MEMORANDUM

TO: Sophia van der Bijl

FROM: Matt Sloan and Dan Levy   **DATE:** 3/12/2012
                                                         BRIGHT-13

SUBJECT: BRIGHT II Evaluation Design (revised)

The Burkinabe Response to Improve Girls' Chances to Succeed program (BRIGHT I), was implemented from 2005 to 2008 in 132 rural villages throughout the 10 provinces of Burkina Faso in which girls' enrollment rates were lowest. The program involved constructing primary schools with three classrooms and implementing a set of complementary interventions. The program was found to have positive impacts on both enrollment and test scores. However, throughout the course of the program, policymakers in Burkina Faso voiced concern about whether children would continue to go to school after completing the three grades served by BRIGHT I schools. Given this concern and the demonstrated impacts of the BRIGHT I program, the government of Burkina Faso decided to extend the program, using funding from a compact signed with the Millennium Challenge Corporation (MCC). Under the compact, the BRIGHT II program will provide funding for three additional classrooms in the original 132 villages and for continuation of the complementary interventions provided during BRIGHT I. In this memo, we discuss Mathematica's plan to conduct a rigorous impact evaluation of the BRIGHT II program, including a discussion of the evaluation design, cost analyses, and data collection strategies.

A. EVALUATION DESIGN

We propose a regression discontinuity (RD) design in order to answer the key research questions of interest with regard to the BRIGHT II intervention. This is the same research design that was successfully utilized during the BRIGHT I evaluation.

1. Proposed Design

The BRIGHT II intervention will be implemented in the same 132 villages selected under BRIGHT I. Three additional classrooms for grades four through six will be built in these villages and the complementary activities provided in the BRIGHT I program will continue. The 132 villages were originally selected using a scoring process with a cutoff point. This selection process allowed us to use an RD design to assess the impact of the BRIGHT I program; since BRIGHT II will evaluate impacts in the same villages, the RD design remains the most appropriate conceptual and practical methodology.

For the evaluation of the BRIGHT I program, we performed statistical analyses to verify that the RD design was appropriate for the particular context in Burkina Faso in which BRIGHT was implemented. The main conclusions of these analyses were:

- There were no statistically significant differences in baseline characteristics between the treatment and the comparison groups after making statistical adjustments implied by the RD design.

- Villages above the cutoff score (treatment villages) were about 87 percentage points more likely to receive a BRIGHT school than villages below the cutoff score (comparison villages). This confirms that the eligibility rules were largely followed to decide which villages would receive a BRIGHT school.

- The treatment villages were not significantly more likely than comparison villages to have a school prior to 2005, the year when some villages began constructing temporary schools in anticipation of BRIGHT. This confirms the notion that the treatment and comparison villages were comparable across this key dimension prior to the program's existence.

- We were able to detect small treatment effects that were robust to a variety of alternative specifications and control variables. The standard errors for our main impact estimates in the BRIGHT I evaluation were very small (0.029 on enrollment and 0.023 on attendance). Given the existing data and the small standard errors from the BRIGHT I evaluation, we anticipate being able to detect similarly small treatment effects moving forward, since we are maintaining the same target sample size.

Appendix A presents a short evaluation description, suitable for MCC's website. The description includes evaluation questions, data collection plans, evaluation design timeline, and the names of key members of the evaluation team. Appendix B presents frequently asked questions covering key points about the evaluation, in English and French, that can be distributed to relevant stakeholders and interested parties.

B.   ESTIMATING AND INTERPRETING IMPACTS

Under the RD design, we will estimate the impact of the BRIGHT II program on key outcomes—enrollment, attendance, retention, and test scores—for all students in grades one through six, paying particular attention to outcomes of children in grades 4-6 who are most directly affected by BRIGHT II. We will also attempt to estimate the impact on other outcomes, such as health, though our ability to detect impacts on such indirect outcomes will depend on whether they are large enough to be detected with the existing sample size. The RD design will estimate the treatment effect by comparing the outcomes of treatment villages just above the

cutoff point to the outcomes of comparison villages just below the cutoff point. If the intervention had an effect, we will see a "jump" in village outcomes (such as the enrollment rate for girls) at the point of discontinuity. This design will produce estimates of the difference in outcomes in the treatment villages relative to what they would have been in the absence of the BRIGHT program.

