Curriculum Reform, Teacher Training, and Entrepreneurship Education in Rwanda
Pre-Analysis Plan

Moussa P. Blimpo and Todd Pugatch

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Contents

[*]A single footnote was added in January 2017 to page 7, as noted in the text.

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1 Introduction

This analysis plan describes ex ante the set of analysis to be conducted when the follow up data become available. Because of the timing of the study, the baseline data were collected before this pre-analysis plan was finalized. However, the authors abstained from consulting the data before drafting this document. The plan is mainly based on the theory of change and thus can be considered as the benchmark against which to judge the final analysis and findings.

The plan is organized as follows: Section 2 provides the general description of the study, including its motivation, data sources, sample selection, partners, funding, etc; Section 3 describes the theory of change and the hypotheses to be tested; Section 4 operationalizes the hypotheses and presents the planned empirical analysis; Section 5 presents the power calculations underlying the study design and the planned balance tests. Survey instruments appear in the appendices.

2 Overview of the study

2.1 Motivation and project description

Youth account for 60% of Africa's unemployed, with 72% of employed youth in Rwanda in family firms or self-employed (African Economic Outlook 2016). These outcomes suggest that schools are failing to develop the skills required to enter formal sector jobs or launch and grow small firms. In response, Rwanda is one of ten African countries to reform its secondary curriculum, including the required entrepreneurship course, by incorporating interactive pedagogy and focusing on labor market skills. Curriculum reforms will only improve student outcomes if teachers deliver them effectively, but policymakers lack evidence on effective implementation. This study will examine in-service teacher training, an approach that has shown promise to improve teaching of traditional

curricula (Angrist and Lavy 2001, Glewwe, Hanushek, Humpage and Ravina 2011), and test whether it improves education service delivery and leads to improved student outcomes.

The study began in 2016, the year that Rwanda revised its secondary school curriculum and overhauled the entrepreneurship course. A subset of schools were randomly selected to receive two years of in-service teacher training on the curriculum. A control group received the curriculum without the in-service training, but instead were provided with a standard orientation. The study will measure impact on student academic and life outcomes over three years.

To date, the only experiment of school-based entrepreneurship training in sub-Saharan Africa we know of is being run in Uganda by Educate!, the international NGO partnering with Rwanda's Ministry of Education on this project. Preliminary results of this RCT showed increases in business creation and income among participants (Educate! 2014). Results of the present study will contribute to knowledge on promoting labor market skills among secondary school students through teacher training in line with competency-based curriculum reform. Outcomes will have direct relevance for potential scale-up because entrepreneurship is a required subject and government will implement the intervention. The results will inform government efforts to implement competency-based curriculum reforms in secondary schools across Africa.

The study was funded by the Jameel Poverty Action Lab (J-PAL), via a grant from the Post-Primary Initiative, Fifth Round. The Rwanda office of Innovations for Poverty Action (IPA) administered the data collection.

2.2 Sample selection & interventions

The study population consists of schools from 11 districts in 3 provinces (Eastern, Western, and Northern). The intervention targets the cohort that entered S4 (grade 10) in 2016. The total number of schools eligible were 229. The criteria of eligibility is solely based on the presence of grade S4 in a school offering the entrepreneurship course. We randomly sampled 211 schools within province-district-school type strata, where school type refers to public/non-public. An equal number of schools were assigned to treatment and control within each province-district-school type cell. Cell sizes were determined by the cell's share of enrolled students in the overall sample.

Intervention: We randomly selected 106 schools to receive intensive in-service teacher training on the curriculum over two years. The training includes 10 days of teacher workshops spread throughout each year of the two year intervention, and a one-day administration workshop each year for two years. The training intensity is intended to go beyond standard one-time initial teacher trainings, which have not been effective in altering pedagogy (Lewin and Stuart 2003). The intervention also provides teachers with additional support for curricular implementation, including scripted lesson plans (building on evidence from a similar program for primary teachers in Namibia

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(O'Sullivan 2003)), visits from trainers to assist with curricular components, and structured peer observations of teaching.

Control group: The remaining 105 schools were randomly assigned to the control group. Control schools will participate in the new entrepreneurship curriculum without intensive training. A subset (about 15%) of teachers in control schools will participate in a 5-day general orientation on changes in the broader curriculum,[1] but will not receive training in entrepreneurship content, scripted learning activities or the Skills Lab and Student Business Club pedagogy.

Implementation: The Rwandan Education Board, the implementation arm of the Ministry of Education, will administer the intervention, in conjunction with Educate!, an international NGO. Educate! will train a set of master trainers in each district in the study, who in turn will train entrepreneurship teachers from each treated school.

2.3 Data sources

The main sources of data are the following:

- **Baseline data:** This data will be used for balance checks, improving precision of treatment effect estimates, selected heterogeneity analysis, and the production of a descriptive baseline report.

- **Endline data:** This data will primarily serve the purpose of measuring the outcomes of interest and will be used to assess the overall impacts of the program.

- **Monitoring data:** The monitoring data will be used to check for treatment take-up and compliance. It will also help to interpret program impacts and understand their underlying mechanisms.

- **Administrative data:** We have not gained access to administrative data at this point. However, if we do obtain this data, we will use it for mainly two purposes: i) pre-intervention data will be used to construct their baseline counterpart for heterogeneity analysis and group comparisons, as with the baseline data; and ii) post-intervention outcome data, such as students test scores, will be used to construct the endline counterpart of the outcomes of interest for impact assessment.

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[1] The Rwanda Education Board will lead a five-day general orientation for 4 teachers at every school. One of these teachers will represent the humanities department, which hosts the entrepreneurship curriculum. A typical school has 5 humanities teachers, including 1 entrepreneurship teacher. Given that of the entrepreneurship is newer subject in the schools, we estimate teachers have less than a 1 in 5 chance of being selected for this training.

The questionnaires for the baseline data may be found attached in the appendices. These questionnaires will be adjusted based on experiences from the baseline and used at the endline. The monitoring tool may be found in the annex.

2.4 Timeline

This pre-analysis plan was written in July 2016, after baseline data collection began but before it was digitized or analyzed. The endline survey will not occur until 2018. In between, there will be a monitoring and evaluation process.

3 Hypotheses

3.1 Intervention and Theory of Change

This study will test the impact of intensive teacher training for the reformed entrepreneurship curriculum on A-level students in Rwanda. All Rwandan secondary students are required to enroll in the entrepreneurship course. The revised curriculum will promote student-centered pedagogy in its revised version in three distinct ways: 1) active, hands-on *Scripted Learning Activities*, which correspond to learning objectives, 2) *Skills Lab Pedagogy* that directs teachers to structure class time in a laboratory format, and 3) *Student Business Clubs* where students work in teams to start and run school-based businesses.

Entrepreneurship teachers in treated schools will receive additional support to implement this revised curriculum. This support includes:

1. Intensive training: 10 days of teacher workshops spread throughout each year of the two year intervention, and a one-day administration workshop each year for two years

2. Visits from trainers throughout the school year to assist with implementation of Skills Labs, Skills Day student workshops, and guidance of student Business Clubs

3. Support for structured peer observations of teaching among treatment group teachers

The study will measure both educational and life outcomes for students over a period of three years. Figure 1 outlines the theory of change.

3.2 Outcomes

When referring to particular variables, we reference the student, teacher, and head teacher questionnaires as SQ, TQ, and HQ, respectively. A "B" suffix refers to baseline and "E" to endline.

Figure 1: Theory of Change

Research Question	Program Components		Inputs	Outputs	Outcomes Level 1	Outcomes Level 2	Impact
Will continuous teacher training increase the impact of Competency-Based curriculum reform on 1) Teacher pedagogical practice 2) student academic outcomes, and 3) student life outcomes?	Rwanda Competency-Based Curriculum (Treatment & Control Groups)	Business Clubs	Student Business Clubs pedagogy included in Entrepreneurship curriculum	Students form business clubs at school	Student Learning Outcome: 1. Academic performance on exam 2. Soft Skills	Student Life Outcomes: 1. Income 2. Business and job creation 3. Employment 4. Tertiary Enrollment	Increase in student life outcomes Increase student learning outcomes
			Business Club Competitions	Teacher patrons business clubs	Student Life Outcomes:		Improved teacher pedagogy
		Skills Lab	Skills Lab included in entrepreneurship curriculum	Teachers incorporate Skills Lab	3. Income 4. Entrepreneur-ship/ Work readiness Skills	Pedagogy Outcomes	
	Educate! Exchange (Treatment group only)	School Visits	Trainer visits school to support teachers	Teachers use learner-centered pedagogy	5. Business and job creation	1. Group-based learning	
			Pre-Written Skills Lab lesson plan	Teachers use student portfolios	6. Employment	2. Student portfolios 3. Student presentations	
					Pedagogy Outcomes:		
			Trainer co-teaches w/ teacher student product-making skills training	Business clubs create & market products	7. Group-based learning 8. Student portfolios		
		Continuous Teacher Training	Lesson Demonstration Lesson Study	Teachers attend termly teacher training	9. Student presentations		
			Teacher product-making skills training				

For example, variable BSQ405 refers to baseline student questionnaire item 405.

We make several hypotheses consistent with our theory of change about the effect of the intervention on students and teachers. Because each hypothesis is related to several outcomes, we list the specific outcomes we plan to test under each hypothesis. For each outcome listed, we plan to test the null that the intervention had no effect. Items marked with "†" will be aggregated into an index, with individual components analyzed only if the index is significantly affected by treatment. We will also test for heterogeneity in treatment effects as described below. We reference baseline variables in this list, to be replaced later by the corresponding endline variables.

