
	(0.010)	(0.193)	(0.211)	(0.006)	(0.147)	(0.153)
Socio- demographic controls[a]	No	Yes	Yes	No	Yes	Yes
Village- Level controls[b]	No	Yes	Yes	No	No	No
Std Errors clustered by village	Yes	Yes	Yes	No	No	No
Std Errors clustered by hh	No	No	No	Yes	Yes	Yes
Sample Size	13,967	13,961	13,961	13,967	13,961	13,961
R- squared (adjusted)	0.0821	0.0954	0.0987	0.0821	0.0954	0.0987

Sources: Village Census (Mathematica 2011) and Household Survey (Mathematica 2011)

[a]Sociodemographic Controls include: Total number of household members, the household flooring and roofing material, household assets, whether the household has always lived in current place of residence, and the head of household's sex, age, schooling, religion and ethnicity.

[b]Village- Level Controls include: Number of people in the village, percentage of households with school-aged boys, percentage of households with school- aged girls, and percentage of households with children.

*Coefficient statistically significant at the 10% significance level, two- tailed test.
**Coefficient statistically significant at the 5% significance level, two- tailed test.
***Coefficient statistically significant at the 1% significance level, two- tailed test.

In each table, column 1 estimates the linear equation described in Box III.1 with standard errors clustered at the village level. This also corresponds to the regression specification used to present our main estimates in this chapter (Tables IV.3 and IV.4). The coefficient on the treatment variable is 0.043, significant at the 5 percent level, suggesting that the IMAGINE program increased student enrollment by 4.3 percentage points. Column 2 estimates the same regression, but includes a number of sociodemographic control variables. The resulting estimate of the coefficient is very similar— 4.6 percentage points rather than 4.3 percentage points. The similarity of these estimated coefficients is reassuring and confirms that children in treatment and control villages have very similar sociodemographic characteristics. If the children had looked considerably different in terms of these characteristics that are correlated with school enrollment, the estimated coefficient on treatment would have changed significantly when the control variables were added to the regression. Similarly, column 3 adds village-level control variables to the sociodemographic controls included in column 2. The addition of village-level controls changes the estimated impact of the IMAGINE program to 4.7 percentage points on enrollment. This confirms our assumption that treatment and control villages are very similar to each other. Had they been substantially different, the addition of village-level control variables related to school enrollment would have caused a significant change in the estimated impact of the program.

Column 4 in both tables presents the same regression as column 1, except it uses standard errors clustered at the household rather than the village level. Likewise, column 5 reports the same regression as column 2 and column 6 reports the same as column 3, but with standard errors clustered at the household rather than village level. Changing the level in which standard errors are clustered does not result in any changes in the impact estimates (as expected), but tended to reduce the standard errors by almost half, which yielded higher levels of statistical significance in the impact estimates.

2. Sensitivity of the Results to Weights

The impact estimates presented do not utilize any type of weighting scheme but the impacts are robust to two types of weights to adjust for differences in the probability of selection. Table IV.13 presents a sensitivity analysis of three different weight specifications tested: no weights (as presented earlier in the chapter), weights at the village level, and an interaction of weights at the household and village levels. The calculations of these weights are described in Chapter III.

Table IV.13. Impact of IMAGINE on Key Outcomes: Sensitivity Analysis

	No Weights Used (1)		Village- level Weights (2)		Household/Village- level Weights (3)	
	Impact	Std Error	Impact	Std Error	Impact	Std Error
Impacts On Key Outcomes						
School Availability						
School available in child's village (%)	0.008	0.008	0.007	0.007	0.006	0.007
Number of schools per village	- 0.002	0.053	- 0.006	0.056	N/A	N/A
Number of classrooms per village	1.659**	0.645**	1.549***	0.586***	N/A	N/A
Number of classrooms made with finished material per village	3.301***	0.554	3.297***	0.517	N/A	N/A
Enrollment						
Enrolled according to household	0.043**	0.020	0.045**	0.019	0.035*	0.020
Enrolled according to school	0.037*	0.022	0.040*	0.021	0.029	0.022
Attendance						
Child was present on day of visit	0.017	0.025	0.023	0.023	0.001	0.025
Child was present one week prior to day of visit	0.022	0.023	0.027	0.021	0.010	0.025
Test Scores						
Math (std dev)	0.028	0.034	0.028	0.031	0.025	0.037
French (std dev)	0.044	0.041	0.035	0.040	0.053	0.042
Impacts By Gender						
Enrollment						
Enrolled according to household	0.072***	0.021	0.056**	0.023	0.082***	0.022
Enrolled according to school	0.065***	0.021	0.051**	0.022	0.075***	0.022
Attendance						
Child was present on day of visit	0.069***	0.019	0.050**	0.022	0.083***	0.020
Child was present one week prior to day of visit	0.059***	0.021	0.046**	0.023	0.066***	0.022
Test Scores						
Math (std dev)	0.049	0.044	0.025	0.044	0.064	0.051
French (std dev)	0.093*	0.048	0.073	0.052	0.109**	0.054

Sources: Village Census (Mathematica 2011), Household Survey (Mathematica 2011) and School Survey (Mathematica 2011)

*Coefficient statistically significant at the 10% significance level, two- tailed test.
**Coefficient statistically significant at the 5% significance level, two- tailed test.
***Coefficient statistically significant at the 1% significance level, two- tailed test.

The magnitude of the impact estimates does not vary much across the different weighting schemes, although the statistical significance varies somewhat. Estimates produced with village-level weights produce slightly greater overall impacts, but slightly lower differentiated impacts by gender. Estimates produced with household-level weights produced slightly smaller overall estimates, but slightly greater impacts when looking solely at girls.

3. Sensitivity of Results to Communes that Violated Random Assignment

As previously reported, two communes in our evaluation sample (Gorouol and Guidiguir) did not implement random assignment properly.[19] Additionally, we could not collect data in several villages in one commune (Arlit) due to civil unrest during the time of the survey. To verify that the communes that violated random assignment did not drive the results presented in this chapter, Tables IV.14.A and IV.14.B show the impact estimates excluding the three communes that violated random assignment.

Table IV.14.A Impact of IMAGINE on Key Outcomes Excluding Communes That Did Not Implement Random Assignment

	Impact	P- Value of Impact	Sample Size
School Availability			
School available in child's village (%)	0.00	1.00	14301
Number of schools per village	- 0.023	0.588	151
Number of classrooms per village	0.944***	0.002	151
Number of classrooms with finished material per village	2.924***	0.000	151
Enrollment			
Enrolled according to household (%)	3.8*	0.090	12288
Enrolled according to school (%)	3.1	0.206	12286
Attendance			
Child was present on day of visit (%)	1.8	0.517	12219
Child was present one week prior to day of visit (%)	2.3	0.346	12197
Test Scores			
Math (std dev)	0.032	0.413	12021
French (std dev)	0.024	0.590	12031

Sources: Village Census (Mathematica 2011), School Survey (Mathematica 2011) and Household Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Impact statistically significant at the 10% significance level, two- tailed test.
**Impact statistically significant at the 5% significance level, two- tailed test.
***Impact statistically significant at the 1% significance level, two- tailed test.

[19] These communes are different than the two that violated random assignment severely and were excluded from the study. See Chapter III for details.

Table IV.14.B Impact of IMAGINE on Subgroups Excluding Communes That Did Not Implement Random Assignment

	Impacts for Girls - Impacts for Boys	p- Value of Impact	Sample Size
Enrollment			
Enrolled according to household – girls (%)	6.9***	0.002	12288
Enrolled according to school – girls (%)	6.3***	0.005	12286
Attendance			
Child was present on day of visit – girls (%)	6.6***	0.001	12219
Child was present one week prior to day of visit – girls (%)	5.0**	0.023	12197
Test Scores			
Math – girls (std dev)	0.030**	0.540	12021
French – girls (std dev)	0.095*	0.073	12031

Sources: School Survey (Mathematica 2011) and Household Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Impact statistically significant at the 10% significance level, two- tailed test.
**Impact statistically significant at the 5% significance level, two- tailed test.
***Impact statistically significant at the 1% significance level, two- tailed test.

Excluding communes that did not adhere to random assignment from the analysis reduced the sample size by 1,681 school-aged children. The impact estimates were changed somewhat as a result of this specification. Impacts on enrollment, according to the household survey, decreased from 4.3 to 3.8 percentage points and were significant at the 10 percent, rather than 5 percent, level. Impacts on enrollment according to the school were no longer significant. There remained no significant impacts on attendance or test scores.

Excluding communes that did not implement random assignment decreased the impact levels shown for girls slightly, although the statistical significance of the impacts remained the same for all enrollment variables. The impact estimates were slightly less significant for one measure of attendance, and impacts were slightly more significant for both math and French test scores.

4. Estimates of Treatment Effect on the Treated

All of the impact estimates presented thus far are estimates based on random assignment and are, therefore, estimates of the offer to participate in the program. These are known in the evaluation literature as intent-to-treat estimates. In Table IV.15, we use information on the villages that actually received an IMAGINE school to estimate treatment on the treated impact estimates.

Table IV.15. Impact of IMAGINE on Those Receiving Treatment

	Treatment Group	Control Group	Impact	P- Value of Impact	Sample Size
Enrollment					
Enrolled according to household (%)	78.2	73.5	4.6**	0.036	13,969
Enrolled according to school (%)	76.3	72.2	4.0*	0.096	13,967
Attendance					
Child was present on day of visit (%)	70.0	68.2	1.8	0.491	13,894
Child was present one week prior to day of visit (%)	71.4	69.0	2.4	0.337	13,869
Test Scores					
Math (std dev)	0.016	- 0.015	0.031	0.408	13,686
French (std dev)	0.025	- 0.022	0.047	0.293	13,697

Sources: School Survey (Mathematica 2011) and Household Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Impact statistically significant at the 10% significance level, two- tailed test.
**Impact statistically significant at the 5% significance level, two- tailed test.
***Impact statistically significant at the 1% significance level, two- tailed test.