The impacts of the BRIGHT II program are likely to be different for different subgroups. We will estimate impacts on different subgroups using the same RD design described above. Key subgroups to be examined are (1) girls and boys, because the program itself is designed to improve outcomes specifically for girls and eliminate gender biases in the traditional schools; (2) children at different age levels, including comparing key outcomes across children in grades 1-3 with those in grades 4-6; and (3) subgroups related to a range of socio-demographic characteristics, such as assets, that are typically correlated with academic participation of households with different asset levels. In addition, we will compare the impacts from BRIGHT I and BRIGHT II to learn how enrollment in grades 1-3 has changed over time.

The interpretation of the treatment effect depends critically on the current state of school construction in the comparison villages. During the impact evaluation of BRIGHT I, we found that about 60 percent of the comparison villages had non-BRIGHT schools and the number was increasing. If all comparison villages have non-BRIGHT schools by the time BRIGHT II is implemented, the treatment effect will be interpreted as the effect of receiving BRIGHT schools compared to non-BRIGHT schools. Alternatively, if some comparison villages have non-BRIGHT schools and some still have no schools, then the impact is the effect of receiving a BRIGHT school compared to a combination of having non-BRIGHT schools and no schools.

B. COST ANALYSES

In addition to estimating the statistical impact of the BRIGHT II program, we will perform analyses to estimate the overall merit of the BRIGHT II investment. These additional analyses will help provide insight into the sustainability of the program and will produce estimates that allow comparison of the program with similar educational interventions and other social investments.

1. Sustainability of the Program

We will review documents from the implementation agencies and through direct observation to assess the extent to which school construction and various complementary components of the BRIGHT II program have been implemented. This will also inform us on whether the complementary interventions that were originally started during the BRIGHT I implementation have been sustained through the BRIGHT II implementation. We will determine what amenities still exist within the original BRIGHT schools as well as whether they exist within non-BRIGHT

schools. This will provide an inventory of the existing services and infrastructure provided in all schools. Descriptive and qualitative data on implementation will complement our analyses on quantitative impact estimation on key educational outcomes.

2.   Cost-Effectiveness Analysis

Even if the magnitude of the BRIGHT II program's estimated impacts are positive, a cost-effectiveness analysis is needed to assess whether the effects are large on a per-dollar basis. We will estimate the cost-effectiveness of the BRIGHT II program in three steps, similar to our cost-effectiveness analysis for the BRIGHT I program. First, we will estimate the costs associated with providing the program in the BRIGHT villages. Second, we will estimate the impacts for the key outcomes using the RD framework described previously. Third, we will calculate the cost-effectiveness measure by dividing the estimated cost by the estimated impact for the outcome. In the case of enrollment, for example, we will divide the costs by the impact on the number of enrolled children. To get a broad sense of the magnitude of these cost-effectiveness estimates, we will compare them to cost-effectiveness estimates of other education interventions in the literature.

To estimate costs associated with BRIGHT II, we have recommended that BERD, the local data collector selected by the Millennium Challenge Account–Burkina Faso (MCA-BF), hire an independent infrastructure consultant to visit BRIGHT and non-BRIGHT schools in order to estimate construction costs, maintenance requirements, and total lifespan of the schools. Non-infrastructure costs, such as teachers' salaries, books, and take-home rations, will be estimated using sale prices collected from suppliers. All costs will be depreciated according to each component's expected lifespan. We will use the school surveys to estimate quantity present for these items. We will calculate the incremental costs of the BRIGHT II program by taking the difference in costs between BRIGHT and non-BRIGHT schools. If all comparison villages have non-BRIGHT schools, calculating cost-effectiveness is straightforward because the treatment effect will directly measure the difference between BRIGHT and non-BRIGHT schools. If some villages have non-BRIGHT schools and some have no schools, disentangling treatment effects will require additional analyses.

3.   Cost-Benefit Analysis

Calculations of cost-effectiveness do not take into account potential benefits other than increased educational outcomes; they provide no information about whether or not the monetary benefits of these estimates might outweigh the costs. That information is provided through a cost-benefit analysis, where the potential benefits of the BRIGHT II program are compared in monetary terms to the costs of the program. We will estimate the costs associated with providing the program in the BRIGHT villages, using the same cost estimates we used to estimate cost-effectiveness. Next, we will estimate the lifetime discounted monetary benefits of the program.

This will be done by monetizing the benefits of the program over the lifetime of the beneficiaries and discounting the estimate so it is comparable to the costs. Third, we will obtain the cost-benefit measure by subtracting the estimated costs from the estimated monetary benefits.