Student outcomes

We expect the intervention to affect the following student outcomes: employment, income, and business creation. We specify the main indicator for each outcome below. If the treatment coefficient for a particular outcome is statistically significant, we will also analyze whether treatment altered the related outcomes listed in bullet points:

1. employment (BSQ500)

   - source and frequency of earnings (BSQ501-502)

2. income (BSQ503)

3. business creation (BSQ600)

   - business characteristics and earnings (BSQ601-603, BSQ607-608)

Improvements in these student outcomes are expected to operate through a combination of three key intermediate outcomes:

1. The intervention is expected to improve student cognitive skills.

   - standardized test scores (endline or administrative data, if available)
   - grades (endline or administrative data, if available)
   - secondary school completion (endline or administrative data, if available)
   - university enrollment (endline or administrative data, if available)

2. The intervention is expected to improve student non-cognitive skills.

   - aspirations (BSQ1100-1102)
   - locus of control† (BSQ1200-1209)
   - persistence/grit† (BSQ1300-1303)
   - school attendance (administrative data, if available)[2]

3. The intervention is expected to improve student financial and entrepreneurship skills.

   - time preference[3] (BSQ801-803)
   - savings (BSQ804-805)
   - entrepreneurship knowledge (BSQ1000-1005)

Because the endline survey is planned for shortly after secondary school completion, it is possible that these intermediate outcomes could be affected by treatment without corresponding changes in the final outcomes of employment, income, and business creation. We will therefore analyze these intermediate outcomes regardless of results for the main outcomes.

Teacher outcomes
The intervention aims to upgrade the skills and alter the pedagogy of teachers. To test that these goals were met, we will test the following hypotheses. To do so, we will run regressions analogous to (1), with i now indexing the teacher and y representing a teacher outcome of interest.

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[2]Improving attendance is not an explicit goal of the curriculum or training, but could be a by-product of its success. (Comment added January 26, 2017.)

[3]We expect that the intervention will make students more patient.

1. The intervention will improve teacher adherence to the curriculum reform.

    - attendance at training (administrative data)
    - compliance with entrepreneurship curriculum† (BTQ304, BTQ314-315)

2. The intervention will improve teacher skills.

    - use of lesson plans and notes† (BTQ224-225)
    - knowledge of entrepreneurship curriculum content† (BTQ400-405)

3. The intervention will increase teacher motivation.

    - teacher attendance (BHQ620)

4. The intervention will alter teacher pedagogy to be more student-centered.

    - adherence to student-centered teaching style† (BTQ300-302)
        - To measure this, we will construct indicators for whether the teacher considers at least 2 interactive pedagogical tools as among 3 most comfortable forms of teaching (question and answer; group work; games; activities outside classroom; experiment; portfolio). We will then aggregate these into an index.
    - promotion of skills-based learning outcomes (BTQ309)

5. The intervention will alter school administrators' perceptions about the curriculum.

    - adherence to student-centered teaching style† (BHQ614-615)[4]
    - promotion of skills-based learning outcomes† (BHQ606, BHQ608, BHQ610)

4 Estimation methodology

4.1 Main effects - Intent to treat

The main results will come from the regression:

$$y_{isg} = \alpha + \beta T_{sg} + \gamma_g + \epsilon_{isg} \tag{1}$$

where i indexes students; s indexes schools; and g indexes strata. The strata are province-district-school type cells, where school types are public and non-public. In this equation, y is a student or

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[4]See note on measurement of teacher pedagogy for details.

teacher outcome as previously described; T is set to one if the school was assigned to treatment and zero otherwise; γ is a stratum fixed effect; and ϵ is an error term. Because randomization occurred within strata, the strata fixed effects ensure that treatment assignment D is unrelated to the error term. The coefficient of interest is β, which measures the intent to treat (ITT), or the effect of the offer of teacher training T on the mean outcome. We will cluster standard errors by school to account for correlated outcomes among students within a school.

When baseline outcome data are available for a particular outcome, we will estimate (1) with and without the baseline outcome. Inclusion of baseline outcomes should leave the treatment coefficient relatively unchanged but improve their precision.

We consider issues of treatment effect heterogeneity, compliance, attrition, and adjustments for multiple outcomes in subsequent sections.

4.2 Main effects - Treatment effects on the treated

Depending on the policy objectives, policy makers may be interested in the impact of the program where it was properly and effectively implemented. In this case, we will use the randomization variable T as an instrumental variable for the intensity or effectiveness of the implementation. See the section on partial compliance below for additional details.

4.3 Treatment effect heterogeneity

The effect of the program may differ among students or teachers. Testing for such effects is important as it may point to key policy nuances. We will allow treatment effects to vary according to observable characteristics of a student or school by modifying (1) as:

$$y_{isg} = \alpha + \beta_1 T_{sg} + \beta_2 (T_{sg} \times X_{isg}) + \beta_3 X_{isg} + \gamma_g + \epsilon_{isg} \tag{2}$$

where X is some characteristic determined prior to the treatment. A non-zero value of β_2 indicates that the effect of treatment differs according to X. When baseline outcome data are available for a particular outcome, we will estimate (1) with and without the baseline outcome, as with (1).

The characteristics X we plan to test are the following and we motivate them succinctly:

- gender (BSQ301): Gender disparities are important challenges in this context. Education policies in many countries have emphasized these disparities. It is therefore of interest to analyze this dimension.

- household socioeconomic status (SES): For certain outcomes like entrepreneurship, the SES of the family may matters for various mechanisms such as credit constraints.

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- parents' education (BSQ310)
- household assets† (BSQ303-308)
- parents' occupation (BSQ309)

- teacher characteristics

  - gender (BTQ200): teacher's gender may matter for the effect on students, both overall and according to the gender of the student.
  - experience (BTQ206)
  - qualifications and contract status (BTQ203, BTQ205, BTQ216, BHQ207-208): It is important to understand the teaching experience and qualifications of teachers. This may inform teacher staffing policies.

4.4 Mechanisms

We seek to learn not only if the intervention was effective, but also why. Through what mechanisms did results occur? What aspects of the intervention were most or least influential? The mechanisms through which the teacher training intervention might affect student outcomes include the same take-up measures as above. These might also interact with school or student characteristics.

One way to explore mechanisms is through regressions analogous to (2), where X now measures some hypothesized channel through which the intervention succeeds. A non-zero value of β_2 now represents a differential effect of the program according to values of X. For instance, if X measures teacher knowledge, than $\beta_2 > 0$ indicates that students of teachers with higher levels of knowledge increased their outcomes more than other students in the program.

This approach is worthwhile but faces two major drawbacks. First, X is an intermediate outcome of the program, i.e., the program alters y through its effect on X. It is therefore not entirely clear how to interpret a program effect that holds X constant; Angrist and Pischke (2008) refer to this as the problem of "bad control." Second, X is not randomly assigned among teachers. If X is correlated with unobserved teacher attributes that also affect the outcome (such as motivation), then β_2 will be a biased estimate of X's role as a treatment effect mechanism. These caveats should be kept in mind when interpreting results.[5]

Given the centrality of teacher behavior to the mechanisms underlying our theory of change, we plan to run variants of (2) using each teacher outcome listed in Section 3.2 as an X variable, with the main effect of X also included as an explanatory variable.

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[5]An alternate approach would be to instrument for X using program assignment D. Other than teacher attendance at the training (the broadest measure of take-up), however, the intervention likely operates through many channels, rather than a single mechanism X, violating the exclusion restriction.

4.5 Threats

4.5.1 Partial Compliance

Partial compliance with the experiment could come in three forms:

1. *Teacher noncompliance.* Teachers could fail to participate in the training program.

2. *Teacher contamination.* Teachers could switch from treatment to control group, or vice versa, by transferring schools after learning of their group assignment.

3. *Student contamination.* Students could switch from treatment to control group, or vice versa, by transferring schools after learning of their group assignment.

Teacher noncompliance will be monitored via attendance records taken at training. If noncompliance is prevalent, we will supplement estimates of the intent to treat in (1) with an instrumental variables strategy:

$$D_{isg} = \mu + \theta T_{sg} + \gamma_g + \nu_{isg} \tag{3}$$

$$y_{isg} = \alpha + \beta D_{isg} + \gamma_g + \epsilon_{isg} \tag{4}$$

in which D is an indicator for whether student i's teacher attended training and T is an indicator for assignment to the treatment group. Equation (3) is the first stage equation for treatment take-up, while (4) is the second stage, in which T instruments for D. The parameter β measures the local average treatment effect (LATE), or the effect of the program for students whose teachers complied with their experimental assignment. Baseline outcome data will be included where available.[6,7]

Teacher and student contamination will be measured via personnel and enrollment records, when available, to check for transfers among schools. We will also check whether students are exposed to similar entrepreneurship programs outside of school. All analysis will use the student and teacher's initial school assignment, regardless of their eventual school, to avoid bias based on transfers following treatment assignment.

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[6]To interpret the instrumental variables estimate as the LATE, the instrument must satisfy two assumptions. First, the instrument must predict take-up, which can be checked empirically though hypothesis tests on θ in (3). Second, there must be no defiers in the population, which in this case would be a teacher who would refuse training if offered but receive it if denied. The presence of such teachers seems unlikely.

[7]If schools assigned to the control group have zero probability of receiving the treatment, then the instrumental variables estimate can also be interpreted as the average treatment effect on the treated, or ATT (Duflo, Glennerster and Kremer 2007).

4.5.2   Attrition

Attrition occurs if we are unable to collect post-treatment outcome data on students who appear in the baseline sample. We will minimize attrition by attempting to locate students who transfer or drop out of school. Nonetheless, some attrition is likely.

To deal with attrition, we will first measure whether it varies by treatment status:

$$A_{isg} = \alpha + \beta T_{sg} + \gamma_g + \epsilon_{isg} \tag{5}$$

where A is an indicator for being absent in the endline and T is initial treatment assignment. If β is non-zero, then treatment assignment predicts attrition, raising concern that endline treatment and control samples are no longer comparable.

Even if treatment assignment does not predict the level of attrition, the intervention may still have altered the composition of the sample. We will check whether attrition correlates with observable characteristics by checking for balance in baseline student data between students who remained or left the post-treatment sample.

Finally, we will adjust our estimates for attrition bias by constructing Lee (2009) bounds. These bounds assume rank preservation, meaning that if a student's potential outcome is above a certain quantile in the control group distribution, then it would also be above that quantile in the treatment distribution.

4.6   Issues related to multiple outcomes

Because the treatment may affect many outcomes, we must adjust statistical inference for the possibility of spurious results. In some cases listed above, we aggregate related outcomes into an index, as in (Kling, Liebman and Katz 2007). We then analyze components of the index separately only if the treatment significantly affects the index, following the pre-analysis plan in the follow-up to Baird, McIntosh and Ozler (2011).

For other families of outcomes, we will adjust p-values following the procedure in Anderson (2008). We will drop outcomes with limited variation, which we define as binary outcomes for which 90% or more of the sample has the same response.