As described in Chapter III, random assignment was generally followed, with a few exceptions. As would be expected, the results of estimating the treatment on the treated impacts were not substantially different than the estimated intent to treat impacts.

5. Alternative Explanation

While we believe that random assignment was well designed and implemented, and provided the basis for evaluation findings that are very credible, this section explores one possible threat to the design and assesses the extent to which this might have affected the results presented in Sections C and D.

The possible threat is that while IMAGINE did not alter the percentage of children in a village that are enrolled in school, it may have had an effect on the enrollment of children living outside the village. If children living in neighboring villages come to IMAGINE schools at a greater rate than to schools located in the control villages, this would not be reflected in our impact estimates since our sampling design is based on children who live in the IMAGINE and control villages. While we cannot fully discard this explanation, the analysis presented below suggests that this is unlikely to be the case.

We consider three cases:

1. Households from neighboring villages move to IMAGINE villages to be able to send their children to IMAGINE schools. If this were the case, we should see treatment villages having a larger number of households than control villages. Yet, as described in Table III.4, the difference in the number of households between treatment and control villages is small (4.08) and not statistically significant.

2. Households from neighboring villages do not move but send their children to live with other households in IMAGINE villages. If this were the case, it should affect the proportion of children in IMAGINE villages enrolled in school, and hence be reflected on our impact estimates. Moreover, if this were the case, we should see treatment group households having a greater number of children than households in the control group. This was not the case, as the number of school-aged children was almost identical (Table IV.16). Finally, children in the treatment group should be less likely to be the son or daughter of the head of the household. The two groups are almost identical in this dimension as well.

3. Households from neighboring villages send their children to school but children continue living in their villages. Since we have no data from these households, this case is harder to discard. Yet qualitative evidence suggests that children are not likely to walk long distances to go to school. In the case of our evaluation sample, less than 1 percent of children go to school in a neighboring village. While this may not be representative of all children in Niger that live in rural villages, we believe it is unlikely that large numbers of children from neighboring villages would come to IMAGINE villages and that this would happen more frequently for IMAGINE villages than for non-IMAGINE villages.

In sum, we believe that the random assignment design implemented in this evaluation yielded credible impact estimates, and that this alternative explanation is unlikely to explain the lack of major impacts reported earlier in this chapter.

Table IV.16. Difference between the Number of Children in IMAGINE and non- IMAGINE Households and the Proportion of Those That are Son/Daughter to Head of Household

	Treatment Group	Control Group	Difference	P- Value of Difference
Number of children in household	1.984	1.950	0.034	0.412
Child is son/daughter of head of household (%)	87.7	89.0	- 1.2	0.282

Source: Household Survey (Mathematica 2011)

Note: Control group means are regression adjusted.

*Difference statistically significant at the 10% significance level, two- tailed test.
**Difference statistically significant at the 5% significance level, two- tailed test.
***Difference statistically significant at the 1% significance level, two- tailed test.

H. Summary

This section summarizes the key results of this chapter. IMAGINE had no effect on the availability or number of schools in a village. This was due to the fact that schools were widely available prior to program implementation. While IMAGINE did not have an effect on the availability of schools, it did have a positive effect on the number of classrooms available to children in villages where the program was implemented. It also greatly improved the quality of school infrastructure. In particular, IMAGINE schools have more classrooms, usable classrooms, and classrooms with blackboards than non-IMAGINE schools. IMAGINE schools were also significantly more likely to have a water supply, separate latrines for boys and girls, a preschool facility, and teacher housing.

The evaluation measured the effect of the program toward meeting its goals of increasing enrollment, attendance, and test scores for girls. The effects of the IMAGINE program on school enrollment were small and positive, ranging from 3.7–4.3 percentage points, according to the household and school surveys. When broken down by gender, the enrollment effect was driven entirely by girls, with an enrollment boost of 6.5–7.2 percentage points. No measurable impacts were detected on attendance or math and French test scores overall. Girls' French test scores were 0.093 standard deviations higher than boys, but this effect was statistically significant only at the 10 percent level and was not as robust as the other impact estimates.

V. CONCLUSIONS

This report documents the main findings from the impact evaluation of the IMAGINE program. Overall, IMAGINE had a 4.3 percentage point positive impact on primary school enrollment, no impact on attendance, and no impact on math and French test scores. The program impacts were generally larger for girls than boys. For girls, the program had an 8 percentage point positive impact on enrollment and a 5.4 percentage point impact on attendance. The program had no impact on girls' math scores, though there is suggestive evidence it may have had a positive impact of 0.09 standard deviations on girls' French test scores. No significant impacts were detected for boys' enrollment, attendance, or test scores.

To assess the magnitude of these impacts, we compare them with those of a similar program called BRIGHT, implemented in neighboring Burkina Faso. BRIGHT was very similar to IMAGINE in that it also constructed girl-friendly schools in rural areas with similar infrastructure (e.g., teacher housing, separate latrines, nearby water source) and somewhat similar complementary soft interventions. The evaluation of BRIGHT was similar to that of IMAGINE in various ways: there was a rigorous evaluation design with a comparison group created to mimic the counterfactual (regression discontinuity in the case of BRIGHT and random assignment in the case of IMAGINE), key outcome variables were the same and measured in similar ways, and the outcomes were measured approximately at the same time (i.e., one year after program implementation).

The impacts of IMAGINE are both small in their own right and relative to BRIGHT's impacts (Table V.1). Impacts of IMAGINE on school attendance and enrollment are in the order of 2–4 percentage points, whereas those of BRIGHT are in the order of 15–20 percentage points. Moreover, IMAGINE's impact on test scores was small and statistically insignificant (in the order of 0.03–0.04 standard deviations), whereas BRIGHT's impacts were much larger (0.40 standard deviations) and statistically significant. We now speculate about possible reasons for the lack of large impacts of IMAGINE on school enrollment.

Table V.1. Impacts of IMAGINE vs. Impacts of BRIGHT

	IMAGINE	BRIGHT
School Enrollment (pp)	4**	20***
School Attendance (pp)	2	16***
Math Test Scores (std dev)	0.03	0.40***
French Test Scores (std dev)	0.04	0.40***

Sources: Household Survey (Mathematica 2011), School Survey (Mathematica 2011), and BRIGHT program report (Mathematica 2009)

pp= percentage points

1. IMAGINE was implemented mostly in villages that already had a school.

By the end of the IMAGINE evaluation, 99.2 percent of the control group villages had a school. This means that in the absence of the IMAGINE program, 99.2 percent of IMAGINE villages would have had a school. The comparable figure for the BRIGHT evaluation was 60 percent. Moreover, about 95 percent of the villages in the IMAGINE program had a school

before the program was implemented. So perhaps the program could have had a larger impact if it had been implemented in villages without a school. In fact, if IMAGINE had not been implemented, about 75 percent of children would have attended schools in IMAGINE villages, so the margin for an upward swing in enrollment was rather limited. In contrast, the comparable figure for the BRIGHT program was 40 percent, so there was a larger margin for improvement.

The preceding paragraph suggests that perhaps if the schools had been built in villages without a school, the impacts on enrollment would have been larger. This presumes that there are villages in Niger without a school. We investigated whether this was the case, and while we don't have definitive evidence, it seems like villages without a school were less common in Niger than in Burkina Faso. Government officials indicated that practically all "administrative villages" have a school. About 73 percent of the population of Niger lives in an administrative village or in an urban area. We do not have reliable evidence about what fraction of the remaining 27 percent live in a village with a school, though from conversations with the government of Niger suspect that there are isolated rural villages without school.

Even if there were many isolated rural villages without a school, it still leaves open the question whether it would have been better to build schools in these villages. On the one hand, as suggested above, the potential impact on the percent of children enrolled is likely to be large. On the other hand, given that these villages are likely to be small, the impact on the number of children enrolled may not be so large. Also, the construction costs are likely to be high, and the lack of proximity to secondary schools and to labor markets are likely to be a long term disadvantage of building schools in these villages.

2. IMAGINE was not fully implemented.

While most of the IMAGINE schools were built as intended, the program was not fully implemented. First, the difficult political situation that the country went through and the fact that MCC's NTP program was suspended made for a very challenging setting in which to implement the program. Second, the complementary soft interventions were only partially implemented or not implemented at all. Hence, one possible reason for the lack of large impacts is that the intervention as a whole was not fully implemented. The very nature of the IMAGINE program was meant to be integrative and called for a combination of hard and soft interventions, so perhaps if these interventions had been implemented the impacts could have been larger. What seemed somewhat surprising though is that many of the soft interventions were meant to affect education outcomes for girls, and yet the findings of the evaluation point to impacts for girls even without these soft interventions. It is possible that if the soft interventions had been implemented, impacts would have been even higher, but it seems hard to believe that these interventions would have done much to increase the practically zero impacts for boys.

3. Villages in IMAGINE did not apply to get a school.

The villages that were part of the evaluation were selected by the government of Niger using criteria that related to the number of school-aged children in the village, distance from roads, and other factors. Our understanding is that these villages did not apply to get a school. In contrast, for the BRIGHT program, villages applied. Hence, one possible reason for the lack of large impacts of the IMAGINE program is that households in the villages where it was implemented may not have felt that building a new school was an important priority for the village. We do not know for sure

whether this is the case as it is possible the villages did feel it was an important priority but they did not have a way to voice their preference. It is fair to suggest, however, that in BRIGHT, there is stronger evidence that the households in the village wanted a school.