Impacts of the intervention include both short-term benefits, which we will most likely observe during the household surveys, and long-term benefits, which will need to be estimated because they are realized during later phases of the lives of beneficiaries. In the short-term, given that BRIGHT is targeted to very young children, we do not think it is realistic to expect to observe impacts on economic well-being that would be large enough to be detected by the evaluation. If short-term changes to economic well-being were present, however, they could be measured through observing changes in household income or household consumption patterns. Collecting data on household income would theoretically be easier, but this approach has two main shortcomings. The first is that we do not expect BRIGHT to have a positive impact on household income in the short-run and, if anything, the impact may be negative impact due to the displacement of children from the field to schools. The second reason is that measuring income reliably in this context would be quite difficult. The majority of households in our sample rely on subsistence agriculture, which does not lend itself well to accurate and reliable income measurement. Accurately measuring short-term consumption patterns is also problematic, as it would require adding a very substantial module that would lengthen interview time to a point that would compromise the quality of the data. Furthermore, differences in the consumption behavior of households may make this comparison unreliable, as household savings rates may differ in treatment and control villages. Given all of these measurement limitations, we chose to ask a short list of consumption questions on the household survey to see if consumption patterns changed. We will collect data on the number of assets households own (e.g. radio, mobile telephone, cattle, etc.), and whether members of the household have consumed a number of luxury foods (e.g. rice, bread, meat, market beer) and non-luxury foods (e.g. sorghum, millet, home-brewed beer) in the last two weeks.

Beyond short-term economic impacts, monetizing the individual benefit streams of this intervention is an involved process. The project potentially has a broad range of impacts on various elements of families' lives, including the direct effects on educational outcomes but also ancillary effects on health, long-term income, and other outcomes. Valuing these individual streams requires investigating the unique literatures relating to the valuation of each of the endpoints. For example, there is a relatively large literature on the returns to additional years of education (for example, Duflo 2001) and changes in morbidity and mortality risk (for example, Aldy and Viscusi 2007). Conducting the proposed cost-benefit analysis will require us to explore each literature, assessing whether or not the existing results are sufficient to credibly monetize each individual outcome, and then perform the actual calculations. Given the large number of outcomes that are under consideration, we decided to adopt the strategy of first determining

which outcomes are affected by the intervention so that we can narrow our exploration of the individual valuation literatures based on the outcomes that matter for the proposed analysis. We will then perform a thorough literature review within the context of the developing world, and specifically Burkina Faso, to identify studies that inform our selections.[1] In each case, however, we have chosen to use standard outcome measures to ensure consistence with the larger development economics literature.

4.   Economic Rate of Return (ERR)

The cost-benefit analysis of the BRIGHT II program can be used to calculate the economic rate of return (ERR) of the program. The ERR estimate represents a summary statistic that reflects the economic merits of a proposed investment. Conceptually, it is the discount rate at which benefits exactly equal costs of a proposed intervention program. The higher the value of the benefits relative to costs, the higher the ERR. We will estimate the ERR of the BRIGHT II program based on our estimates of program costs and benefits.[2] The point of this exercise is to move one step beyond the cost-benefit analysis when benefits net of costs are positive, and evaluate whether a beneficial and cost-effective program is a good investment overall. In the case of BRIGHT, the ERR analysis will provide information that will allow us to compare the investment in the BRIGHT program with other investment opportunities that the U.S. government and other donors could make in other sectors within Burkina Faso as well as in other countries.

The descriptions in sections 2-4 above indicate our plans to conduct rigorous and credible analyses of cost effectiveness, cost benefit, and economic rates of return. These plans rely on assumptions about availability and quality of data that are not directly under our control. In particular, they rely on being able to collect high quality data on several indicators, including costs of schools and its various components, gains in household productivity, and estimates on the returns to schooling. We will be assessing the feasibility of these plans and communicating with you the key challenges that arise.

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[1] We know of at least one study that estimated returns to schooling for both women and men, and for public and private sector jobs, using two rounds of the Priority Survey, a nationally representative survey (Kazianga 2004).

[2] The estimation procedures for costs and benefits described above is consistent with MCC's Guideline for Economic Analysis (http://www.mcc.gov/mcc/bm.doc/guidance-economicandbeneficiaryanalysis.pdf).

C. DATA COLLECTION PLAN

We will perform data collection for BRIGHT II using the same methods that were employed to evaluate BRIGHT I. As a continuation of BRIGHT I, the BRIGHT II project was implemented in 132 of the 293 villages that applied for a BRIGHT school. With technical assistance from Mathematica, BERD will conduct surveys in the 287 villages that were surveyed as part of BRIGHT I in an effort to determine if the BRIGHT communities showed positive outcomes as a result of having a BRIGHT school and its accompanying interventions.[3] Whenever possible, the survey will be conducted with the same children in the same households and schools surveyed during the BRIGHT I evaluation. By visiting the same households and schools, we will be able to better assess the longer-term impacts of the BRIGHT project.