5   Power Analysis and Baseline Balance

5.1   Power Analysis

Randomization is at the school level, with all students in the relevant grade within each school receiving the same treatment. Figure 2 shows the number of schools (vertical axis) required as a function of the minimum detectable effect (horizontal axis), under different assumptions about the intracluster correlation in outcomes among students within a school. We assume a traditional significance level of 5% and an equal number of treatment and control schools for maximum power for a given sample. We sampled 15 students per school.

Figure 2, panel (a) shows that a sample of 100 schools per arm (i.e., treatment or control) is appropriately powered for reasonable effect sizes and intra-cluster correlations. For instance, 100 schools per arm allows for 80% power to detect an effect of 0.2 s.d., a common effect size for learning outcomes, under an intracluster correlation of 0.2 (blue curve). When the intra-cluster correlation is set conservatively to 0.3, we could detect an effect size of 0.25, which is still common and economically significant. These calculations also include the conservative assumption of an outcome standard deviation of one; this value should fall once we adjust for baseline characteristics. When the outcome is in proportions (variables such as employment status or business creation plans) rather than standardized units (panel [b]), 100 schools per arm allows us to detect a difference of 10 percentage points (intracluster correlation 0.2, control mean 0.3). Again, with even a conservative value of 0.4 for the intracluster correlation (green curve), the minimum effect size is below 0.15 percentage points. While we did not have background data on Rwanda to calibrate the assumptions for the power calculation, we use insights from related work from the neighboring Uganda to support them. For example, the minimum effect size (proportion of 10 percentage points) falls in line with the unadjusted difference in business ownership between treated and control students in Educate!'s Uganda program (Educate! 2014).

5.2   Balance checks

To check for balance on observable characteristics between treatment and control schools, we will compare school-level means of the following variables from the baseline survey. For each variable, we will present unadjusted means and standard errors by treatment status in a table. To formally test for differences in these means, we will estimate equation (1), replacing the outcome with each baseline characteristic listed below. The t statistic and associated p-value on the treatment coefficient in these regression will be our test for equality of means.

We will also look for systematic balance by regressing the treatment indicator on multiple

baseline variables:

$$T_{sg} = \alpha + \mathbf{X}_{isg}\beta + \gamma_g + \epsilon_{isg} \tag{6}$$

where $\mathbf{X}$ is a vector of baseline characteristics and all other notation is as in (1). To test for balance, we will conduct an F-test to test for joint significance of the coefficient vector β. We will run separate versions of (6) in which $\mathbf{X}$ consists of student, teacher, or school-level characteristics, as listed below. We will also estimate an omnibus version with all baseline characteristics listed.

The baseline variables to be included in these balance tests are:

1. Student characteristics

   - gender (BSQ301)
   - household assets (mean of all items in BSQ306a-BSQ306g)
   - mother's education (BSQ310)
   - repeating S4 (BSQ402)
   - S3 exam aggregate score (BSQ404)
   - employed during school holiday (BSQ700)
   - understands interest (BSQ803)
   - has savings (BSQ804)
   - can calculate business profit (BSQ1002)
   - wants to enroll in post-secondary schooling (BSQ1100)
   - plans to start a business (BSQ1102)
   - grit index (BSQ1300-BSQ1303)

2. Teacher characteristics

   - gender (BTQ200)
   - age (BTQ201)
   - qualified (BTQ202)
   - showed written entrepreneurship lesson plan (BTQ224)
   - considers at least 2 interactive pedagogical tools as among 3 most comfortable forms of teaching (question and answer; group work; games; activities outside classroom; experiment; portfolio) (BTQ300)

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- can calculate business profit (BTQ402)

- knows definition of business profit (BTQ405)

- holds another job (BTQ600)

3. School characteristics

- public (BHQ108)

- boarding (BHQ109)

- S4 enrollment, male (BHQ209)

- S4 enrollment, female (BHQ209)

- number of teachers, upper secondary (BHQ210)

- teacher absences, past 3 weeks (BHQ213)

- currently has electricity (BHQ216)

- Head Teacher knows definition of Skills Lab (BHQ611)

- considers at least 2 interactive pedagogical tools as among 3 most effective forms of teaching (question and answer; group work; games; activities outside classroom; experiment; portfolio) (BHQ614)

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A   Baseline instruments

A.1   Student survey, baseline

STUDENT QUESTIONNAIRE

Start Time of the Interview	HH : MM 24-hour clock: 2pm=14:00	/_____/_____ /: /_____ /_____ /

1. Identification of the School

100	Province	1. East 2. North 3. West	/_____ /
101	District	1. Bugesera 6. Gicumbi 2. Kayonza 7. Musanze 3. Ngoma 8. Nyabihu 4. Gatsibo 9. Ngororero 5. Rulindo 10. Karongi	/_____/
102	Sector		/_____/
103	Cell		/_____/
104	Village		/_____/
105	Name of the school		/_____/
106	Code of the School		/____ /____ /____ /____ /
107	Group	1. Group 1 (Treatment) 2. Group 2 (Control)	/_____ /
108	Number of the questionnaire		/___ /___ /___ /___ /___ /___ /
109	Code of the enumerator		/_____/
110	Code of the survey supervisor/Team leader		/_____/
111	Code of data entry clerk		/_____/
112	Date	DD/MM/YYYY	/ ____ / ____ / _____ /

2. Student Identification

200	Student's Name	First name Family name	/_____/ /_____/
201	Can you please tell us about your permanent home?	Province	/_____/
		District	/_____/
		Sector	/_____/
		Cell	/_____/
		Village *-99. If Don't know*	/_____/
		Location: 1. Urban 2. Rural	/_____/

		Do you/ does your family rent or own the house? 1. Rent
		                  2. Own
		                  3. Built by Government/Donor
			/_____/

202	Are you a boarding or day student?	1. Boarding 2. Day	/_____ /
203	How far is your home from the school? Answer in *either* kilometers or in	Km or Minutes	/_____/ Km /_____/ Minutes

	minutes.		
204	By which main means of transport do you travel to school? *Choose one*	1. Vehicle (car, bus) 2. Moto, bicycle 3. By foot 4. Staying inside the school (boarding)	/_____/
205	Can you provide phone numbers that we may use to reach you in the future? → *Write -99 if don't know (but they have)* *Write -77 if don't have*	Personal number	/_____/ MTN /_____/ Tigo /_____/ Airtel
		Your mother/guardian Name:_____	/_____/ MTN /_____/ Tigo /_____/ Airtel
		Your father/guardian Name:_____	/_____/ MTN /_____/ Tigo /_____/ Airtel
		Any other contact (e.g. Brother, sister, uncle, best friend)? Name:_____	/_____/ MTN /_____/ Tigo /_____/ Airtel
206	Can you provide an email address we may use to reach you in the future? →*Write -77 if don't have*	1. Personal 2. Any other email address you use	/_____/ /_____/

3. Socioeconomic Background Characteristics			
300	Age		/_____ /_____ /
301	Gender	1. Male 2. Female	/_____ /
302	Do you have parents?	1. Only Father 2. Only Mather 3. Mother and Father 4. No biological parents	/_____/
303	What main material is the floor in your main house?	1. Earth/mud 2. Wood/timber 3. Stone/brick 4. Cement/concrete/tiles 5. Clay -66. Other (specify)	/_____ /

304	What main material is the roof of your main house?	1. Thatch 2. Wood 3. Iron sheets 4. Plastic sheetings 5. Cement/concrete/clay/tiles -66. Other (specify)	/_____/
305	Where does your household mainly get drinking water?	1. Tap (public or personal) 2. Borehole 3. Hand-pump 4. Protected well 5. Protected spring 6. Unprotected spring 7. River/stream/pond/rain/lake -66. Other (specify)	/_____/
306	Do you have any of the following assets in your house?	0. No 1. Yes	a. Radio /_____/ b. Television /_____/ c. Telephone /_____/ d. Refrigerator /_____/ e. Bicycle /_____/ f. Motorcycle /_____/ g. Private car /_____/
307	What is the main energy source for cooking in your household?	1. Wood 2. Charcoal 3. Gas (Biogas) 4. Electricity 5. Kerosene 6. Waste/debris/burning material -66. Other (specify)	/_____/
308	What is the main energy source for lighting in your household?	1. Electricity 2. Generator \3. Lantern 4. Gas Lantern 5. Fireplace 6. Candle 7. Traditional lamp 8. Solar power 9. Batteries (including torches) -66. Other (specify)	/_____/
309	What does your father/mother/guardian's main occupation?	1. Farming 2. Business 3. Petty trading 4. Casual labor 5. Skilled labor (carpenter, tailor, etc) 6. Professional/salaried (lawyer, doctor, accountant, teacher, etc.) -66. Other (specify)	Father/guardian /_____/ Mother/guardian /_____/
310	What is the highest level of education reached by the following people? (Mark years of schooling).	0. No education 1. Primary 2. Secondary 3. Technical 4. University -66. Other (specify) -99. Do not know -77 If don't have	Your father/guardian /_____/ Your mother/guardian /_____/ Your highest educated sibling/any person at home /_____/
311	Does any member of your home own a business? (Parents, brothers, sisters, grandparents, etc).	0. No → skip to Section 4 1. Yes	/_____/

312	If Yes, describe the largest business based on the highest number of employees. *-99 if Don't know*	Describe the largest business (highest number of employees): a. Owner of the business and relationship b. Number of paid employees including the owner c. Area of activity	a. /_____ / /_____/Relationship b. /_____ / c. /_____ /

4. Academic Background & Performance

400	Current class/level, option and stream *-77 If not applicable*	e.g: Class: S4 Option: HEG Stream: A	/_____ / Class /_____ / Option /_____ / Stream
401	What is the name of the entrepreneurship teacher?	Names	/_____ /
402	Are you repeating S4 or is this the first time you are in S4?	1. New to S4 2. Repeated once 3. Repeated twice or more	/_____ /
403	How many times have you repeated a class/level ever since you started school? (Includes primary and secondary levels)	Number of times	/_____ /
404	What was your aggregate mark on your Senior 3 National Exams	Aggregate mark	/_____ /
405	What was your Mathematics mark, on your Senior 3 National Exam? -99 If don't remember	Mark/grade in mathematics	/_____ /