These are not the only reasons, of course, and are speculative in nature. But we believe they are the most plausible explanations for the lack of major impacts of IMAGINE on school enrollment. Other possible explanations include the difficult political environment present in the country during the past two years and cultural and socioeconomic factors that may have limited the improvement of education outcomes despite the fact that IMAGINE was implemented. Finally, another possible explanation is that IMAGINE was not able to enroll in school a greater number of children who live in the villages where the schools were located but perhaps was able to attract a greater number of children from outside the villages. Since our evaluation is based on the data from households who live in the villages where the schools were located (and in control villages), we would not be able to detect this change if it had occurred. Yet, for reasons detailed in Section IV.G.5, we think this is very unlikely.

Given the small impacts on enrollment and attendance, it is perhaps not surprising that IMAGINE had no impact on test scores. While the school infrastructure was better in IMAGINE schools than in non-IMAGINE schools, there was no component of the IMAGINE program implemented that was geared towards having a substantial impact on the quality of education. The teachers that were assigned to IMAGINE schools by the Ministry of Education did not look very different from the teachers assigned to control villages. Finally, the IMAGINE schools were not open for longer than the non-IMAGINE schools.

Overall, we conclude that the IMAGINE program had small impacts on enrollment, no impacts on attendance and no impact on test scores, and that the leading explanations behind these results are likely to be related to where and, the extent to which, the program was implemented.

APPENDIX 1

VILLAGE NAMES AND TREATMENT STATUS

Village Names & Treatment Status

Adibour	Control
Adoumchi[2]	Control
Aguégalame[1]	Control
Aîkaoua	Control
Akokan Boukoki nord	Control
Angoual Gao	Control
Arifadi	Treatment
Arnadi	Treatment
Bakari Serki[2]	Treatment
Baman Anné	Control
Bandio	Treatment
Bangoutara[3]	Treatment
Banizoumbou 1	Treatment
Batche Batche	Treatment
Bellékoira	Treatment
Beykori	Treatment
Birni kouka	Control
Bolbol Goumandey[2]	Treatment
Bolbol Kodi[2]	Control
Borobon	Control
Boude	Treatment
Boudoun	Treatment
Bougouzawa	Control
Boukoki 2 Arlit	Control
Boukoki nord Arlit	Treatment
Boura	Treatment
Bourtoutoua[2]	Treatment
Carré SNTN	Treatment
Chago[2]	Treatment
Chaoulawa	Control
Chergouna	Control
Dab Daji	Control
Dagué Zouma	Control
Dakourawa Chazoumalia	Control
Damama	Treatment
Damoua 2	Control
Dan Aîsaboua	Control
Dan Ala	Treatment

[1]Village was not surveyed due to civil unrest.
[2]Village not surveyed because the random assignment process was not respected in the commune.
[3]Village was not included in the evaluation because it was selected to receive the intervention prior to the random assignment process.

Dan Barde	Treatment
Dan Dourwaye	Control
Dan Kori	Control
Dan Rago	Control
Dan Saga	Treatment
Dan Tchedia	Treatment
Dan Toudou Boudé	Control
Dan Toudou Galadima	Treatment
Dargol Centre	Control
Dargol Quartier[3]	Treatment
Daytagui Banikoubey	Control
Débi	Control
Deréki	Control
Derkindé[3]	Treatment
Djambala Day	Control
Djanguiri	Control
Djiko	Control
Djongo- Zarma	Treatment
Dogon Gao	Control
Dolbel Quartier	Treatment
Douguere	Treatment
Douguere Mai Gao	Control
Doukou Doukou	Control
Doundayé	Control
Doundou Gonga	Control
Doungoul	Treatment
Dourgoun Mage	Control
El Dama Haoussa	Control
El Gueza	Control
Faari [2]	Control
Faraye	Treatment
Fau Fau	Control
Foura Guirké	Treatment
Gabana[2]	Control
Gamdji Saboua	Control
Gamdou Doum Doum[2]	Treatment
Gandou	Control
Gao Gayanba	Control
Garaoua	Control
Gararé	Control

[1]Village was not surveyed due to civil unrest.
[2]Village not surveyed because the random assignment process was not respected in the commune.
[3]Village was not included in the evaluation because it was selected to receive the intervention prior to the random assignment process.

Garbougna	Treatment
Gassafa	Treatment
Gazori	Control
Gomba	Treatment
Gonga Karimoune	Control
Gonga Moussa	Control
Gorou	Treatment
Goudjou	Control
Goungo	Control
Guériel	Control
Guetsi	Treatment
Guidan Atché	Control
Guidan Dagna	Treatment
Guidan Dawey	Control
Guidan Doutchi	Control
Guidan Galadima	Control
GUIDAN Gazobi	Treatment
Guidan Idder	Control
Guidan Matchéra Moussa	Control
Guidan Mayaki Tmars	Control
Guilguigé	Treatment
Haramiya Kalo	Control
Hardo Choumo	Control
Izawitan	Control
Jean- Marie Ducroz de Dolbel	Treatment
Jiga	Treatment
Jirga 2	Control
Kabé	Control
Kachédawa	Control
Kagarki	Control
Kaîhin Gatari	Control
Kambou Dan Habou	Control
Kangouri[2]	Treatment
Kanjiwa	Treatment
Kannia	Treatment
Kaoutchin Kaba	Control
Kellakam Nord	Treatment
Kirin	Control
Kodaga	Control
Kodey	Control

[1]Village was not surveyed due to civil unrest.
[2]Village not surveyed because the random assignment process was not respected in the commune.
[3]Village was not included in the evaluation because it was selected to receive the intervention prior to the random assignment process.

Kogori	Treatment
Koubdou Saboua	Control
Koulétchi	Control
Kouloudjia	Control
Kourki	Control
Kouroua	Treatment
Kouya-Kouya	Control
Laboda	Control
Lamamé	Treatment
Larre	Control
Lawey Kaoura Alassane	Control
Madawayla[1]	Control
Madobi	Control
Magémi	Control
Maigaoudé	Control
Maîguigé Karfi	Treatment
MaïKourou	Control
Mairam	Control
Maïtalakia	Treatment
Maitchakaye	Treatment
MaïZabi	Control
Makani Souleymane	Control
Makéra Guidadji	Control
Mamoudou Kouara[2]	Control
Maraké	Control
Maroudi	Control
Mayel[2]	Control
Mokko Peul	Treatment
Moutséka	Control
N'Guel Lamido	Control
Nafouta Peul	Control
Nai Lawan	Control
Nakikarfi	Control
Nobba	Control
Nouveau Marché Arlit	Control
Rapha	Control
Rawayou Saboua	Control
Rouafi	Control
Saber	Treatment
Sabon Lahi	Control

[1]Village was not surveyed due to civil unrest.
[2]Village not surveyed because the random assignment process was not respected in the commune.
[3]Village was not included in the evaluation because it was selected to receive the intervention prior to the random assignment process.

Sabon Yayi	Control
Safatan	Control
Salewa 1	Treatment
Sansané Tabla	Treatment
Sarki Peul	Control
Sissia[2]	Control
Sogassa Adamou[2]	Control
Sogassa Karsani[2]	Treatment
Son Allah Kouara[2]	Control
Soubdou Centre[2]	Control
Tajaé Sédendaire	Control
Takawatt	Treatment
Takoraka	Control
Talcho	Treatment
Tamagorgek	Control
Taslimt	Control
Tatségouma Saboua	Control
Tawala	Treatment
Tchingalene	Control
Tchirobi Day	Treatment
Tchourout	Control
Tégueye	Treatment
Telaweye	Control
Tezirzet[1]	Control
Tibbo Deytagui	Control
Tidani	Treatment
Tillimidis[2]	Treatment
Timboran Hatta	Treatment
Tombo Djambé	Control
Tondi Kiré- Tabla	Control
Tounga Maissabé	Control
Tounga Mayaki[2]	Control
Tounga Yacouba	Control
Tsamayé	Control
Tsangalandan	Control
Tsararaou ala sarki	Control
Wenzerbé	Control
Wézébangou	Control
Yatakala	Treatment
Yelwa	Control

[1]Village was not surveyed due to civil unrest.
[2]Village not surveyed because the random assignment process was not respected in the commune.
[3]Village was not included in the evaluation because it was selected to receive the intervention prior to the random assignment process.

Yelwani	Control
Yéya	Control
Zabori Zadey[2]	Control
Zabouré	Treatment
Zanen Zaboua	Treatment
Zarmey	Control

[1]Village was not surveyed due to civil unrest.
[2]Village not surveyed because the random assignment process was not respected in the commune.
[3]Village was not included in the evaluation because it was selected to receive the intervention prior to the random assignment process.

APPENDIX 2

HOUSEHOLD AND SCHOOL QUESTIONNAIRES

NIGER HOUSEHOLD QUESTIONNAIRE

HELLO. MY NAME IS _____ AND I AM WORKING WITH THE _____. WE ARE WORKING ON A PROJECT CONCERNED WITH FAMILY HEALTH AND EDUCATION. I WOULD LIKE TO TALK TO YOU ABOUT YOUR HOUSEHOLD. THE INTERVIEW WILL TAKE ABOUT 60 MINUTES. ALL THE INFORMATION WE OBTAIN WILL REMAIN STRICTLY CONFIDENTIAL AND YOUR ANSWERS WILL NEVER BE IDENTIFIED. 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.