Mathematica will develop two surveys, a household survey and a school survey, to collect all relevant data. The household survey will collect data on a household's assets, duration in the village, whether or not the children in the household attend school, and the household feelings toward girls' education. In addition, as part of the household survey, a basic French and math test will be administered to all household children, regardless of whether or not they are enrolled in school. The school survey will collect data on the characteristics of the school and its personnel, as well as the school's physical structure. The school survey will also collect data on school enrollment and attendance using the roster and observation of the current day.

We have recommended that MCA-BF hire a local building consultant to gathering the data needed to perform the cost-effectiveness and cost-benefit analyses. We will work closely with the selected local building consultant to define the parameters for this portion of data collection. The building consultant will collect data on the building type, as well as expense of construction and maintenance for BRIGHT schools and comparable non-BRIGHT school buildings.

1. Survey Instrumentation and Targeted Outcomes

MCA-BF selected a local data collection firm, BERD, to administer the household and school surveys. Mathematica will provide technical assistance to BERD and oversee all aspects of the data collection process, including design and pilot testing, survey management, and preparation of data sets and documentation.

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[3] The BRIGHT I analysis file excluded four villages. Two were excluded because they were the only villages that applied for the program from their department and thus were not eligible for this type of analysis. The other two villages were excluded because no data were reported for them. Therefore, the BRIGHT II analysis will also rely on date from 287 villages.

- *Designing and piloting survey tools*. We will use the BRIGHT I household and school surveys as a basis from which to draft the BRIGHT II household and school surveys. These surveys have been designed to measure all key outcomes reliably. In October 2011 we will oversee the pilot testing of the instruments, ensuring that all questions are unambiguous and easy to understand, and looking for problems with skip patterns or response categories. During this phase we will also confirm procedures for administering the survey, and will test the data entry system. In addition, we will analyze the pilot data for evidence of ceiling or floor effects and to ensure that ranges of values are reasonable, and will revise the questionnaires, procedures, and data entry system accordingly.

- *Planning and managing the evaluation in the field*. In preparation for the January 2012 field period, we will review the training materials that BERD has developed, including agendas, exercises, and tests that will be used to certify the interviewers' competence. Once the survey has begun, we will hold weekly phone meetings with the local firm to check on progress, discuss any problems, and review any changes to protocols or schedules. We will travel to Burkina Faso during the survey field period to observe the data collection process and offer technical assistance. We will also conduct periodic reviews of data entry files to check for problems with missing or out-of-range information.

- *Preparing clean data sets*. Following data collection, Mathematica will work with BERD to ensure that the data are correctly entered and are complete and clean. This will include a review of all frequencies for out-of-range responses, missing data, or other problems, as well as a comparison between the data and paper copies for a random selection of variables. We will then provide data sets to MCC with documentation that describes the sample design, questionnaire design, data collection procedures, data editing procedures, coding of verbatim and open-ended responses, and response rate and weighting used in the survey. We will also provide a codebook that includes information about each variable. All data sets and documentation will be properly de-identified for use by interested members of the academic and development research community.

2. Next Steps and Timeline

Once the pilot data collection has been completed, we will work closely with BERD to revise the interviewer training materials based on feedback received during the pilot interviewer training. We will also revise and finalize the data collection instruments based on our findings during the pilot survey. We will provide technical assistance during the field period and draft the first-round survey impact evaluation analysis and report.

Table 1: Proposed Data Collection and Analysis Timeline

Date	Evaluation Activities
2011	
October	• Oversee interviewer training and pilot data collection
November–December	• Finalize training materials, based on feedback received during initial training.
	• Finalize data collection instrument based on pilot survey findings.
2012	
March–April	• Conduct nationwide data collection to collect data for BRIGHT II.
May–July	• Draft survey impact evaluation analysis report and presentations
	• Perform cost-benefit and cost-effectiveness calculations
June–July	• Provide data sets, data files, and documentation for public use of the final survey

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FROM: Matt Sloan and Dan Levy
DATE: 3/12/2012
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APPENDIX A

EVALUATION DESCRIPTION

The Burkinabé Response to Improve Girls' Chances to Succeed II program (BRIGHT II) is an extension of its predecessor, BRIGHT I, which sought to improve girls' educational outcomes in the 10 provinces with the lowest girls' enrollment rates in Burkina Faso. Interventions included the construction of 132 three-classroom schools for grades one through three, separate latrines for boys and girls, teacher housing, supplemental food rations, and textbook distribution. The BRIGHT I program was found to have positive impacts on both enrollment and test scores, particularly for girls. To ensure sustained success of this program, BRIGHT II funding was granted to construct three additional classrooms for grades four through six and to continue the complementary activities in the original 132 villages.