5. Labor Market and Entrepreneurial Outcomes

500	Do you currently earn money? Excluding pocket money.	0. No 1. Yes If No→ Skip to Section 6	/_____ /
501	From what sources?	1. Personal business 2. Employment 3. Both -66. Other source (specify)	/_____ /
502	How often do you earn money?	1. Seasonal 2. Monthly 3. Daily 4. Unpredictable	/_____ /
503	How much money did you personally earn from business and employment combined in the last 2 months?		/_____ / FRW

	6. Business Creation		
600	Do you currently have your own business BACK HOME? *We mean a business that __YOU STARTED__, that __earns money__, and is __located AT YOUR HOME__ where you live). If you're a boarding student, this means where you live during the school holidays). Don't write about projects you've participated in but didn't __START.__*	0. No 1. Yes If Yes → Skip to question 601 If No → Skip to Section 7	/_____ /
	If you have **business back home**, answer the following questions (601-608) about __YOUR MOST PROFITABLE BUSINESS ONLY.__		
601	What type of business is your most profitable business? **Choose one answer only.**	1. Farming/Livestock/Agriculture 2. Art, jewelry or crafts making/selling 3. Food making/food selling business 4. Shop that buys and resells products 5. Salon/hairdresser 6. A small shop 7. Charcoal, brick or tile makers 8. ICT/Computer buying/selling/repair shop 9. Skilled trade (construction, tailoring, carpentry) 10. Self-employment as a domestic worker/doing housework, providing cleaning and/or childcare services (for someone OTHER than your family) -66. Other (specify)	/_____ /
602	How long have you had this business?	Write number of months, If less than 1 month, specify the number of days	/_____/Months /_____/ Days
603	Did you start this business/project as part of a club or a group?	1. Yes, the club / group is: _____ 2. No, this is not a group project	/_____ /
604	Who did you start this business with/who are your business partners? *Choose all that apply*	1. My mother/father/guardian 2. My brother/sister/cousin 3. A club/group: _____ 4. A different family member 5. My friend(s) 6. My school/teacher 7. My church/temple/mosque 8. Other organization: _____ 9. No one -66. Someone else: _____	/_____ / /_____ / /_____ / /_____ / /_____ /
605	What was your starting capital?	Amount FRW	/_____/ FRW
606	How did you get the money or the asset (goat, land bees, etc) to start / run your business? *Choose all that apply*	1. My mother/father/guardian 2. My brother/sister/cousin 3. A club: _____ 4. A different family member 5. My friend(s) 6. My school/teacher 7. My church/temple/mosque 8. Someone else: _____	/_____ / /_____ / /_____ / /_____ /

		9. No one -66. Other organization, (specify):_____	/_____ /
607	Did you earn money from your business? If no → Skip to Section 7	0. No 1. Yes	/_____/
608	How much money did you earn from your business over the last two months?	FRW	/_____/ FRW
609	Do you intend to continue or change your business in the future?	1. I will continue my business 2. I will change my business and start a new one	/____/

7. Employment			
700	When you were on holiday, were you **PAID** to work at **someone else's** business? If Yes → Skip to question 702	0. No 1. Yes	/_____/
701	Were you actively seeking employment during the holiday? → Skip to question 704	0. Yes, was seeking work at someone else's business 1. No, because I was running my own business 2. No, because I wanted to rest 3. No, because I wanted to prepare for the next school term 4. No, because it is difficult to get a job in Rwanda 5. No because I do not have the right skills/capabilities 6. No, because my parents/family would not like it 7. No, because jobs do not pay enough money 8. No, but I, was attempting to start my own business	/_____/
702	During the last holiday, how many days were you paid to work? If you did not work→ Skip to question 704	Number of days	/_____/ days
703	How much did you earn per day?		/_____/ FRW
704	Are you working part-time for pay during the school term?	0. No 1. Yes, different from my job during holidays 2. Yes, the same as my job during holidays	**/_____/**
705	Are you working without pay for a business that generates income for your family or outside of your family?	0. No 1. Yes, for my family's business 2. Yes, for an outside business	/_____/

706	When at home, which of the following activities do you do on a regular basis (at least three times per week)? **Choose the top 3**	1. Cooking 2. Cleaning 3. Studying 4. Washing clothes 5. Caring for the other siblings 6. Getting water 7. Shopping for the family or household 8. Resting/playing 9. All of the above -66. Other (specify)_	/_____/ /_____/ /_____/
707	Do you regularly receive any pocket-money from family, friends or relatives?	0. No 1. Yes	/_____/

8. Entrepreneurship Skills and Personal Finance

800	Have you ever borrowed or attempted to borrow, money from a bank, a friend, family or anyone else in order to take advantage of an economic opportunity?	0. No 1. Yes	/_____/
801	Imagine this happened: suppose someone you fully trust offered you 5,000 FRW today. However, he tells you that you can wait one month and receive 10,000 FRW instead. Which would you prefer?	1. 5,000 FRW today 2. 10,000 one month from now	/_____/
802	What if your choice was between 5,000 FRW today or 20,000 FRW one month from now?	1. 5,000 FRW today 2. 20,000 FRW one month from now	/_____/
803	Suppose you had 10,000 FRW in a savings account and the interest rate was 2% per year. After five years, how much do you think you would have in the account if you left the money to grow?	1. More than 10,200 FRW 2. Exactly 10,200 FRW 3. Less than 10,200 FRW	/_____/
804	Do you have any money saved right now? If no → Skip to Section 9	1. No, I have no savings 2. Yes, hidden in a box/drawer 3. Yes, another person holds it for me 4. Yes, in a group account at a bank 5. Yes, in an individual account at a bank 6. Yes, in a SACCO (Savings and Credit Co-op) 7. Yes, in a telecom company account (MTN mobile money, Tigo cash, Airtel mobile money, etc.) -66. Other (specify)	/_____/
805	How much have you saved?	1. Less than 5,000 FRW 2. 5,000 to 10,000 FRW 3. More than 10,000 FRW	/_____/

9. Youth Skill Development Scale

Do you have any of the following skills? **Tell us how good you are at this skill by circling a number.**

900	Craft making *(jewelry, weaving, beads, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
901	Household product making *(liquid soap, brooms, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
902	Services *(cooking, cleaning, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
903	Agriculture *(planting, intercropping, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
904	Job searching *(CV writing, interviewing, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
905	Sales and marketing *(market research, advertising, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
906	How to raise animals / domestic birds	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
907	Computer / tech skills *(using a word processor, internet, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
908	Financial skills *(bookkeeping, accounting, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/

909	Value addition *(drying fruit, proper packaging, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
910	Management *(recruiting staff, project plans, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
911	Vocational training *(tailoring, carpentry, etc.)*	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/
912	How to start a business/business skills	1. Don't have skill 2. Poor 3. Fair 4. Middle 5. Good 6. Great	/_____/

10. Entrepreneurship Knowledge (Based on the curriculum)

Suppose you are starting a business. Answer the following questions based on what you would do as a business owner.

1000	How would you apply **marketing skills** to your business? *Choose all that apply.*	1. Develop Product Brand 2. Advertise 3. Keeping Accounts 4. Conducting product quality assurance checks 5. Business registration 6. Open bidding process 7. Verbal promotion to potential customers 8. Division of labour	/_____/ /_____/ /_____/ /_____/ /_____/
1001	What should be included in your **business plan**? *Choose all that apply.*	1. Business name 2. Receipts from sales 3. Marketing Plan 4. Profit & Loss Statement 5. Audit	/_____/ /_____/ /_____/ /_____/
1002	Suppose you started selling paper bags at 800 FRW. It costs 600 FRW for the materials to make the bags. You sell 5 paper bags per day. How much profit would your business earn in **1 month (30 days)**?		/_____/ FRW
1003	In the above example from question 1002, how would you be able to increase this monthly profit? *Choose all that apply.*	1. Sell more paper bags daily 2. Increase the price of the paper bags 3. Employ someone make the paper bags for you 4. Use cheaper materials to make the bags	/_____/ /_____/ /_____/ /_____/

1004	Which of the following is **NOT** considered an indicator of business growth? *Choose one.*	1. Increase in sales 2. Increase in profits 3. Increase in liquidity assets 4. Increase in liabilities 5. Increase in market share	/_____/ /_____/ /_____/ /_____/
1005	How do you know a business is **not** profitable? *Choose all that apply.*	1. The cost of making a product is more than the selling price 2. The cost of making a product is less than the selling price 3. Selling less than 50% of your products 4. Selling more than 50% of your products	/_____/ /_____/ /_____/ /_____/

11. Aspirations			
1100	What is the highest level of schooling you plan to complete?	1. Level 10 (S4) 2. Level 11 (S5) 3. Level 12 (S6) 4. TVET 5. Diploma (A1) 6. University (A0) 7. Masters 8. Doctorate	
1101	After school, what occupation would you like to have in your life?	1. Farming 2. Business 3. Petty trading 4. Skilled labor (carpenter, tailor, etc) 5. Professional/salaried (lawyer, doctor, accountant, teacher, etc) -66. Other (specify)	/_____/
1102	Do you plan to start a business in the future?	1. No 2. Yes -99. Not sure/I don't know	/_____/

12. About Your Life

Some things that happen to you happen because your decisions, or maybe what your parents do, or maybe what God does. Sometime things happen just by chance or accident.

Sometimes control is mixed. Imagine you are riding a bicycle on a road. You can control if you are a safe person (you look around you; you avoid busy / dangerous roads) but you cannot control if other people on the road are safe drivers. Maybe you get hurt in a road accident while riding your bicycle but it is not your fault, it was a terrible taxi driver who knocked you down. You only have **a little control in this situation.** You controlled what you could by being a careful rider but you still might get hurt because you cannot control everything.

For each of the following questions, **try to answer by reality, not by faith**. Answer with a number between 1 and 10. Give a high number (like a 9 or 10) if you think you have total control or a low number (like 1 or 2) if you think you have no control and it is someone else or chance that has the control. Give a number like 5 or 6 when you have some control but not complete control.
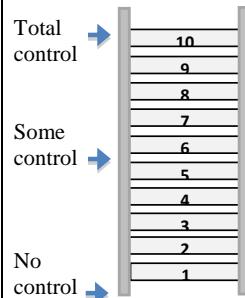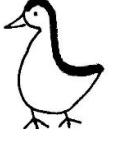
Circle ONE number for each question. How much control do you have over...