HOUSEHOLD CHARACTERISTICS — HC

HC1. VILLAGE:_____ ID: |___|___|___|

HC2. HOUSEHOLD NUMBER: |___|___|___|

HC3. INTERVIEWER NAME AND NUMBER:

NAME_____ |___|___|

HC4. SUPERVISOR NAME AND NUMBER:

NAME_____ |___|___|

HC5. DAY/MONTH/YEAR OF INTERVIEW: |___|___| / |___|___| / |___|___|___|___|

HC6. REGION: _____ID|___|___|

HC7. COMMUNE: _____ID|___|___|___|

HC8. NAME OF HEAD OF HOUSEHOLD:_____

HC9. RESPONDENT RELATIONSHIP TO HEAD OF HOUSEHOLD: |___|___|

01 = HEAD	05 = PARENT	09 = OTHER RELATIVE
02 = WIFE OR HUSBAND	06 = BROTHER OR SISTER	10 = ADOPTED/FOSTER/STEPCHILD
03 = SON OR DAUGHTER	07 = UNCLE/AUNT	11 = NOT RELATED
04 = GRANDCHILD	08 = NIECE/NEPHEW	98 = DON'T KNOW

HC10. SEX OF HEAD OF HOUSEHOLD:

1. MALE 2. FEMALE

HC11. AGE OF HEAD OF HOUSEHOLD

AGE: |___|___|

HC12A. HIGHEST LEVEL OF EDUCATION AND GRADE OF HEAD OF HOUSEHOLD (CIRCLE ONE):

0 NONE
1 PRE-SCHOOL
CURRICULUM
2 PRIMARY
3 SECONDARY
4 HIGHER
5 NON-STANDARD
98 DON'T KNOW

HC12B. GRADE (CIRCLE ONE):

0 NONE	7 6TH	14 1ST CYCLE SUPÉRIEUR
1 CI	8 5TH	15 2ND CYCLE SUPERIEUR
2 CP	9 4TH	16 3RD CYCLE SUPERIEUR
3 CE1	10 3RD	
4 CE2	11 2ND	
5 CM1	12 1ST	
6 CM2	13 TERMINAL	

HC13. HOUSEHOLD GEO-REFERENCE:

LONGITUDE: DG|__|__| MN|__|__| SC|__|__|__|

LATITUDE: DG|__|__| MN|__|__| SC|__|__|__|

HC14. TOTAL NUMBER OF HOUSEHOLD MEMBERS:

|___|___|

HC15. TOTAL NUMBER OF CHILDREN UNDER 18 YEARS OLD IN HOUSEHOLD:

|___|___|

HC16A. WHAT IS THE RELIGION OF THE HEAD OF THIS HOUSEHOLD?

MUSLIM.....1
CHRISTIAN.....2
ANIMISM.....3
NO RELIGION 4
OTHER RELIGION (SPECIFY) 96

HC	Village ID: |___|___|___|	Household Number |___|___|___|
HC16B. TO WHAT ETHNIC GROUP DOES THE HEAD OF THIS HOUSEHOLD BELONG?		HOUSSA ..... 1 DIERMA SONRAI ..... 2 TUAREG ..... 3 PEUHL ..... 4 KANOURI MANGA ..... 5 TOUBOU ..... 6 ARABE ..... 7 BOUDOUMA ..... 8 GOURMANTCHE ..... 9 AUTRE GROUPE (SPECIFY) 96
HC17A. MAIN MATERIAL OF THE DWELLING FLOOR:		NATURAL MATERIAL (EARTH, SAND, DUNG) ..... 1 RUDIMENTARY MATERIAL (WOOD PLANKS, PALM, BAMBOO) ..... 2 FINISHED MATERIAL (POLISHED WOOD, VINYL, ASPHALT, CERAMIC, CEMENT, CARPET) ..... 3 OTHER (SPECIFY) 96
HC17B. MAIN MATERIAL OF THE ROOF:		NATURAL MATERIAL (NO ROOF, STUBBLE) ..... 1 RUDIMENTARY MATERIAL (RUSTIC MAT, PALM, BAMBOO, WOOD PLANKS) ..... 2 FINISHED MATERIAL (METAL, WOOD, CEMENT, SHINGLES) ..... 3 OTHER (SPECIFY) 96
HC18. HOW MANY OF THE FOLLOWING GOODS DO ANY MEMBERS OF YOUR HOUSEHOLD OWN: A RADIO? A MOBILE TELEPHONE? A WATCH? A BICYCLE? A MOTORCYCLE OR SCOOTER? AN ANIMAL-DRAWN CART? CATTLE?		RADIO ..... [____] MOBILE TELEPHONE ..... [____] WATCH ..... [____] BICYCLE ..... [____] MOTORCYCLE/SCOOTER ..... [____] ANIMAL DRAWN-CART ..... [____] CATTLE ..... [____]
HC19. WHAT IS THE MAIN SOURCE OF DRINKING WATER FOR MEMBERS OF YOUR HOUSEHOLD DURING THE RAINY SEASON?		PIPED WATER ..... 1 TUBE WELL OR BOREHOLE ..... 2 DUG WELL ..... 3 WATER FROM SPRING ..... 4 RAINWATER ..... 5 TANKER TRUCK ..... 6 CART WITH SMALL TANK ..... 7 SURFACE WATER ..... 8 BOTTLED WATER ..... 9 TRADITIONAL WELL ..... 10 OTHER (SPECIFY) 96

HC	**Village ID: |___|___|___|**	**Household Number |___|___|___|**
HC20.	How long have you been living continuously in (name of current place of residence).	Years .....|__|__| Always/Permanent.....94 Temporary/Periodically.....95
HC21.	Have any women in this household participated in literacy training of any kind?	Yes .....1 No.....2
After the questionnaire has been completed, fill in the following information:		
HC22.	Result of HH interview: |__|__|	
	Completed.....1 Effort Ended.....2	Refused .....3 Other (specify) 96
HC23.	*Interviewer/supervisor notes:* use this space to record notes about the interview with this household.	
HC24.	Data entry clerk: |__|__|	

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 12. *List all household members between 5 and 12 years old in HL2, their relationship to the household head (HL3), their sex (HL4), and their age (HL5). Then ask:* ARE THERE ANY OTHER CHILDREN BETWEEN THE AGE OF 5 AND 12 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 between 5 and 12. 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. WHAT IS THE RELATIONSHIP OF (NAME) TO THE HEAD OF THE HOUSEHOLD? *Interviewer: For this question, use codes from HC9*	HL4. IS (NAME) MALE OR FEMALE? 1 MALE 2 FEMALE		HL5. HOW OLD IS (NAME)? *Record in completed years* 98=DON'T KNOW	HL6. 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 OR KIND? 1 YES, FOR PAY (CASH OR KIND) 2 YES, UNPAID 3 NO			HL7. WHAT IS THE HIGHEST LEVEL OF SCHOOL (NAME) ATTENDED? **LEVEL:** 0 NO SCHOOL 1 PRE-SCHOOL 2 PRIMARY 3 INFORMAL 98 DON'T KNOW	HL8. WHAT IS THE HIGHEST GRADE (NAME) COMPLETED AT THIS LEVEL? **GRADE:** 1. CI 2. CP 3. CE1 4. CE2 5. CM1 6. CM2 IF LEVEL = 0 OR PRESCHOOL, WRITE GRADE = 0
ID	CHILD'S NAME	RELATION	M	F	AGE	YES PAID	YES UNPAID	NO	LEVEL	GRADE
01		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|
02		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|
03		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|
04		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|
05		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|
06		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|
07		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|
08		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|
09		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|
10		|___|___|	1	2	|___|___|	1	2	3	|___|	|___|

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 12. *List all household members between 5 and 12 years old in HL2, their relationship to the household head (HL3), their sex (HL4), and their age (HL5). Then ask:* ARE THERE ANY OTHER CHILDREN BETWEEN THE AGE OF 5 AND 12 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 between 5 and 12. Tick here if continuation sheet used* ☐

HL1. *Child ID*	HL2. CHILD'S NAME	HL9. WHAT IS THE HIGHEST LEVEL OF SCHOOL YOU WOULD LIKE (NAME) TO ATTEND? **LEVEL:** 0 NO SCHOOL 1 PRE-SCHOOL 2 PRIMARY 3 SECONDARY 4 ADVANCED DEGREE 98 DON'T KNOW	HL10. WHAT IS THE HIGHEST LEVEL YOU THINK (NAME) WILL COMPLETE? **LEVEL:** 0 NO SCHOOL 1 PRE-SCHOOL 2 PRIMARY 3 SECONDARY 4 ADVANCED DEGREE 98 DON'T KNOW	HL11. DURING THE (2009-2010) SCHOOL YEAR, HAS (NAME) ATTENDED SCHOOL OR PRESCHOOL AT ANY TIME? 1 YES 2 NO 98 DON'T KNOW			HL12. DURING THE (2010-2011) SCHOOL YEAR, HAS (NAME) ATTENDED SCHOOL OR PRESCHOOL AT ANY TIME? 1 YES ⇨ ED2 2 NO 98 DON'T KNOW 1 ⇨ ED2			HL13. *If no*: WHY IS (NAME) NOT ENROLLED IN SCHOOL IN 2010-2011? 0 NO SCHOOL IN VILLAGE 1 SCHOOL FEES 2 CHILD TOO YOUNG 3 SCHOOL TOO FAR 4 WORK FOR INCOME 5 HOUSEHOLD WORK 6 TAKING CARE OF SIBLINGS 7 NO SEPARATE TOILETS FOR GIRLS AND BOYS 8 CHILD TOO OLD 9 AVOID DEBAUCHERY 10 PREVENT EARLY MARRIAGE 96 OTHER (SPECIFY) ⇨ MA2
ID		LEVEL	LEVEL	YES	NO	DK	YES	NO	DK	
01		|___|	|___|	1	2	98	1	2	98	
02		|___|	|___|	1	2	98	1	2	98	
03		|___|	|___|	1	2	98	1	2	98	
04		|___|	|___|	1	2	98	1	2	98	
05		|___|	|___|	1	2	98	1	2	98	
06		|___|	|___|	1	2	98	1	2	98	
07		|___|	|___|	1	2	98	1	2	98	
08		|___|	|___|	1	2	98	1	2	98	
09		|___|	|___|	1	2	98	1	2	98	
10		|___|	|___|	1	2	98	1	2	98	

EDUCATION MODULE **Village ID|___|___|___|** **Household Number |___|___|___|** **ED**

To be administered for every child in the household age 5 through 12 years who attended school at any time during 2010-2011 School Year