As with the BRIGHT I program, BRIGHT II was administered by the United States Agency for International Development (USAID) and implemented by a collaboration of two international nongovernmental organizations (NGOs)—Plan International and Catholic Relief Services—and two Burkinabé NGOs—Tin Tua and the Forum for African Women Educationalists.

A. EVALUATION DESCRIPTION

Millennium Challenge Corporation hired Mathematica Policy Research to conduct an independent evaluation of the BRIGHT II program. The three main research questions of interest are:

- What was the impact of the program on school enrollment, attendance, and retention?

- What was the impact of the program on test scores?

- Are the impacts different for girls than for boys?

Mathematica will compare data collected from the 132 communities served by BRIGHT II (the "treatment group") with that collected from the 161 communities that applied but were not selected for the program (the "comparison group"). Using a statistical technique called regression discontinuity, Mathematica will compare the outcomes of the treatment villages just above the cutoff point to the outcomes of the comparison villages just below the cutoff point. If the intervention had an impact, we will observe a "jump" in outcomes at the point of discontinuity.

Mathematica will perform additional analyses to estimate the overall merit of the BRIGHT investment. By conducting a cost-benefit analysis and a cost-effectiveness analysis and calculating the economic rate of return, Mathematica will be able to answer questions related to the sustainability of the program, and compare the program to interventions and social investments in other sectors. The household survey is designed to capture household-level data rather than community-level data; however, questions have been included to measure head-of-household expectations of educational attainment. These questions ask the head of household what grade level he hopes each child will attain; and what grade level he thinks the child will be capable of achieving in reality. In addition to these two questions, qualitative data is being collected through focus groups and interviews with community members regarding their opinions on education.

B.   DATA COLLECTION

Mathematica has developed two surveys, a household survey and a school survey, to collect relevant data from villages in both the treatment and comparison groups. The household survey will be administered to the same households that were interviewed during BRIGHT I, if possible. Data will be collected on the attendance and educational attainment of school-age children in the household, attitudes towards girls' education, and parental assessment of the extent to which the complementary interventions influenced school enrollment decisions. It will also assess the performance of all household children on basic tests of French and math. The school survey, to be administered to all local schools in the 293 villages, gathers data on school characteristics, personnel, and physical structure, and collects enrollment and attendance records. Data will be gathered by a local data collection firm, with Mathematica providing technical assistance and oversight.

C.   EVALUATION TIMELINE

- October 2011: Interviewer training and pilot data collection conducted

- March–April 2012: Data collection occurs for impact evaluation

- June 2012: Produce initial cost-benefit and cost-effectiveness calculations

- July 2012: Produce impact evaluation analysis and report of 2012 data as well as a data set and documentation for public use

- June–September 2013: Second data collection occurs for impact evaluation

- December 2014: Produce final cost-benefit and cost-effectiveness calculations

- February 2015: Produce final impact evaluation analysis and report; release the data set and documentation for public use.

D. KEY TEAM MEMBERS

Matt Sloan, Dr. Dan Levy, Dr. Harounan Kazianga, Dr. Leigh Linden, Dr. Peter Schochet

APPENDIX B

BRIGHT II FREQUENTLY ASKED QUESTIONS

1. What is the BRIGHT II Program?

The Burkinabé Response to Improve Girls' Chances to Succeed (BRIGHT II) is an extension of the BRIGHT I project. BRIGHT I established schools for girls and boys in grades one to three in 132 rural villages within the 10 provinces in Burkina Faso with the lowest girls' enrollment rates. In addition to constructing schools, BRIGHT I also implemented a host of complementary interventions such as separate latrines for girls and boys, teacher housing, supplemental food rations, and textbook distribution, in an effort to improve children's educational outcomes. A mobilization campaign sought to raise awareness of the benefits of girls' schooling, and mothers' literacy training was also enacted. An impact evaluation of BRIGHT I revealed that the program had a positive impact on both enrollment rates and test scores of boys and girls. In an effort to sustain the gains achieved through BRIGHT I, the BRIGHT II program constructed three additional classrooms for grades four through six in the same 132 rural villages and implemented the aforementioned interventions for children in this upper age range.