Total control → 10, 9, 8, 7
Some control → 6, 5, 4, 3
No control → 2, 1

1200	Whether you go to university or not?	1 2 3 4 5 6 7 8 9 10	
1201	**Why do you feel that way?**	1. Because I might NOT get high enough points 2. Because I WILL get high enough points 3. Because I might NOT have the money 4. Because I WILL have the money 5. Because I don't want to attend 6. Because I will marry or start a family instead -66. Other reason:_____	/_____/
1202	How much housework you do at home?	1 2 3 4 5 6 7 8 9 10	
1203	**Why do you feel that way?**	1. Because my PARENTS decide this 2. Because my parents and I decide TOGETHER 3. Because I decide this ALONE -66. Other reason:_____	/_____/
1204	If you have many or very few children when you eventually get married	1 2 3 4 5 6 7 8 9 10	
1205	**Why do you feel that way?**	1. Because GOD will decide this 2. Because I WILL use family planning 3. Because my spouse will decide 4. Because my spouse and I will decide together -66. Other reason:_____	/_____/
1206	Whether you are elected head boy or girl?	1 2 3 4 5 6 7 8 9 10	
1207	**Why do you feel that way?**	1. Because someone else might be more popular or qualified for the position 2. Because I am popular; many people like me 3. Because I am good at mobilizing people 4. Because I am very qualified for this position -66. Other reason:_____	/_____/
1208	If you are safe when you walk out to the shop?	1 2 3 4 5 6 7 8 9 10	
1209	**Why do you feel that way?**	1. Because there are some dangerous people 2. Because I can protect myself -66. Other reason:_____ _____	/_____/

13. Your Interests			
1300	New ideas and projects sometimes distract me from older projects	1. Not true 2. Not so true 3. Somehow true 4. True 5. Very true	/_____/
1301	It is difficult for me to stay interested in a project that takes a long time to finish	1. Not true 2. Not so true 3. Somehow true 4. True 5. Very true	/_____/
1302	My interests / passions change from year to year	1. Not true 2. Not so true 3. Somehow true 4. True 5. Very true	/_____/
1303	I become interested in new projects every few months	1. Not true 2. Not so true 3. Somehow true 4. True 5. Very true	/_____/

	14. Your Ideas	
1400	You have saved 100,000 RFW and you can use it to start **ANY** project you want! What type of project do you want to start? What you sell?	**Describe here:**
1401	Imagine you lost your key to your dorm at school or your home. How will you get back into your room or home?	1st idea: _____ _____ 2nd idea: _____ _____
1402	Someone started drawing 3 pictures but they did not finish them. Try finishing the drawings to see what you can create! For example: Unfinished Drawing 	What is it? **Now it is a chicken!**
1403	Unfinished Drawing 	What is it?
1404	Unfinished Drawing	What is it?

1405	Unfinished Drawing	What is it?

End Time of the Interview	HH : MM 24-hour clock: 2pm=14:00	/_____/_____ /: /_____ /_____ /

Thank You!

A.2   Teacher survey, baseline

TEACHER SURVEY

Start Time of the Visit	HH: MM 24-hour clock: 2pm=14:00	/_____/_____ /: /_____ /_____ /

1. School Identification		
100	Province	1. East 2. North 3. West	/_____/
101	District	1. Bugesera 6. Gicumbi 2. Kayonza 7. Musanze 3. Ngoma 8. Nyabihu 4. Gatsibo 9. Ngororero 5. Rulindo 10. Karongi	/_____/
102	Sector		/_____/
103	Cell		/_____/
104	Village		/_____/
105	District Location	1. Rural 2. Urban	/_____/
106	Name of the school		/_____/
107	Code of the School		/____ /_____/_____ /_____ /
108	Is this school public or private?	1. Public 2. Private 3. Part- public, part-private	/_____ /
109	Teacher name	First name Family name	/_____/ /_____/
110	Would you mind sharing your phone number with us so that we may follow up with you if need more information?	0. No 1. Yes *(If YES, record all numbers for MTN, Tigo, Airtel and others, if applicable).*	/_____/ MTN /_____/ Tigo /_____/ Airtel /_____/ Other
111	Group	1. Group 1 Treatment 2. Group 2 Control	/_____/
112	Number of the questionnaire		/____ /_____/___ /___ /_____ /_____ /
113	Code of the enumerator		/_____/
114	Code of the survey supervisor		/_____/
115	Code of data entry clerk		/_____/
116	Date of the Interview	DD/MM/YYYY	/_____/_____/_____/
117	Do you teach Entrepreneurship for S4?	0. No → (end of survey? Wrong teacher) 1. Yes	/_____/

			Stream	Option
118	Which stream(s) and options of S4 do you teach	*Stream: A, B, C ...…..* *Options: HEC, MPC...*	/_____/ /_____/ /_____/ /_____/	/_____/ /_____/ /_____/ /_____/
119	Do you teach Entrepreneurship for S5?	0. No 1. Yes	/_____/	
120	Do you teach entrepreneurship for S6?	0. No 1. Yes	/_____/	
121	Do you teach other subjects in the school?	0. No →Skip to Section 2 1. Yes	/_____/	

			S4	S5	S6
122	Which other subjects do you teach and at which levels? *(List all that apply)*	1. Physics 2. Chemistry 3. Maths 4. Biology 5. Physics 6. Geography 7. Economics 8. History 9. English 10. French 11. Kinyarwanda 12. Kiswahili 13. Computer Science 14. Literature -66. Other, specify	/------/ /------/ /------/ /------/ /------/	/--------/ /--------/ /--------/ /--------/ /--------/	/---------/ /---------/ /---------/ /---------/ /---------/

Sections 2-6 should be completed via an interview with the teacher.

	2. Teacher Experience and Training		
200	What is your gender?	1. Male 2. Female	/_____/
201	What is your age? *-88 if refused to answer*	Years	/_____/
202	What is your position at this school?	1. Head Teacher 2. Deputy Head Teacher 3. Teacher *If answered 1 or 2, skip to question 204* *If answered 3, specify type of teacher in the next question*	/_____/
203	What kind of teacher are you? *Receiving training on pedagogy means a teacher did not study education but took a 6-month education training (such as Post graduate diploma in education)*	1. Qualified teacher (you studied Education) 2. Unqualified teacher (you did NOT study Education) but trained on pedagogy 3. Unqualified teacher (you did NOT study Education) but not trained on pedagogy 4. Internee	/_____/
204	Is this position a full time or part time?	1. Full time 2. Part time	/_____/

205	What is your contract status	1. One-year contract 2. Multi-year or indefinite contract -66. Other, specify -99. Don't know	/_____/
206	Which year did you begin formal teaching?	(XXXX)	/____ /_____/____ /____ /
207	Which year did you begin teaching at this school?	(XXXX)	/____ /_____/____ /____ /
208	Up to now, how many different public schools have you taught at?	If 0 → Skip to question 209	/_____/
209	What is the total number of years you have taught in public schools?		/_____/ years
210	Up to now, how many different private schools have you taught at?	If 0 →Skip to question 211	/_____/ years
211	What is the total number of years you have taught in private schools?		/_____/ years
212	How many students are there in your S4 entrepreneurship class?	Both males and females	a. Males /_____/_____/ b. Females /_____/_____/
213	How many students do you teach across all your classes? *Enter -99 if don't know and cannot make a reasonable estimate*		a. Males /_____/_____/ b. Females /_____/_____/
214	Do you teach more than one class at the same time/period/together in the same classroom?	0. No 1. Yes	/_____/
215	What were the reasons for your appointment to this school?	1. Transfer with promotion 2. First Posting 3. Routine transfer 4. Personal Request for transfer 5. Political Inference/pressure 6. Punishment/discipline posting 7. Personally, I applied here	/_____/
216	What is the highest level of education you have completed?	*Mark one* 1. Completed Secondary Education 2. Received A1 Diploma 3. Received bachelors (A0 equivalent) 4. Masters/ Other postgraduate	/_____/
217	What education training did you receive to qualify as a teacher? *If answer = 1 or 2 → Continue to question 217. Otherwise, Skip to question 218*	*Mark one* 1. Completed 2-year training program including Teaching Practice 2. Completed 4-year program in University including Teaching Practice 3. Currently in a Teacher Training College 4. None → Skip to question 221 -66. Other, specify	/_____/

218	When did you complete the education training before you were employed as a teacher?	MM/YYYY	/_____/ _____/
219	When was the last time you attended an in-service teacher-training program?	MM/YYYY *Mark -77 if Never* *-99 don't know*	/_____/ _____/
220	Have you attended any trainings on competence based curriculum (the new curriculum beginning in 2016) specifically?	0. No 1. Yes. If yes, How many trainings?	/_____/ /_____/ trainings
221	Have you attended any trainings on entrepreneurship specifically?	0. No 1. Yes. If yes, How many?	/_____/ /_____/ entrepreneurship trainings
222	Have you observed another teacher conduct a lesson in the last term?	0. No 1. Yes. If yes, How many?	/_____/ /_____/ number of teacher observations
223	Has another teacher observed you teach a lesson in the last term?	0. No 1. Yes If yes, How many?	/_____/
224	Do you have a written entrepreneurship lesson plan? *If yes, ask to see it.*	0. No 1. Yes and did not show it 2. Yes, showed it	/_____/
225	Do you have written lesson notes for today's lesson? If you are not giving a lesson today, do you have written lesson notes for your most recent entrepreneurship lesson?" *If yes, ask to see them.*	0. No 1. Yes, and did not show it 2. Yes, showed it	/_____/
226	Does your school have a staff code of conduct? *If yes, ask for a <u>brief</u> description.*	0. No 1. Yes, did not describe it 2. Yes, described it	/_____/
227	When was the last staff meeting you were expected to attend?	DD/MM/YYYY If cannot remember day, write -99 in day field.	/ _____ / _____ / _____ /
228	Did you attend that meeting?	0. No 1. Yes	/____/
229	What was the main topic of the most recent staff meeting?	1. School Finance 2. Students attendance 3. Students performance 4. Students discipline 5. Teacher attendance / punctuality 6. General administrative issues -66. Other, specify	/_____/
230	How many lessons per week do the S4 students study entrepreneurship?	*Ask students if teacher is absent*	/_____/_____/

		Write a detailed response of the teacher's answer. If possible, write down the answer exactly word-for-word:	
231	How would you describe what the students learned as a result of today's or previous entrepreneurship lesson?		