HL1. *Child ID*	HL2. CHILD'S NAME	ED2. DOES (NAME) HAVE ACCESS TO A COMPLETE SET OF TEXTBOOKS FOR HIS OR HER USE? 1 YES 2 NO		ED3. IS THE SCHOOL THAT (NAME) ATTENDS PUBLIC OR PRIVATE 1 PUBLIC 2 PRIVATE, SECULAR 3 PRIVATE, RELIGIOUS 4 KORANIC SCHOOL 5 MADRASSA 6 NON FORMAL SCHOOL 96 OTHER (SPECIFY)	ED4. WHAT IS THE NAME OF THE SCHOOL THAT (NAME) IS CURRENTLY ATTENDING AND IN WHICH VILLAGE IS IT LOCATED? WRITE THE APPROPRIATE CODE		ED5. IS THERE A DIRECT ROUTE FROM HOME TO SCHOOL FOR (NAME), OR DOES HE HAVE TO GO AROUND AN OBSTACLE, SUCH AS A LAKE OR RAVINE?		ED6. HOW LONG DOES IT TAKE (NAME) TO TRAVEL TO HIS/HER SCHOOL?	ED7. DID (NAME) ATTEND SCHOOL ON THE MOST RECENT DAY THE SCHOOL WAS OPEN, (DAY)? 1 YES ⇨ ED9 2 NO	
ID		YES	NO	TYPE OF SCHOOL	SCHOOL ID	VILLAGE ID	YES	NO	ONE WAY MINUTES	YES	NO
01		1	2		|___|___|___|	|___|___|___|	1	2		1	2
02		1	2		|___|___|___|	|___|___|___|	1	2		1	2
03		1	2		|___|___|___|	|___|___|___|	1	2		1	2
04		1	2		|___|___|___|	|___|___|___|	1	2		1	2
05		1	2		|___|___|___|	|___|___|___|	1	2		1	2
06		1	2		|___|___|___|	|___|___|___|	1	2		1	2
07		1	2		|___|___|___|	|___|___|___|	1	2		1	2
08		1	2		|___|___|___|	|___|___|___|	1	2		1	2
09		1	2		|___|___|___|	|___|___|___|	1	2		1	2
10		1	2		|___|___|___|	|___|___|___|	1	2		1	2

EDUCATION MODULE **Village ID: |___|___|___|** **Household Number |___|___|___|** **ED**

To be administered for every child in the household age 5 through 12 years who attended School at any time during 2010-2011School Year

HL1. *Child ID*	HL2. CHILD'S NAME	ED8. WHAT WAS THE PRINCIPAL REASON FOR (NAME) MISSING SCHOOL? 1 SICK 2 FUNERAL 3 OTHER CEREMONY 4 WORK FOR INCOME 5 HOUSEHOLD CHORES 6 FINANCIAL REASONS 7 TAKING CARE OF SIBLINGS 8 CHILD REFUSED 9 TEACHER ABSENT 10 TRAVEL 96 OTHER (SPECIFY)	ED9. HOW MANY DAYS HAS (NAME'S) SCHOOL BEEN OPEN IN THE PAST 7 DAYS?	ED10. HOW MANY DAYS WAS (NAME'S) TEACHER PRESENT IN THE PAST 7 DAYS?	ED11. HOW MANY DAYS HAS (NAME) ATTENDED SCHOOL IN THE PAST 7 DAYS? *IF ED9 & ED11 MATCH ⇨ ED13*	ED12. WHAT WAS THE PRINCIPAL REASON FOR (NAME) MISSING SCHOOL IN THE PAST 7 DAYS? 1 SICK 2 FUNERAL 3 OTHER CEREMONY 4 WORK FOR INCOME 5 HOUSEHOLD CHORES 6 FINANCIAL REASONS 7 TAKING CARE OF SIBLINGS 8 CHILD REFUSED 9 TEACHER ABSENT 10 SCHOOL CLOSED 11 TRAVEL 96 OTHER (SPECIFY)	ED13. HOW OLD WAS (NAME) WHEN HE/SHE FIRST ENTERED PRIMARY SCHOOL?
ID	NAME	REASON	DAYS	DAYS	DAYS	Reason	Age
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							

EDUCATION MODULE **Village ID|___|___|___|** **Household Number |___|___|___|** **ED**

To be administered for every child in the household age 5 through 12 years who attended School at any time during 2010-2011 School Year

HL1. *Child ID.*	HL2. CHILD'S NAME	ED14. DOES THE SCHOOL (NAME) ATTENDS OFFER SEPARATE BATHROOMS FOR BOYS AND GIRLS?			ED15. DOES THE SCHOOL (NAME) ATTENDS OFFER SCHOOL CANTEEN?			ED16. DOES THE SCHOOL (NAME) ATTENDS OFFER DRY RATIONS? IF YES OR DK ⇨ ED18			ED17. IF YES, ARE THE RATIONS FOR GIRLS ONLY?			ED18. DOES THE SCHOOL (NAME) ATTENDS OFFER TEXTBOOKS?			ED19. OF THE FOLLOWING FACTORS, WHAT IS THE MOST IMPORTANT TO YOU FOR SENDING (NAME) TO SCHOOL? 1 DISTANCE TO SCHOOL 2 TEXTBOOKS 3 SCHOOL CANTEEN 4 DRY RATIONS 5 SEPARATE BATHROOMS FOR BOYS AND GIRLS 96 OTHER (SPECIFY)	ED20. OF THE FOLLOWING FACTORS, WHAT IS THE SECOND MOST IMPORTANT REASON TO YOU FOR SENDING (NAME) TO SCHOOL? 1 DISTANCE TO SCHOOL 2 TEXTBOOKS 3 SCHOOL CANTEEN 4 DRY RATIONS 5 SEPARATE BATHROOMS FOR BOYS AND GIRLS 96 OTHER (SPECIFY)
ID	NAME	Yes	No	DK	Yes	No	DK	Yes	No	DK	Yes	No	DK	Yes	No	DK	MAIN REASON	SECONDARY REASON
01		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		
02		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		
03		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		
04		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		
05		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		
06		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		
07		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		
08		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		
09		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		
10		1	2	98	1	2	98	1	2	98	1	2	98	1	2	98		

MATH ASSESSMENT **Village ID: |___|___|___|** **Household Number |___|___|___|** **MA**

To be administered to every child in the household age 5 through 12 years, ***even if they are not enrolled in school.***

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 GIVE YOU A SHORT TEST IN MATH AND FRENCH. I AM GOING TO READ 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 MA2<10 AND MA3=2, END THE TEST. WE'LL START WITH THE MATH TEST.

HL1. *Child ID*	HL2. CHILD'S NAME	MA2. CAN YOU COUNT TO TEN?	MA3. ARE YOU ABLE TO IDENTIFY THE FOLLOWING NUMBERS? *Show Card*				MA4. ARE YOU ABLE TO COUNT THE FOLLOWING ITEMS? *Show Card*				MA5. OF THE NUMBERS BELOW, ARE YOU ABLE TO IDENTIFY THE GREATER NUMBER? *Show Card*						MA6. ARE YOU ABLE TO COMPLETE THE FOLLOWING ADDITION? *Show Card*				MA7. ARE YOU ABLE TO COMPLETE THE FOLLOWING SUBTRACTION? *Show Card*			
			A. FOUR GOATS B. SEVEN ROOSTERS								A. 7 8 B. 4 5 C. 9 2						A. 4+2= B. 7+1=				A. 3-1= B. 8-5=			
ID	NAME	ENTER HIGHEST NUMBER	3		9		FOUR DOGS		SEVEN FISH		7 & 8		4 & 5		9 & 2		4+2		7+1		3-1		8-5	
			Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
01			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
02			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
03			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
04			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
05			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
06			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
07			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
08			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
09			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
10			1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2

FRENCH ASSESSMENT **Village ID: |___|___|___|** **Household Number |___|___|___|** **FA**

To be administered to every child in the household age 5 through 12 years, ***even if they are not enrolled in school.***

NOW, I'M GOING TO ASK YOU THE QUESTIONS FOR THE FRENCH TEST. CHILD'S REACTION TIME = 1 MINUTE AT MOST. IF FA2=2 AND FA3=2 END THE TEST

HL1. *Child ID*	HL2. CHILD'S NAME	FA2. ARE YOU ABLE TO IDENTIFY THE FOLLOWING LETTERS? *Show Card*	FA3. ARE YOU ABLE TO READ THE FOLLOWING WORDS? A. PAPA B. VÉLO *Show Card*	FA4. ARE YOU ABLE TO READ THE FOLLOWING MORE DIFFICULT WORDS? A. ÉCOLE B. TOMATE *Show Card*	FA5. ARE YOU ABLE TO IDENTIFY THE CORRECT MISSING WORD? *Le garçon achète un ____.* A. HEUREUX B. BONBON C. EST *Show Card*	FA6. ARE YOU ABLE TO IDENTIFY THE CORRECT MISSING WORD? *La fille ____ aller à l'école.* A. JOUR B. CHEMIN C. AIME *Show Card*

ID	NAME	C		T		PAPA		VÉLO		ÉCOLE		TOMATE		BONBON		AIME	
		Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
01		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
02		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
03		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
04		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
05		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
06		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
07		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
08		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
09		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
10		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2

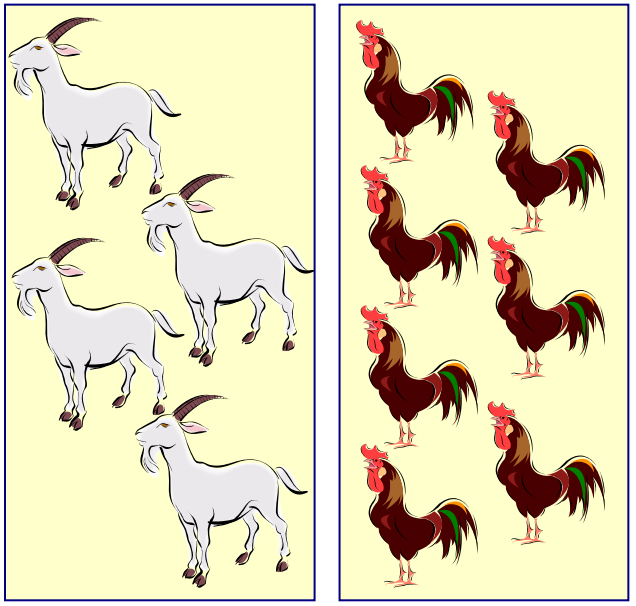
MATH

MA3.