2. What is the purpose of the BRIGHT II Evaluation?

The BRIGHT II Evaluation seeks to answer the following research questions: (1) What was the impact of the program on school enrollment, attendance, and retention? (2) What was the impact of the program on test scores? and (3) Were the impacts different for girls than for boys? In addition to answering these research questions, the BRIGHT II evaluation will investigate whether the BRIGHT I program investments have been sustainable, what the cost-effectiveness and cost-benefit of the program are, and the program's economic rate of return (ERR).

3. Who are the key players in the BRIGHT II Program and Evaluation?

The Government of Burkina Faso entered into a compact with the Millennium Challenge Corporation to implement the BRIGHT II program. Many of the same organizations that were a part of BRIGHT I participated in BRIGHT II, including the United States Agency for International Development, Plan International, Catholic Relief Services, Tin Tua, and the Forum for African Women Educationalists. As it did for BRIGHT I, Mathematica Policy Research will again conduct the independent evaluation of the BRIGHT program. A Burkinabé data collection firm, BERD, will conduct data collection, under the support of Mathematica.

4.   How many villages are involved in the BRIGHT II program and evaluation?

The BRIGHT II program was implemented in the same 132 villages that received the BRIGHT I interventions. These 132 villages were originally selected using a scoring process, with eligibility scores based on the villages' potential to improve girls' educational outcomes. A total of 293 villages applied to receive a BRIGHT school; the Burkina Faso Ministry of Basic Education (MEBA) selected the 132 villages with scores that were above a certain cutoff point.

5.   What research design was chosen and why?

A regression discontinuity (RD) research design was chosen to assess the impact of the BRIGHT I program; since the BRIGHT II program will continue in the same 132 villages, the RD design will again be employed. The RD design is the most appropriate design because a well-defined set of criteria was used to select the 132 treatment villages out of the pool of 293 villages, data are available to measure these criteria for all 293 villages, and the MEBA appeared to have largely adhered to the process of selecting villages in each department with the highest application scores. Using the RD design, Mathematica will compare the outcomes of the treatment villages just above the cutoff point to the outcomes of the comparison villages just below the cutoff point. The idea is that if the intervention had an effect, there should be a "jump" in the outcomes at the point of discontinuity.

6.   How will data collection be implemented?

During the evaluation of the BRIGHT I program, field interviewers visited approximately 9,000 households across the 293 rural villages. For the BRIGHT II evaluation, field interviewers will interview the same households that participated in the BRIGHT I evaluation whenever possible. Mathematica designed two surveys that will be used to gather data necessary for measuring key outcomes. One will be administered at the household level to gather data on the attendance and educational attainment of school-age children, opinions on girls' education, and whether any of the complementary interventions influenced school enrollment decisions. Basic tests of French and math will be administered to all household children as well. The other survey will be administered to all local schools in the 293 villages and in neighboring villages that children in our study sample attend. It will collect data on school attributes and enrollment and attendance records. BERD will administer all surveys, with technical oversight from Mathematica staff.

7.   How will the cost analyses be performed?

Cost analyses will estimate the overall merit of the BRIGHT investment and allow for comparison of the program with similar educational interventions and other social investments. Mathematica will assess the sustainability of the program, conduct cost-effectiveness and cost-benefit analyses, and calculate the program's economic rate of return. The sustainability of the program will be determined through a document review from implementation agencies to assess the extent to which school construction and complementary interventions of the BRIGHT II program have been implemented. In addition, several questions regarding sustainability of the hard interventions will be included as part of the cost collection exercise during the final data collection. Building inspectors will be asked to document how well various aspects of the building infrastructure are being maintained. Several questions regarding sustainability of the soft interventions will be included on the household survey as well. Households will be asked whether members are participating in any ongoing soft interventions, such as literacy and feeding programs. The cost-effectiveness analysis will assess whether the effects of the BRIGHT II program are substantial on a per-dollar basis by analyzing the per-unit costs of achieving the measured outcomes. The cost-benefit analysis will compare the potential benefits of the BRIGHT II program in monetary terms to the costs of the program by estimating the lifetime discounted monetary benefits of the program. The estimated costs will be subtracted from the estimated monetary benefits, yielding a measure of whether the overall monetary benefits of the program are larger than its costs. Finally, Mathematica will estimate the ERR using the results of the cost-benefit analysis. An ERR estimate represents the economic merits of a proposed investment, which allows for a comparison of the BRIGHT II program with other investment opportunities in various sectors.