		3. Pedagogy		
300	What are the three (3) teaching methods or pedagogies you are **most** comfortable using?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games (e.g. energizers, competitions, cards, etc) 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/ _____ / / _____ / / _____ /
301	What are the three (3) teaching methods or pedagogies you are **least** comfortable using?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games (e.g. energizers, competitions, cards, etc) 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/ _____ / / _____ / / _____ /
302	Which of these teaching methods did you use in the **last** entrepreneurship lesson you taught? (Choose all that apply)	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games (e.g. energizers, competitions, cards, etc) 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/ _____ / / _____ / / _____ / / _____ /
303	Do you currently coach any clubs at your school?	0. No → Skip to question 307 1. Yes Which one(s) _____ _____ _____	/ _____ /

304	Do you have a student business or entrepreneurship club at your school?	0. No → Skip to question 307 1. Yes -99. Unsure → Skip to question 307	/_____/
305	Does this business club sell products?	0. No → Skip to question 307 1. Yes -99. Unsure → Skip to question 307	/_____/
306	Does this business club earn money or profits?	0. No 1. Yes -99. Unsure	/_____/
307	Which five (5) teaching methods do you think are most effective at preparing students to pass exams?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/_____/ /_____/ /_____/ /_____/ /_____/
308	Which five (5) teaching methods do you think are **least** effective at preparing students to pass exams?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/_____/ /_____/ /_____/ /_____/ /_____/
309	In your opinion, what is your main goal as a teacher? *(Enumerator, allow teacher to respond freely and codes response.)*	1. Develop student knowledge 2. Develop student skills and attitudes 3. Develop student knowledge, skills and attitudes -66. Other, specify _____	/_____/
310	A competence-based approach to teaching develops students' skills and attitudes in addition to their knowledge. In your opinion, do you use a competence-based approach?	0. No → Skip to question 313 1. Yes -99. Unsure → Skip to question 313	/_____/
311	How often do you use a competence-based approach?	1. Every lesson 2. Once or twice every week 3. Once or twice every month 4. Once or twice every term 5. Once or twice every year 6. Only once or twice ever	/_____/
312	What prepared you to use a competence-based approach?	1. A REB training 2. A training not by REB 3. My Headmaster trained me 4. A Teacher at my school trained me 5. A teacher from another school trained me 6. I researched and read to learn it on my own 7. I developed my own approach -66. Other, specify_____	/_____/

313	If you have not adopted a competence-based approach, what is the main reason?	1. Never been trained on it 2. Never heard of it 3. Don't agree with it 4. Have not had time to start using it 5. Do not have the materials to use it -66. Other, specify_____	/_____/
314	Is there something in the competence-based 2016 entrepreneurship subject called Skills Lab?	1. No → Skip to question 316 2. Yes -99. Don't know → Skip to question 316	/_____/
315	What is the definition of Skills Lab?	1. A time after classes for students to do activities 2. A special lesson during the regular entrepreneurship lesson time for students to complete practical learning activities 3. A laboratory session for science students 4. A time for students to start student business clubs and administer their business activities	/_____/
316	Which three (3) teaching methods do you believe are **most** effective for teaching entrepreneurship subject?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/_____/ /_____/ /_____/
317	Which 3 teaching methods do you believe are **least** effective for teaching entrepreneurship subject?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/_____/ /_____/ /_____/
318	How do you assess students on their skills and attitudes instead of just their knowledge? Choose all that apply.	1. Assess if students can write the most important notes on the topic 2. Assess how much students memorize for exams 3. Assess if students can recall facts taught to them a long time ago 4. Assess if students can remember both facts and figures 5. Assess if students can answer questions that make them use higher order thinking skills (i.e. apply, analyze)	/_____/ /_____/ /_____/ /_____/

319	How can your lesson quality improve? (*Choose the two (2) that you think are most important*)	1. With better materials 2. With more training 3. With more support from my head teacher 4. With more time spent on lesson planning 5. With more feedback and experience sharing with other teachers -66. Other, specify: _____	/_____/ /_____/
320	What is your biggest challenges in trying to teach good lessons? Choose the two (2) most important reasons.	1. Low student capacity 2. Not enough materials 3. Low quality or confusing materials 4. Personal lack of knowledge on subject content 5. Personal lack of knowledge on teaching methods or pedagogy 6. Low teacher's salary/motivation 7. Teacher absences 8. English language -66. Other, specify: _____	/_____/ /_____/
321	What materials do you have for the new Competence-based curriculum? Choose all that apply.	1. Syllabus 2. Teacher's Guide 3. Learner's Guide / Textbook 4. Notes based on the syllabus 5. Lesson plans based on the syllabus 6. Nothing -66. Other, specify: _____	/_____/ /_____/ /_____/ /_____/

4. Entrepreneurship Curriculum		
400	How should students apply **marketing skills** in their school business club? (*Select all that apply*).	1. Develop Product Brand 2. Advertise 3. Keeping Accounts 4. Business registration 5. Verbal promotion to potential customers	/_____/ /_____/ /_____/ /_____/ /_____/
401	What should be included in a student's **business plan**? (*Select all that apply*).	1. Business name 2. Receipts from sales 3. Marketing Plan 4. Profit & Loss Statement 5. Audit	/_____/ /_____/ /_____/ /_____/
402	Let's imagine your students' business club started selling paper bags at 800 FRW per bag and it costs 600 FRW for the materials to make the bags. Imagine your club sell 5 paper bags per day. How much profit would your business earn in **one month (30 days)**?		/_____/ FRW
403	In the above example, how would you be able to increase this monthly profit? *Select all answers that apply.*	1. Sell more paper bags daily 2. Increase the price of the paper bags 3. Employ someone make the paper bags for you 4. Use cheaper materials to make the bags	/_____/ /_____/ /_____/ /_____/

404	Which of the following is **NOT** considered an indicator of business growth? *Choose one.*	1. Increase in sales 2. Increase in profits 3. Increase in liquidity assets 4. Increase in liabilities 5. Increase in market share	/_____/
405	How do you know a business is **not** profitable? *Choose one.*	1. The cost of making a product is more than the selling price 2. The cost of making a product is less than the selling price 3. Less than 50 people buy the product 4. More than 50 people buy the product	/_____/

5. Job Duties

Explain to the teachers that the purpose of the following questions is to gather information for a research study, not to assess the performance of an individual teacher for their personnel records. Reassure them that answers will be anonymized and not individually reported to any official.

500	Did you have to be away from school in the last month? 0. No 1. Yes /_____/ If Yes, please list the number of days you were not at school and the reason? *(Do not include weekends or holidays)*	1. School Closed 2. REB Training 3. Training (not by REB) 4. Events & Functions 5. Official School Business 6. Personal Reasons -66. Other, specify: _____	/_____/ number of days Reasons: /_____/ /_____/ /_____/ /_____/
501	How many hours of school day did you spend outside of school yesterday (for any reason)? Do NOT count the regular break time.	Write number of hours. *If absent yesterday, mark -77.* *Leave blank if teacher **present** whole time/day.*	/_____/_____/ hours
502	On average, how much time did you spend in the last working day in each of the following activities?	1. Teaching Activity 2. Preparing for class 3. Correcting homework 4. Maintaining order and discipline 5. Administrative/paperwork 6. Breaks during school 7. Mid-day meals/tea break 8. Preparation/distribution 9. Extra/Evening classes -66. Other, specify: _____	/_____/ Minutes /_____/ Minutes /_____/ Minutes /_____/ Minutes /_____/ Minutes /_____/ Minutes /_____/ Minutes /_____/ Minutes /_____/ Minutes
503	On average, how many days in a month do you have to substitute for other teachers?		/_____/ days per month

504	Of the days you were away from school since the beginning of the year, how many days were you away due to the following reasons?	1. Duties related to administrative work 2. Preparation and supply of statistics or other information to the Education Department 3. Attending official meetings or trainings 4. Being on duties related to education (e.g. enrolment drive, child census, midday meal, text books distribution, admission related work) 5. Being on official duties not related to education (e.g. election work, committee meetings, community service) 6.Sick leave 7. Personal reasons 8. Maternity leave	/_____/ /_____/ /_____/ /_____/ /_____/ /_____/ /_____/ /_____/ /_____/
505	During last school year, how many times did you perform non-teaching related duties? (Voter registration, disaster management, committee meetings, community service, etc.)	*-99 if do not remember*	/_____/ times
506	How regularly does the average parent come to ask you about their children?	1. Never →Skip to Section 6 2. Yearly 3. A few times a year 4. Monthly 5. Weekly -99. Don't know	/_____/
507	When did the last parent come?	*MM/DD/YYYY*	/_____/ /_____/____/
508	What was the topic of discussion?	1. Discipline 2. Performance/ test 3. Routine information 4. Absenteeism/ sickness -66. Other (specify)_____	/_____/

6. Teacher Income and Job Satisfaction		
600	Aside from teaching, are you engaged in any other occupations to earn extra income?	0. No → Skip to question 603 1. Yes	/_____/
601	How many hours per week do you spend on these other occupations on average? Record average number of hours		/_____/ hours per week
602	What is your total monthly income from these occupations? *Record -88 if respondent refused to answer*	1. Less than 50,000 FRW 2. 50,000-100,000 FRW 3. 100,001-150,000 FRW 4. Greater than 150,000 FRW	/_____/
603	Do you conduct after-class tutoring to some students of this school for pay?	0. No 1. Yes	/_____/
604	Are you aware of any local/district/national level methods of recognizing good teachers with any kind of recognition or award?	0. No → Skip to question 606 1. Yes	/_____/

605	If yes, has anyone in the school ever won such recognition or award for his/her contribution towards education? This could be a formal government award or an informal local organization.	0. No 1. Yes	/_____/
606	How satisfied or dissatisfied are you with your teaching job from the following points of view? Scale: 1=Very dissatisfied 2=Dissatisfied 3=Satisfied 4=Very satisfied	1. Salary/Income 2. Workload 3.Current posting 4. Job security 5. Appreciation from parents/students 6. Social status in the community 7. Work environment 8.Support/guidance from govt./management for becoming a better teacher 9. Overall job satisfaction	/_____/ /_____/ /_____/ /_____/ /_____/ /_____/ /_____/ /_____/ /_____/

124	End Time of the Interview	HH: MM 24-hour clock: 2pm=14:00	/____/____ /: /_____ /____ /

Thank You!