3

9

MA4.



MA5.

7 8

4 5

9 2

MA6.

4 + 2 =

7 + 1 =

MA7.

3 - 1 =

8 - 5 =

FRANÇAIS

FA2.

c

t

FA3.

papa

vélo

FA4.

école

tomate

FA5.

Le garçon achète un _____.

heureux

bonbon

est

FA6.

La fille____ aller à l'école.

jour

chemin

aime

NIGER **SCHOOL QUESTIONNAIRE**

SCHOOL INFORMATION PANEL **SCH**

VISITS SHOULD BE MADE IN THE MORNING WHEN THE SCHOOL IS OPEN AND THE STUDENTS ARE IN CLASS. COLLECT INFORMATION FROM MODULES A, B, C AND D. THEN, TO FILL OUT THE STUDENT ATTENDANCE ROSTER, REQUEST THE OFFICIAL ROSTER OF STUDENTS ENROLLED IN THE SCHOOL.

SCH1. VILLAGE_____ ID: |___|___|___|	SCH2. SCHOOL ID: |___|___|___|
SCH3. INTERVIEWER NAME AND NUMBER : NOM_____ ID |___|___|	SCH4. SUPERVISOR NAME AND NUMBER : NOM_____ |___|___|
SCH5. DAY/MONTH/YEAR OF INTERVIEW : |___|___| / |___|___| / |___|___|___|___|	
SCH6. REGION: _____ID: |___|___|___|	SCH7. COMMUNE: _____ID: |___|___|___|
SCH8. NAME OF SCHOOL : _____	
SCH9. NAME OF RESPONDENT: _____	
SCH10. POSITION OF RESPONDENT (CIRCLE ONE): 1 HEAD MASTER 3 TEACHER 2 OTHER ADMINISTRATOR 96 OTHER (SPECIFY_____)	
SCH11. GEO-REFERENCE : LONGITUDE: DG|__|__| MN|__|__| SC|__|__|__| LATITUDE: DG|__|__| MN|__|__| SC|__|__|__|	SCH12. NUMBER OF DAYS SCHOOL WAS OPEN IN: OCT 2010: |___|___| NOV 2010: |___|___| DEC 2010: |___|___| JAN 2011: |___|___|

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

SCH13. RESULT OF SCHOOL INTERVIEW :

COMPLETED 1
EFFORT ENDED 2
REFUSED 3
SCHOOL NOT FOUND/DESTROYED 4
OTHER……..96
(SPECIFY) _____

INTERVIEWER/SUPERVISOR NOTES : *USE THIS SPACE TO RECORD NOTES ABOUT THE INTERVIEW WITH THIS SCHOOL, SUCH AS CALL-BACK TIMES, INCOMPLETE INDIVIDUAL INTERVIEW FORMS, NUMBER OF ATTEMPTS TO RE-VISIT, ETC.*

SCH14. DATA ENTRY CLERK : |___|___|

A: SCHOOL CHARACTERISTICS		SC
SC1. IS THIS A PUBLIC SCHOOL OR A PRIVATE SCHOOL?	PUBLIC ..... 1 PRIVATE SECULAR..... 2 PRIVATE RELIGIOUS ..... 3 KORANIC SCHOOL ..... 4 MADRASSA ..... 5 NON-FORMAL SCHOOL ..... 6 OTHER (SPECIFY) 96	
SC2. WHAT YEAR WAS THIS SCHOOL OPENED?	YEAR.....|___|___|	
SC3. HOW MANY MALE AND FEMALE STUDENTS ARE ENROLLED IN EACH GRADE?		

GRADE	BOYS STUDENTS	GIRLS STUDENTS	BOYS PRESENT TODAY	GIRLS PRESENT TODAY
CI				
CP				
CE1				
CE2				
CM1				
CM2				

SC4. HOW MANY WEEKS WAS THIS SCHOOL OPEN DURING THE **LAST** ACADEMIC YEAR (2009-2010)?	WEEKS OPEN LAST ACADEMIC YEAR (2009-2010) .....|___|___| *Record 00 if no school was present in previous year.*	
SC5. WHAT LANGUAGE IS USED FOR … 01 FRENCH 02 HAOUSSA 03 DIERMA SONRAI 04 TUAREG 05 PEUHL 06 KANOURI MANGA 07 TOUBOU 08 ARABIC 09 BOUDOUMA 10 GOURMATCHE 96 OTHER LANGUAGE (SPECIFY)	MATHEMATICS INSTRUCTION .....|___|___| READING INSTRUCTION .....|___|___| GENERAL CONVERSATION.....|___|___|	
SC6. DURING **THIS** SCHOOL YEAR (2010-2011), WERE ALL STUDENTS WHO WANTED TO ENROLL IN THIS SCHOOL ADMITTED?	YES..... 1 NO 2	

SC7. IN YOUR OPINION, WHAT IS THE MOST IMPORTANT REASON TO PARENTS FOR **NOT** SENDING GIRLS TO SCHOOL?	NO SCHOOL IN VILLAGE .....1 SCHOOL FEES .....2 CHILD TOO YOUNG.....3 SCHOOL TOO FAR .....4 WORK FOR INCOME .....5 HOUSEHOLD WORK.....6 TAKING CARE OF SIBLINGS.....7 NO SEPARATE BATHROOMS FOR BOYS AND GIRLS .....8 CHILD TOO OLD .....9 TO AVOID DEBAUCHERY .....10 PREVENTS EARLY MARRIAGE .....11 OTHER (SPECIFY) 96	
SC8. DOES THIS SCHOOL HAVE A FEEDING PROGRAM?	YES.....1 NO 2	2⇨SC10
SC9. WHAT TYPE OF FEEDING PROGRAM IS OFFERED BY THE SCHOOL?	CANTEEN.....1 DRY RATIONS.....2 CANTEEN AND DRY RATIONS.....3 OTHER (SPECIFY) 96	
SC10. DOES EACH STUDENT HAVE A COMPLETE SET OF TEXTBOOKS FOR HIS OR HER USE?	YES, SOLE USE.....1 YES, SHARED USE .....2 NO 3	
B: SCHOOL PHYSICAL STRUCTURE		**SS**
SS1. HOW MANY CLASSROOMS DOES THIS SCHOOL HAVE?	CLASSROOMS ..... |___|___|	
SS2. HOW MANY CLASSROOMS ARE USEABLE?	USEABLE CLASSROOMS ..... |___|___|	
SS3. HOW MANY OF THESE CLASSROOMS ARE MADE OF NATURAL OR RUDIMENTARY MATERIAL?	NUMBER ..... |___|	
SS4. HOW MANY OF THESE CLASSROOMS ARE MADE OF FINISHED MATERIAL?	NUMBER ..... |___|	
SS5. HOW MANY OF THESE CLASSROOMS HAVE A BLACKBOARD?	NUMBER ..... |___|	
SS6. HOW MANY OF THESE CLASSROOMS HAVE A BLACKBOARD THAT IS VISIBLE TO ALL STUDENTS?	NUMBER ..... |___|	
SS7. HOW MANY CLASSROOMS CAN BE USED WHEN IT RAINS?	CLASSROOMS..... |___|	

SS8. WHAT PERCENTAGE OF STUDENTS DO NOT HAVE DESKS OR CHAIRS?	PERCENTAGE ..... |___|	
SS9. HOW MANY CLASSES MEET OUTSIDE BECAUSE OF LACK OF CLASSROOMS?	NUMBER ..... |___|	
SS10. DOES THIS SCHOOL HAVE A WATER SUPPLY?	YES .....1 NO 2	
SS11. DOES THIS SCHOOL HAVE TOILET FACILITIES FOR STUDENTS?	YES .....1 NO 2	2⇨SS13
SS12. DO GIRLS AND BOYS HAVE SEPARATE TOILET FACILITIES?	YES .....1 NO 2	
SS13. DOES THIS SCHOOL HAVE A PRESCHOOL?	YES .....1 NO 2	
SS14. IS THERE LODGING SPECIFICALLY FOR THE TEACHERS?	YES .....1 NO 2	
C: FORMER SCHOOL		**SA**
SA1. WAS THIS SCHOOL OPEN THREE YEARS AGO, IN 2007-2008?	YES .....1 NO 2	2⇨SA4
SA2. HOW MANY CLASSROOMS WERE MADE OF NATURAL OR RUDIMENTARY MATERIAL IN 2007-2008?	NUMBER ..... |___|	
SA3. HOW MANY CLASSROOMS WERE MADE OF HARD MATERIAL IN 2007-2008?	NUMBER ..... |___|	⇨SP1
SA4. WAS THERE ANOTHER SCHOOL OPEN IN THIS VILLAGE IN 2007-2008 THAT IS NO LONGER IN USE TODAY?	YES .....1 NO 2	2⇨SP1
SA5. HOW MANY CLASSROOMS IN THAT SCHOOL WERE MADE OF NATURAL OR RUDIMENTARY MATERIAL IN 2007-2008?	NUMBER ..... |___|	
SA6. HOW MANY CLASSROOMS IN THAT SCHOOL WERE MADE OF HARD MATERIAL IN 2007-2008?	NUMBER ..... |___|	