8.   What is the timeline for the BRIGHT II evaluation?

The pilot data collection will take place in October 2011, with full-scale first-round data collection scheduled to begin in January 2012. Following data collection, Mathematica will conduct an in-depth analysis of the first-round data to produce initial cost-benefit and cost-effectiveness calculations as well as the first-round impact evaluation analysis and report. From 2013 through 2015, additional data collection will take place and Mathematica will produce the final cost-benefit and cost-effectiveness calculations as well as a final evaluation impact analysis and report. In addition to producing first-round and final evaluation impact reports, Mathematica will submit clean data sets and data files to MCC for public use.

FOIRE AUX QUESTIONS SUR LE PROGRAMME BRIGHT II

1. Qu'est-ce que le Programme BRIGHT II ?

La Réponse burkinabé pour améliorer les chances de réussite des filles (Burkinabé Response to Improve Girls' Chances to Succeed - BRIGHT II) est une extension du projet BRIGHT I. BRIGHT I a permis la construction d'écoles pour les filles et les garçons du CP au CE2 dans 132 villages ruraux, au sein des 10 provinces du Burkina Faso ayant les plus faibles taux de scolarisation des filles. Outre la construction d'écoles, BRIGHT I a également mis en œuvre une multitude d'interventions complémentaires, telles que des latrines séparées pour les filles et les garçons, des logements pour les professeurs, des rations alimentaires supplémentaires et la distribution de manuels en vue d'améliorer les résultats scolaires des enfants. Une campagne de mobilisation a eu pour but d'accroître la sensibilisation aux avantages de la scolarisation des filles, et les mères ont pu bénéficier de cours d'alphabétisation. Une évaluation de l'impact de BRIGHT I a révélé que le programme avait eu une incidence positive tant sur les taux de scolarisation que sur les résultats des tests des garçons et des filles. En vue de soutenir les avantages acquis grâce à BRIGHT I, le programme BRIGHT II comprenait la construction de trois salles de classe supplémentaires du CE2 au CM2 dans les mêmes 132 villages ruraux. Il a par ailleurs permis de mettre en œuvre les interventions susmentionnées pour les enfants de ces classes d'âge.

2. Quel est l'objectif de l'évaluation BRIGHT II ?

L'évaluation BRIGHT II cherche à répondre aux questions de recherche suivantes : (1) Quel a été l'impact du programme sur la scolarisation, la fréquentation et la rétention ? (2) Quel a été l'impact du programme sur les résultats des tests ? et (3) L'impact a-t-il été différent pour les filles et les garçons ? L'évaluation BRIGHT II ne répondra pas seulement à ces questions de recherche, mais elle permettra également de déterminer si les investissements du programme BRIGHT I ont été durables et d'analyser les rapports coût-efficacité et coût-bénéfice du programme, ainsi que le taux de rentabilité économique (TRE) du programme.

3. Qui sont les acteurs clés du Programme et de l'Évaluation BRIGHT II ?

Une convention a été signée entre le gouvernement du Burkina Faso et le Millennium Challenge Corporation pour la mise en œuvre du programme BRIGHT II. La plupart des organisations partenaires de BRIGHT I ont participé à BRIGHT II, y compris l'Agence américaine pour le développement international, Plan International, Catholic Relief Services, Tin Tua et le Forum des éducatrices africaines. À l'instar du programme BRIGHT I, Mathematica Policy Research mènera à nouveau l'évaluation indépendante du programme BRIGHT. Une

entreprise de collecte de données du Burkina Faso, BERD, se chargera de la collecte de données, sous l'assistance de Mathematica.

4. Combien de villages sont impliqués dans le programme et l'évaluation BRIGHT II ?

Le programme BRIGHT II a été mis en œuvre dans les 132 villages qui ont bénéficié des interventions BRIGHT I. Ces 132 villages ont été sélectionnés à l'origine par le biais d'un processus de notation, avec des scores d'éligibilité basés sur le potentiel des villages à améliorer les résultats scolaires des filles. 293 villages au total ont déposé leur candidature pour bénéficier d'une école BRIGHT ; le ministère de l'Enseignement de base du Burkina Faso (MEBA) a sélectionné les 132 villages dont les scores étaient supérieurs à un certain seuil limite.

5. Quel plan expérimental a été choisi et pourquoi ?

Un plan expérimental de discontinuité de la régression (DR) a été choisi pour évaluer l'impact du programme BRIGHT I. Le programme BRIGHT II étant poursuivi dans ces mêmes 132 villages, l'approche DR sera de nouveau employée. L'approche DR est la plus appropriée, car un ensemble de critères bien définis a été utilisé pour sélectionner les 132 villages en question parmi un pool de 293 villages, des données permettent de mesurer les critères de l'ensemble des 293 villages et le MEBA s'est avéré avoir largement participé au processus de sélection des villages ayant les plus hauts scores dans chaque département. En s'appuyant sur l'approche DR, Mathematica comparera les résultats des villages BRIGHT se situant juste au-dessus du seuil limite avec les résultats des villages NON-BRIGHT se situant juste en deçà du seuil limite. Si l'intervention a eu un impact, les résultats devraient alors présenter un « écart » significatif au point de discontinuité.