A.3 Head teacher survey, baseline

HEAD TEACHER QUESTIONNAIRE

Interview start time	HH: MM 24-hour clock: 2pm=14:00	/____/____ /: /____ /____ /

	1. School Identification		
100	Province	1. East 2. North 3. West	/_____/
101	District	1. Bugesera 6. Gicumbi 2. Kayonza 7. Musanze 3. Ngoma 8. Nyabihu 4. Gatsibo 9. Ngororero 5. Rulindo 10. Karongi	/_____/
102	Sector		/_____/
103	Cell		/_____/
104	Village		/_____/
105	District Location	1. Rural 2. Urban	
106	Name of the school		/_____/
107	Code of the School		/___/___/___/___/___/___/___/
108	Is this school public or private?	1. Public 2. Private 3. Part public-part private	/_____ /
109	Is this school boarding, day or both?	1. Boarding 2. Day 3. Both	
110	Group *Enumerator please fill, do not ask respondent*	1. Group 1 Treatment 2. Group 2 Control	/_____ /
111	Code of the enumerator *Enumerator please fill, do not ask respondent*		/_____/
112	Code of the survey supervisor *Enumerator please fill, do not ask respondent*		/_____/
113	Code of data entry clerk *Enumerator please fill, do not ask respondent*		/_____/
114	Date	DD/MM/YYYY	/_____/_____/ _____/
115	Year this school was created/built?	YYYY *-99 if don't know*	/_____/
116	How many buildings make up the school compound?	*Count buildings as separate if they have a separate roof.*	/_____ /_____ /

117	What is the condition of the main school building? (The building where the head teacher's office is).	1. Building in good condition 2. Building needs some minor repairs (roof, windows, walls) 3. Building needs rehabilitation 4. No roof, walls are heavily damaged, need complete reconstruction 5. Needs complete reconstruction -66. Other (specify)	/_____ /

2. Head Teacher Identification

200	What is your name?	First name Family name	/_____/ /_____/
201	What is your position? *(We always want to interview the head-teacher. However, if they are not present, we will interview a different person who is in charge at that time)*	1. Head Teacher 2. Deputy Head Teacher 3. Teacher Representative 4. Normal Teacher -66. Other (specify)	/_____/
202	Your gender?	0. Male 1. Female	/_____/
203	Your age?	Years	/_____/
204	For how long has the current head teacher been in charge of this school?	Years *If less than one year, specify.* -.99 Don't know	/_____/
205	For how long have you been in the teaching profession?	Years *If less than one year, specify.*	/_____/
206	What is your highest grade completed in your formal education?	1. Completed Senior 4-6 2. Received A1 Diploma 3. Received Bachelors (A0 equivalent) 4. Masters/ Other postgraduate	/_____/
207	Are the <u>entrepreneurship teachers</u> at your school … Please answer separately (lines a-e) for each individual entrepreneurship teacher at your school. *Enter -99 if Don't know*	1. Qualified teacher (he/she/they studied Education) 2. Unqualified teacher (he/she/they did NOT study Education) but trained on pedagogy 3. Unqualified teacher (he/she/they did NOT study Education) but not trained on pedagogy 4. Internees	a. /_____/ b. /_____/ c. /_____/ d. /_____/ e. /_____/
208	Thinking about the same entrepreneurship teachers you considered above, what is the status of their teaching contract?	1. One-year contract 2. Multi-year or indefinite contract -66. Other, specify -99. Don't know	a. /_____/ b. /_____/ c. /_____/ d. /_____/ e. /_____/

209	How many students are there in this school by level, for the following levels? *If your school does not have all levels, mark -77 in the "Not Applicable" column*	Level	Not Applicable (-77)	Male	Female	Total
		Primary				
		S1				
		S2				
		S3				
		S4				
		S5				
		S6				

210	How many teachers in total are currently working in this school? *Include head teacher, volunteer teachers but not teachers on leave.* *Mark -77 in the column if not applicable*		Male Teachers	Female Teachers
		Primary		
		Lower Secondary		
		Upper Secondary		

If a teacher teaches in both lower and upper secondary, s/he is included in upper secondary. This also applies for head teacher.

211	Now we would like to ask a few more questions on *only those who teach entrepreneurship classes*.

	Name	Gender *1. Male* *2. Female*	Level taught *(S4-S6)*	Stream(s) *A, B, C .....*	Which other subject does [name] teach *See codes below*	For how many year [name] have been teaching in this school *Years*	Is teacher qualified or not? *0. No* *1. Yes*	Is the teacher on full or part time contract? *1. Full time,* *2. Part time*
1								
2								
3								
4								

Subject codes:
1. Physics, 2. Chemistry, 3. Maths, 4. Biology, 5. Geography, 6. Economics, 7. History,
8. English, 9. French, 10. Kinyarwanda, 11. Kiswahili, 12. Computer Science, 13. Literature
-66. Other, specify

212	Do you have records of the teachers' attendance? *If yes, ask to see records.*	0. No → Skip to question 213 1. Yes, did not show records → 213 2. Yes, showed records	/_____/

213	Look at the teacher attendance book and mark the number of teachers who were absent for the last three Tuesdays.		Tuesday 1	Tuesday 2	Tuesday 3
		Number of teachers Absent			

214	Does this school have a library?	0. No 1. Yes	/_____/

215	a. Does the school have grid electricity? b. Does the school have a generator? c. Does the school have solar panels?	0. No 1. Yes If no to all 3 → Skip to Section 3	/_____/ /_____/ /_____/

216	Is there electricity right now?	0. No 1. Yes	/_____/

3. School Finances and Resources

300	Does this school collect any fees directly from the parents (Tuition and fees)?	0. No → Skip to question 302 1. Yes	/_____/
301	How much money will the school collect in fees from parents this academic year, per student?	Include all contributions, not just school fees (association fees, caution fees, medical insurance fees, Parent Committee fees, ID card fees, etc). *-99. If Don't know*	/_____/

302 — How many/much […] did the secondary school receive from […] this academic year?

If the school is combined primary and secondary, and the HT cannot separate the funding, please note that here.

If none, enter 0.

If received but cannot identify amount, enter XX.

If don't know, enter -99.

	Government	NGO/Donor	Parent Teacher Committee/Community
TEXTBOOKS	/_____/	/_____/	/_____/
MONEY	/_____/	/_____/	/_____/

Write YY if cannot separate primary and secondary funding /_____/

4. School Management

Now we would like to ask a few questions about school management. We are interested both in school management and in school record keeping, so in some cases we may ask to see whether you have written records of things. If you do not have them or do not have them readily available, that is fine; just let us know.

400	What is the school's daily schedule from **Monday to Friday**?	i. Opening time: / _____ / _____ /:/ _____ / _____ / am ii. Closing time: / _____ / _____ /:/ _____ / _____ / pm iii. Total Break time including assembly: /_____/ Minutes	
401	How many days this new school term has the school closed <u>apart from</u> public holidays? We want to know about unscheduled school closures.	Write number of days. *-99. If don't know* If 00 or -99 → Skip to question 404	/_____/
402	What is the main reason why the school closed?	1. Strike 2. Rain/Storm (Weather) 3. Lack of resources 4. Training (teachers) -66. Other (specify)_____	/_____/
403	And as a result, was instructional time lost?	1. Yes 2. No, speed up to cover the material 3. No, work extra time during the week 4. No, organize extra session during the weekend	/_____/
404	What was the date of the most recent staff meeting?	DD/MM/YYYY *mark 99/99/9999 if don't know*	/_____/_____/ _____/

405	Do you have any professional development plan for teachers? (*different from the trainings the Rwandan Education Board is hosting for the new curriculum*)? *If yes, ask to describe*	0. No 1. Yes and cannot describe 2. Yes and described -99. If don't know	/_____/
406	How many teaching hours (teacher -students) per year are legally required from a teacher?	*-99. If don't know*	/_____/
407	Do you conduct and have records of classroom observations in this school to ensure that teachers are teaching? *If yes, ask to see records.*	0. No 1. Yes, did not show records 2. Yes, showed records	/_____/
408	How many school-level general tests/evaluations/examinations did you have last year? A school-level exam is an exam required by the school, rather than initiated by a teacher. Include end-term exams and any applicable to the entire school.	If 00 → Skip to question 411	/_____/
409	After the last student examination, did you do anything to analyze the results?	0. No → Skip to question 411 1. Yes	/_____/
410	What did you do to analyze the results?	*Do not prompt. Mark all that apply* 1. Identified the lowest performing students & met with them / their parents 2. Divided the results by subgroups (age, gender, level, subject, etc) and analyzed -66. Other (specify)_____	/_____/ /_____/ /_____/
411	How do you punish bad behavior from the students, if you do?	*Do not prompt. Mark all that apply* 1. Give extra school work 2. Give non-school related work (cleaning the school, fetch water, etc) 3. Deny break 4. Dismiss from class (send home) 5. Speak with parent(s) 6. Give warning that you will expel 7. Do not punish -66. Other (specify)_____ -88. Refused to answer	/_____/ /_____/ /_____/ /_____/ /_____/ /_____/ /_____/ /_____/ /_____/

412	How do you reward good behavior from the students, if you do?	*Do not prompt. Mark all that apply* 1. Public praise 2. Private praise 3. Prizes/incentives 4. Do not reward good behavior -66. Other (specify)_____	/_____/ /_____/
413	Is there currently a need for additional teachers in this school?	0. No→ Skip to question 415 1. Yes	/_____/
414	If yes, how many, in your opinion?		/_____/ teachers
415	What are the three (3) most important factors that should be considered in the selection process for hiring teachers?	1. Qualification (general education) 2. Teachers' training 3. Age 4. Gender 5. Distance from home to school of teacher (teacher's commute) 6. Teaching experience other than being a contract teacher 7. Prior experience as contract teacher in this school 8. Prior experience as contract teacher in any school 9. Long term interest in pursuing education as a career 10. Recommendation from an important person -66. Other (specify)_____ -99. Don't Know/Can't Say	/_____/ /_____/ /_____/
416	How many private and public secondary schools are also in this sector? *Code -77 if there are no private or public secondary schools in the sector. -99 if don't know*	Private secondary schools in this sector Public secondary schools in this sector	/_____/ /_____/
5. Community Participation			
500	Does the school have a Parent Teacher Committee that meets at least once a year?	0. No→Skip to question 600 1. Yes	/_____/
501	How many times do you expect to meet with the Parent Committee to discuss school related issues during this term (Between February 2 and April 1, 2016)?		/_____/_____/
502	What would you say is the biggest challenge to this school in its effort to provide learning to the students?	*Do not prompt* 1. Lack of resources/materials/furniture 2. Lack of appropriate training of teachers 3. Lack of community participation 4. Lack of enthusiasm from the students 5. Lack of enthusiasm from the teachers -66. Other (specify)_____	/_____/