D: SCHOOL PERSONNEL CHARACTERISTICS		SP
SP1. How many teachers are currently teaching in this school, including Trainees and volunteers?	Teachers .....|___|___|	
SP2. How many of these teachers are female?	Female teachers .....|___|___|	
SP3. How many teachers have an advanced degree?	Teachers with : Bac.....|___|___| Dueeg/Duel/Dues .....|___|___| License .....|___|___| Other (Specify).....|___|___|	
SP4. How many teachers are there in each category?	Number of permanent teachers..|___|___| Number of trainees teachers .....|___|___| Number of volunteer teachers .|___|___|	
SP5. How many teachers are there in each rank?	Num of assistant teachers..... |___|___| Num of certified asst. teachers |___|___| Num of certified teachers ..... |___|___| Num of principal teachers ..... |___|___|	
SP6. Now, I would like some information on the teaching experience of these teachers. How many of these teachers have…	Less than 5 years .....|___|___| 5 years but less than 10 years ...|___|___| 10 or more years .....|___|___|	
SP7. How often is a typical teacher absent?	Once per week.....1 2-3 times per month.....2 Once per month.....3 Less than once per month 4	
SP8. How many teachers have received training on the equal treatment of boys and girls in the classroom?	Teachers .....|___|___|	

SCHOOL REGISTER **SAR**

Date of Visit |___|___| / |___|___| / |___|___|___|___|

Complete this roster by recording each student enrolled in the school as identified in the household survey. Be sure that the date on this roster corresponds to the date of the school visit. Only collect data for primary schools but include each grade. The first six columns (SAR1-SAR6) must be filled out before going to the school. SAR8 must be based on interviewer observation. Use the school roster for SAR9-SAR12. Use additional sheets as necessary. The student household ID number (SAR3) is the same as the child ID number for question HL1 in the household survey.

School ID: |___|___|___| Name of school: ____________________

SAR1. Line No.	SAR2. Student household number (HC2)	SAR3. Student household line number (HL1)	SAR4. Student name (HL2)	SAR5. Sex (HL4)	SAR6. Age (HL5)	SAR7. Is student enrolled in school? (HL12) SAR7=2, end	SAR7a. Grade	SAR8. Is student present at school today?	SAR9. During the last three days the school was open, how many times was the student present?	SAR10. How often does the student usually attend school? 1 Always 2 Often 3 Sometimes 4 Rarely 5 Never	SAR11. Number of days the student was absent, per month, since the start of the 2010-2011 school year. Write zero if the student wasn't absent during the month considered.				SAR12. Student present at school on this day 7 days ago (if school wasn't open on that day, use the past 6 or 8 days).
				M F		Y N		Y N	0 1 2 3	1 2 3 4 5	Oct	Nov	Dec	Jan	Y N
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
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				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2
				1 2		1 2		1 2	0 1 2 3	1 2 3 4 5					1 2

APPENDIX 3

REQUEST FOR PROPOSAL FOR DATA COLLECTION

REQUEST FOR PROPOSALS (RFP) FOR DATA COLLECTION FOR THE EVALUATION OF NIGER'S TP PROGRAM TO INCREASE GIRLS' SCHOOL ENROLLMENT

I. INTRODUCTION

A. Background

The Millennium Challenge Corporation (MCC) has funded a three-year Threshold Country Plan to increase girls' educational attainment in Niger via the construction of schools and complementary interventions. USAID was responsible for overseeing implementation of the Plan for MCC and had engaged international and local non-governmental organizations to implement the girls' educational program.

Mathematica Policy Research (MPR), located in Washington DC, United States, has been contracted as an independent evaluator and is conducting a rigorous evaluation of the overall impact of the program. As part of the evaluation, Mathematica requires a local organization to collect reliable, high-quality data from villages affected by the intervention and comparison villages as part of the research design.

Niger's Threshold Program (TP) has established a pilot program in 18 communes in the (Agadez, Diffa, Dosso, Maradi, Tahoua, Tillabéry, and Zinder) regions. Within these communes, 57 villages received a variety of interventions promoting girls' primary school completion rates, including the construction of 'girl-friendly' schools (IMAGINE schools). Other interventions include a societal awareness campaign, training to increase the literacy of mothers, and a mentoring program for girls.

The contract period is expected to begin on August 15, 2010, and may extend, with the option, until April 01, 2011. All deliverables under this contract are expected to be delivered to Mathematica's offices in Washington, DC.

B. Research Strategy and Data Collection

Mathematica has proposed the use of a random assignment (RA) research design to estimate the impact of the package of interventions. The Ministry of Education has randomly assigned 181 "study" villages into either intervention ("treatment") villages or control villages. Fifty seven (57) treatment villages have received some of the interventions mentioned above. The remaining villages (control villages) did not receive any interventions during the study period. The RA design will compare the "treatment" communities to the control communities that were not selected for interventions.

The pilot survey (task 1) is expected to be fielded September 2010, with optional household and school surveys (task 2 & 3) from November to December 2010, and data entry, cleaning, and documentation completed by January 31, 2011. Mathematica seeks a Consultant that will be able to effectively conduct the pilot survey *and* household and school surveys. However, the initial contract will only include the pilot survey, with the possibility, at Mathematica's option, to extend the contract to include the additional tasks.

II. EXPECTED ACTIVITIES

A. Description of Expected Activities

The objective of this RFP is to identify a contractor to implement the household and school-level surveys for the impact evaluation of the IMAGINE school project. The data collection firm will take charge of all aspects of implementing the surveys, and entering and cleaning the data. Mathematica is seeking proposals to carry out the following 3 data collection tasks:

- ***Task 1 - Pilot Surveys in 10 Villages (September 2010)***

Of the 181 villages in the study, the selected data collection firm will conduct pilot household surveys and school surveys in 10 villages (5 treatment and 5 control) identified by Mathematica. The firm will do a quick census of each village to identify which households have school-aged girls. It will then conduct a 40-minute survey on a sample of 30 households that have school-aged children. It will also conduct a survey with all primary schools in the village and all primary schools within 10 kilometers of the village that are attended by children from the village (to a maximum of three schools per village).

- ***Task 2 –Household Survey (November 2010-December 2010)***

The data collection firm will employ a similar procedure as in Task 1, but for all the villages in the study. Please provide two separate budgets, one for 181 villages in 18 communes, and the second for 130 villages in 13 communes. The firm is expected to conduct a quick census in every village and then interview a sample of households with school-aged children. Please assume 40 households per village. The questionnaire will be an updated version of the one employed in Task 1; we anticipate it will take approximately 40 minutes to complete the survey (and definitely no longer than 60 minutes).

- ***Task 3 –School Survey (November 2010-December 2010)***

For each of the villages in the study, the data collection firm will conduct a visit to all schools in the village and all schools attended by village children within 10 kilometers of the village (up to a maximum of 3 schools per village). During each school visit, the data collection firm will conduct a survey with the director of the school (approximately 30 minutes in length) and collect roster data. The roster data will consist of attendance and other data on the day of the visit and a day 30 days prior to the visit for each student identified in the household surveys as attending that school. In particular, the attendance status of children identified in the household survey must by verified by the interviewer on the day of the visit. This information collection is estimated to take approximately 30 minutes. The school visits will occur after the household surveys in Task 2 are complete for that village. Please provide two separate budgets, one for 181 villages in 18 communes, and the second for 130 villages in 13 communes, assuming 40 households per village.

B. Survey Design

The surveys will include the following modules.

1. Household Survey

- Interview Characteristics, including date of interview, name of interviewer, location of household, etc.
- Household Head Characteristics, including age, sex, religion, education, mother tongue, etc.
- Household assets, income
- Education of children and women in the household
- Roster of Children ages 5-12 living in the household, including parents' names, relationship to head, sex, age, education (including current attendance, school, and location of school)
- Education information on children who attended school in current school year, including attendance, age when started school, feeding programs participation, gender differences at school, school choice
- Child labor roster for all children 5-12 including types of work done and for whom
- Math Assessment for all children 5-12
- French assessment for all children 5-12

2. School Survey

- General information on the school, such as name, location, type, etc.
- Characteristics of the school, including
- Human resources (number and qualification of the teachers)
- School performance (number of students, student progression through grades, etc.)
- Physical characteristics of the school
- Instruction and programs offered
- Student attendance records kept by the school on students identified in household surveys
- Attendance status of children identified in the household survey verified by interviewer on day of visit

C. Translate, Test, and Finalize the Survey Instrument

The survey instrument will be developed in English and French by Mathematica. The Consultant will be responsible for translating the instrument into the appropriate local languages.

The Consultant will also be responsible for checking the internal consistency of the instrument and for testing field protocols by conducting the pilot surveys in Task 1. The Consultant will work with Mathematica to select the pilot areas and to develop a testing plan for the instruments and protocols. The Consultant will be responsible for training field staff to conduct the pilot test, as well as entering the data into Excel and transmitting it to Mathematica for review.

The Consultant will then propose changes to the questionnaire as a result of the pilot survey in a brief report to Mathematica. Mathematica will work with the Consultant to assist with any changes to be made. The Consultant will be responsible for making the final changes to the English and French versions of the questionnaires.

D. Recruit and Train Data Collection and Data Entry Staff

The Consultant will recruit data collection and data entry staff if necessary. The ideal interviewer will be proficient in (1) interacting with all kinds of people, (2) building a rapport with respondents, and (3) dealing with quantitative data. Given the complexity of the survey instrument, it is likely that interviewers will, at a minimum, need the equivalent of a primary-level education and a high level of literacy in the language(s) of the instrument. With these criteria in mind, the Consultant will draft job descriptions for all positions to be filled. The survey director and data entry manager also should be fluent in English or French and in at least one major local language. Field supervisors who are fluent in English or French as well as a local language are preferred.