6. Comment la collecte des données sera-t-elle mise en œuvre ?

Au cours de l'évaluation du programme BRIGHT I, les évaluateurs de terrain ont rendu visite à environ 9 000 foyers répartis dans les 293 villages ruraux. Pour l'évaluation BRIGHT II, les évaluateurs de terrain interrogeront, dans la mesure du possible, les foyers ayant déjà participé à l'évaluation BRIGHT I. Mathematica a conçu deux enquêtes qui seront utilisées pour rassembler les données nécessaires à la mesure des résultats clés. L'une d'elle sera administrée au niveau du foyer en vue de collecter des données quant à la fréquentation scolaire et au niveau d'instruction des enfants en âge d'aller à l'école, aux opinions sur la scolarisation des filles et à l'impact des interventions complémentaires sur les décisions d'inscription à l'école. Tous les enfants des foyers devront également se soumettre à des tests basiques en français et en mathématiques. L'autre enquête portera sur toutes les écoles locales des 293 villages et villages avoisinants que les enfants de notre échantillon fréquentent. Elle collectera des données sur les

caractéristiques de l'école, les taux d'inscription et les taux de fréquentation. BERD administrera toutes les enquêtes, sous la supervision technique du personnel de Mathematica.

7. Comment les analyses de coûts seront-t-elles réalisées ?

Les analyses de coûts évalueront le bien-fondé de l'investissement BRIGHT et permettront une comparaison du programme avec d'autres interventions pédagogiques similaires et d'autres investissements sociaux. Mathematica évaluera la durabilité du programme, mènera des analyses coût-efficacité et coût-bénéfice et calculera le taux de rentabilité économique du programme. La durabilité du programme sera déterminée par une revue documentaire effectuée par des agences d'exécution, afin d'évaluer dans quelle mesure la construction d'écoles et les interventions complémentaires du programme BRIGHT II ont été mises en œuvre. En outré, plusieurs questions sur la durabilité des interventions dures seront incluses dans le cadre de l'exercice de la collecte de coûts pendant la collecte de données finale. Techniciens en bâtiment seront inviter de décrire la façon dont les divers aspects de l'infrastructure du bâtiment sont maintenues. Plusieurs questions relatives à la durabilité des interventions douces seront incluses dans le questionnaire ménage aussi. Les enquêteurs demanderont si les membres du ménage participent aux interventions comme l'alphabétisation et des programmes d'alimentation. L'analyse coût-efficacité évaluera si les effets du programme BRIGHT II sont conséquents sur une base en dollars à travers l'analyse des coûts unitaires liés à l'atteinte des résultats mesurés. L'analyse coût-bénéfice comparera les bénéfices potentiels du programme BRIGHT II en termes financiers aux coûts du programme, en évaluant les bénéfices monétaires actualisés sur la durée de vie du programme. Les coûts estimés seront retranchés des bénéfices monétaires estimés, afin de mesurer si les bénéfices monétaires globaux du programme sont supérieurs à ses coûts. Enfin, Mathematica évaluera le TRE en utilisant les résultats de l'analyse coût-bénéfice. Une estimation du TRE représente le bien-fondé économique d'un investissement proposé, ce qui permet une comparaison du programme BRIGHT II avec d'autres opportunités d'investissements dans différents secteurs.

8. Quel est le calendrier de l'évaluation BRIGHT II ?

Une collecte de données pilote aura lieu en octobre 2011. La première vague de collecte de données grandeur nature est prévue début janvier 2012. Suite à cela, Mathematica mènera une analyse approfondie des données de la première vague afin de fournir les premiers calculs coût-bénéfice et coût-efficacité ainsi que le rapport et l'analyse d'impact de la première vague d'évaluation. Une collecte de données complémentaire aura lieu entre 2013 et 2015. Mathematica fournira alors les calculs coût-bénéfice et coût-efficacité finaux ainsi qu'une analyse et un rapport d'impact de l'évaluation finale. Outre l'élaboration de rapports d'impact pour la première évaluation et l'évaluation finale, Mathematica remettra des ensembles de données et des fichiers de données nettoyés à MCC pour un usage public.