		6. Pedagogy & Competence-Based Curriculum	
600	What are the three (3) teaching methods or pedagogies your teachers are **most** comfortable using?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games (e.g: energizers, competitions, cards, etc) 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment	/_____/ /_____/ /_____/
601	What are the three (3) teaching methods or pedagogies your teachers are **least** comfortable using?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games (e.g: energizers, competitions, cards, etc) 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment	/_____/ /_____/ /_____/
602	Do teachers currently lead/coach any clubs at your school? (We understand that community members sometimes lead different clubs, we want to know about teachers only, leading clubs at your school).	0. No 1. Yes. Which club(s)_____	/_____/
603	Do you have a student business or entrepreneurship club at your school?	0. No → Skip to question 606 1. Yes -99. Don't know/Unsure → Skip to question 606	/_____/
604	Does this business club sell products?	0. No→ Skip to question 606 1. Yes -99. I don't know/Unsure → Skip to question 606	/_____/
605	Does this business club earn money or profits?	0.No 1.Yes -99. I don't know/Unsure	/_____/
606	Now we'd like to ask some questions about how your teachers approach their duties. In your opinion, what is the main goal of your teachers? *Choose only one*	1. Develop student knowledge 2. Develop student skills and attitudes 3. Develop student knowledge, skills and attitude -66. Other	/_____/

|			
607	Which five (5) teaching methods do **you** think are **least** effective at preparing students to pass exams?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games (e.g. energizers, competitions, cards, etc) 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/_____/ /_____/ /_____/ /_____/ /_____/
608	A competence-based approach to teaching develops students' skills and attitudes in addition to their knowledge. How often do your teachers use a competence-based approach? ***Choose only one***	1. Every lesson 2. Once or twice every week 3. Once or twice every month 4. Once or twice every term 5. Once or twice every year 6. Only once or twice ever 7. Never	/_____/
609	How did your teachers learn to use a competence-based approach? ***Choose only one***	1. A REB training 2. A training not by REB 3. I, as Headmaster (school principal), trained them 4. A Teacher from my school trained the others 5. A teacher from another school trained my teachers 6. Teachers researched and read to learn it on their own -66. Other (specify)_____	/_____/
610	Is there something in the competence-based entrepreneurship subject called Skills Lab?	1. No → Skip to question 612 2. Yes -99. Don't know → Skip to question 612	/_____/
611	What is the definition of Skills Lab? ***Choose only one***	1. A time after school for students to do activities 2. A special lesson during the regular entrepreneurship lesson time for students to complete practical learning activities 3. A laboratory session for science students 4. A time for students to start student business clubs and administer their business activities -99. Don't know	/_____/
612	Are there teachers who did not adopt a competence-based approach?	0. No, -→ 614 1. Yes, → 613	/_____/
613	At this school, if your teachers have not adopted a competence-based approach, what is the main reason?	1. Never been trained on it 2. Never heard of it 3. Don't agree with it 4. Have not had time to start using it 5. Do not have the materials to use it -66. Other (specify)_____	/_____/

614	Which three (3) teaching methods do you believe are **most** effective for teaching entrepreneurship subject?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games (e.g. energizers, competitions, cards, etc) 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/_____/ /_____/ /_____/
615	Which three (3) teaching methods do you believe are **least** effective for teaching entrepreneurship subject?	1. Lecture or note taking 2. Question & Answer 3. Quiz or Exam 4. Small Group Work 5. Games (e.g. energizers, competitions, cards, etc) 6. Class Discussion 7. Activities outside of the classroom 8. Reading from a text 9. Practice exercises 10. Research (use of library or computer) 11. Experiment 12. Student Portfolio	/_____/ /_____/ /_____/
616	How do you assess students on their skills and attitudes beyond just their knowledge? *Choose all that apply.*	1.Assess if students can write the most important notes on the topic 2.Assess how much students memorize for exams 3.Assess if students can recall facts taught to them a long time ago 4. Assess if students can remember both facts and figures 5. Assess if students can answer questions that make them use higher order thinking skills (i.e. apply, analyze)	/_____/ /_____/ /_____/ /_____/ /_____/
617	How can the quality of lessons at your school be improved? *Choose up to three (3) that apply*	1. With better materials 2. With more training 3. With more support from government 4. With more effort from teachers 5. With more feedback and experience sharing among teachers (both within schools and between schools) -66. Other (specify)_____	/_____/ /_____/ /_____/
618	What are the **biggest** challenges to having high quality lessons at your school? *Choose all that apply.*	1. Low student capacity 2. Not enough materials 3. Low quality or confusing materials 4. Teacher lack of knowledge on subject content 5. Teacher lack of knowledge on teaching methods or pedagogy 6. Low teacher's salary/motivation 7. Teacher absences 8. English language -66. Other (specify)_____	/_____/ /_____/ /_____/ /_____/ /_____/
619	What materials do you have for the new Competence-based curriculum? Choose all that apply.	1.Syllabus 2. Teacher's Guide 3. Learner's Guide / Textbook 4. Notes based on the syllabus 5. Lesson plans based on the syllabus 6. Nothing -66. Other (specify)_____	/_____/

| 620 | How many entrepreneurship teachers are there in your school?

How many are here today?

Enumerators, we would like to politely verify this information, if possible, by asking the HT to call the entrepreneurship teacher(s) into the office, or brining you to their classroom to introduce you. | /_____/ Entrepreneurship teacher(s)

/_____/ Present teacher(s)

Enumerator, were you able to verify this information?

0. No
1. Yes

/_____/ |

| Interview end time | HH: MM
24-hour clock: 2pm=14:00 | /_____/_____ /: /_____ /_____ / |

Thank You!

Figure 2: Power Analysis
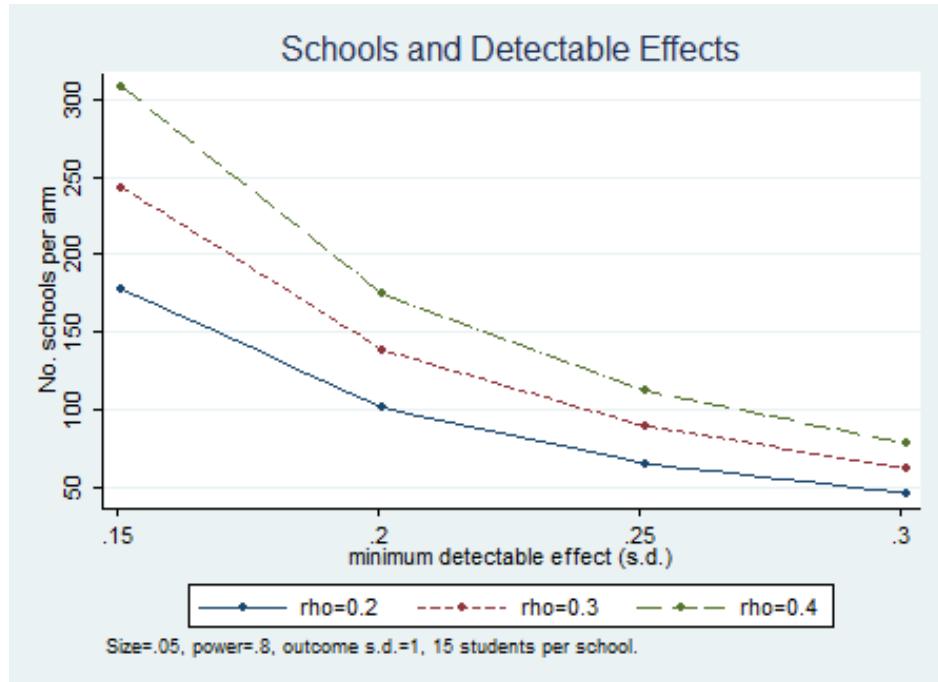
(a) outcome units: standard deviation
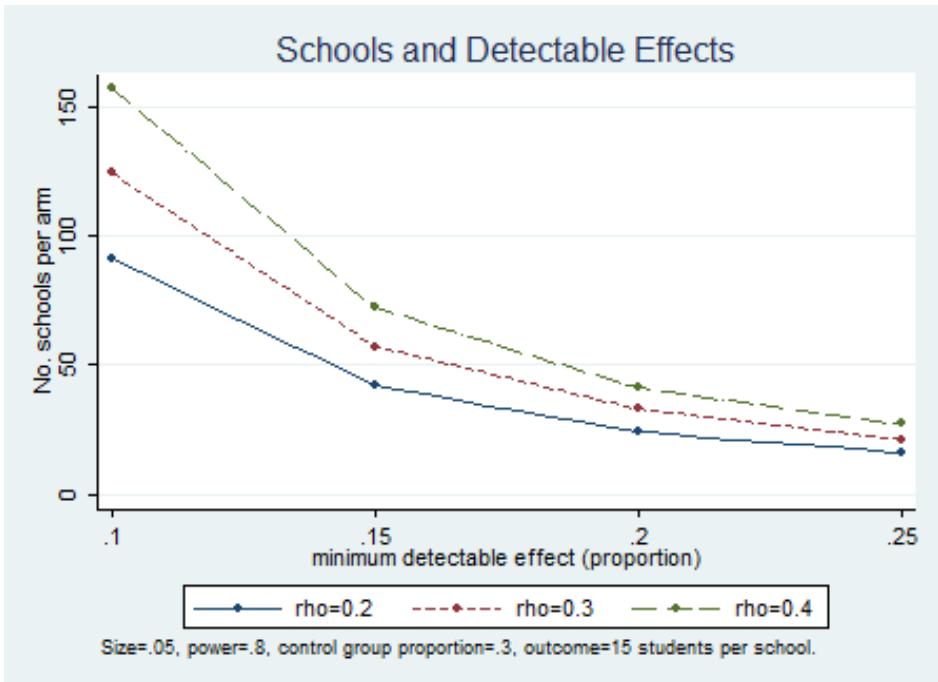
(b) outcome units: proportion