The Consultant will work with Mathematica to prepare for and conduct the training of interviewers. The Consultant will develop and provide interviewers with a training guide that includes an in-depth explanation of the survey questions. Mathematica will review and provide feedback on the training manual and on all other training materials. Data entry clerks also will attend the interviewer training. Training participants will be required to attend all sessions and prove competence through a test administered at the end of training.

E. Develop and Test the Data Entry System

After the survey instrument has been finalized, the Consultant will develop the data entry system and provide a protocol for data entry and cleaning to Mathematica for approval. The Consultant will test the data entry system by entering mock data from surveys filled out by interviewers and fix any problems that are identified. The Consultant will manage training of data entry clerks, manage the double data entry of all questionnaires (and reconcile any differences) and the cleaning of the data. Data should be entered as it is collected, and the Consultant should develop appropriate systems so that the data entry team can provide feedback to the data collection team as problems are identified. The Consultant will send the data electronically to Mathematica for data checks after the first five percent of cases are entered. The Consultant will also be expected to run frequencies on all variables and provide this information to Mathematica in electronic form. Mathematica will conduct random audits of a sample of questionnaires to ensure that the data collected and entered are reliable and accurate. The Contractor is encouraged to propose other data entry methods that contribute to high-quality data.

F. Implement the Survey

During the survey implementation period, the Consultant will submit weekly updates on the number of households contacted, the number of refusals, and the number of completed surveys. To make it easier for the Consultant to report on this information, Mathematica will provide a template in Excel.

Field supervisors will be in charge of ensuring the quality of the collected data. They will review each questionnaire soon after it is completed and ensure interviewers return to respondents if questions are skipped, answers are ambiguous, or other problems with questionnaires are identified. Supervisors will also re-train interviewers or otherwise ameliorate difficulties if systematic problems are found.

After data collection is complete, the Consultant will submit a data collection completion report detailing the data collection process, challenges encountered and remedies used.

G. Enter, Clean and Document Survey Data

The Consultant will be responsible for producing clean data sets.. The Consultant will double-enter the data, compare them, and reconcile any differences. During and after data entry, the Consultant will check the entered data for logical inconsistencies and return to the original questionnaires to resolve them. If inconsistencies found in the original questionnaire data are not caught by the field supervisor while in the field, re-visiting respondents should be considered. If it is not possible to return to the field for re-interviews, missing values should be coded consistently. The Consultant should also ensure that all variables are named and labeled according to specifications provided by Mathematica.

Children identified in the household survey must be linked to school data and attendance information. Children should be provided a unique identifying number to also appear on the school roster.

Once the data are cleaned and labeled, the Consultant will provide a codebook that will include a description of all variables collected. The Consultant will also be responsible for keeping the data files for the duration of the project period for internal control. All data sets and data collected will be the property of Mathematica, and the Consultant will transfer the completed survey questionnaires to Mathematica at the conclusion of the survey.

The Consultant will be responsible for producing descriptive reports of the survey data collected, and data should be provided to Mathematica in SAS, SPSS, or Stata format.

H. Other

During the data collection period, the Consultant will submit weekly updates on progress in the following areas: the implementation plan related to data collection, including obstacles encountered and addressed; numbers of households and villages surveyed; number of refusals; and other information as required. Throughout the course of data collection, the Consultant will be expected to maintain written records of changes made to the survey implementation protocols or instruments; written notification of such changes should be provided to data collection teams and added to the interviewer and/or supervisor training guides. Mathematica will provide the Consultant with templates for the weekly updates.

The Consultant will also escort the MPR team to observe data collection activities and other related activities as requested.

III. DELIVERABLES

Mathematica will provide the data collection firm with a questionnaire for each of the surveys, as well as a list of the 181 (appendix A) study villages and 10 villages chosen for Task 1.

The Consultant will submit all deliverables (Table 1) to Mathematica in English and French. Specifications for each deliverable are described below.

Schedule of deliverables

Task	Due Date	Deliverable
Task 1	August 30, 2010	Training manual (3a)
Task 1	September 30, 2010	Cleaned pretest data set, Surveys (3b, 3c)
Tasks 2 & 3	October 15, 2010	Review training manual (3a)
Tasks 2 & 3	January 31, 2011	Cleaned datasets (HH and School), Surveys (HH and School) (3b, 3c)

If this timeline is not feasible, the Contractor should propose an alternate timeline that completes the project as close to the desired end date as possible.

IV. KEY PERSONNEL

Key personnel include the survey director, field supervisors, and the data entry manager. More than one position may be filled by one person if he/she meets the requirements for more than one position. Bidders should provide curricula vitae for individuals proposed for each position. Provided below are key tasks of these positions and desired qualifications.

A. Survey Director

The survey director will perform the following types of tasks:

- Guide the data collection effort and ensure that it is implemented effectively.
- Oversee technical aspects of the work under the direction of Mathematica, including sampling, interviewer training, data collection, data entry and cleaning, and descriptive report writing.
- Oversee fieldwork through site visits, progress reviews, and review of primary data.
- Maintain communications with Mathematica and other relevant entities, as applicable through regularly scheduled reports and rapidly communicating any problems encountered.
- Manage budgets and expenses.
- Prepare and submit reports according to agreed-upon timelines.
- Ensure that appropriate resources are made available and managed to advance contract objectives.
- Oversee subcontractors and consultants, if any.
- Perform other tasks and responsibilities as requested by Mathematica.

B. Field Supervisor

The field supervisors will perform the following types of tasks:

- Oversee data collection in the field, including assuring proper dispatching of interviewers to the correct survey sites, determining which interviewers will be assigned specific cases, and ensuring cases are completed.
- Conduct quality assurance checks on each completed survey as soon after it is completed as possible, ideally while interviewers are still in the field and could return to respondents if errors require.
- Correct any data collection problems, including re-training interviewers when necessary for systematic problems or changes to protocols or instruments.
- Inform the survey director immediately about any problems encountered.

C. Data Entry Manager

The data entry manager will perform the following types of tasks:

- Oversee the technical aspects of developing and testing the data entry system.
- Recruit and train data entry staff.
- Manage data entry, track progress, and monitor quality.
- Coordinate with the survey director and field supervisors to ensure that timely feedback on field errors in questionnaire completion is provided to interviewers.
- Maintain the pace of data entry, ensure the smooth delivery of questionnaires from the field to data entry staff, and manage scheduling of data entry team labor.
- Other tasks and responsibilities as requested by Mathematica.

V. PROPOSAL SUBMISSION REQUIREMENTS

Bidders should submit to Mathematica a proposal containing two components: technical approach and financial breakdown. The technical component should be no more than 10 single-spaced pages, and it should specify how the Consultant plans to conduct the work. In particular, the Consultant should specify how it plans to collect the household data by describing in detail procedures for identifying eligible households, selecting samples of households to be interviewed, interviewing households, and so on. Each bidder should also include three client references for similar work which Mathematica may contact. Please note, non Nigerien firms must obtain authorizations from the Ministry of Interior, the Ministry of Education as well as collaboration with local audit firms or the University of Niamey.

The financial component should specify the budget in U.S. dollars (USD) for each task described in Sections II and III above. Bidders should submit a budget for the pilot survey as well as two optional budgets: one for 181 villages in 18 communes, and the second for 130 villages in 13 communes, assuming 40 households per village.

Please note that each of the following should appear as separate line items within these budgets:

1. A list of staff by number of hours by **task and by salary**, distinguishing **s**taff members and consultants
2. Travel and per diem (per diem should include lodging and food)
3. Other direct costs (meeting costs, materials, reproduction, communications, and so on) with specific line items describing costs
4. Subcontracts
5. Overhead costs
6. Relevant taxes, if any, that the Consultant is required by law to charge Mathematica. Mathematica assumes that the contract will be for export services that are zero-rate for purposes of charging value added tax (VAT). If the Consultant does not agree with this assumption, please explain.

Categories may be added as necessary within the groups described above.

Note (1) that salaries for all proposed staff will be verified and must not be inflated for purposes of this proposal and (2) payment under the contract will be made in U.S. dollars (USD).

The proposal must be signed by an official authorized to bind the organization and must stipulate that it is predicated on all the terms and conditions of this TOR. The proposal should be submitted electronically to Anca Dumitrescu (adumitrescu@mathematica-mpr.com) no later than 5:00 p.m., Eastern Standard Time (Washington, DC's time zone), August 9, 2010. Questions should be submitted to this same address no later than 5:00 p.m., Eastern Standard Time, July 19, 2010.

VI. SELECTION CRITERIA

The technical component of the proposal will be evaluated in terms of the following criteria:

- Organization's experience conducting similar work: 30 points
- Qualifications of key personnel who will participate in the study: 40 points
- Technical quality of proposed work plan (expected response rates, procedures to ensure accuracy of the data, procedures to ensure timely delivery of output, etc): 30 points

Upon selection, the Consultant will be provided with a fixed price consulting services contract from Mathematica for execution by an authorized representative of the Consultant. Selection of a Consultant will not obligate Mathematica to engage the Consultant until the Consultant has executed Mathematica's consulting services contract.

APPENDIX A

COMMUNES AND NUMBER OF VILLAGES IDENTIFIED TO PARTICIPATE IN THE EVALUATION

Regions	Departments	Communes	Total Villages
Agadez	Arlit	Arlit	10
Diffa	Maîné Soroa	Mainé Soroa	10
Dosso	Dosso	Mokko	10
Maradi	Tessaoua	Tessaoua	10
		Ourafane	12
	Aguié	Aguié	12
		Gazaoua	10
Tahoua	Konni	Alléla	10
		Malbaza	10
	Madaoua	Bangui	10
		Ourno	10
Tillaberi	Filingué	Filingué	10
		Ballayara	10
	Téra	Dargol	7
		Gorouol	10
		Guidiguir	10
Zinder	Magaria	Magaria	10
		Bandé	10
Total			181

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