Center for the Study of African Economies
Botswana/Low-Tech Remote Learning/2020

School Background	Descriptions
Normal Academic Calendar	TERM 1 8th Jan - 4th Apr 2019 (63 days) Vacation: 5th Apr - 23rd Apr (13 days) TERM 2 24th Apr - 11th Jul 2019 (53 days) Vacation: 12th Jul - 29th Jul (12 days) TERM 3 30th Jul - 29th Nov 2019 (84 days) Mid-term break 30th Sep- 4th Oct (5 days) Vacation: 2nd Dec - 12th Jan 2020 (31 days)
Dates schools were closed due to COVID	March 23 – June 22
Date schools (expected to) opened. [Weeks students have been out]	13 weeks of closure, plus an additional 2 weeks during subsequent lockdowns
How are schools opening? Virtual, physical, other.	Physical

Project Background	Descriptions
Geographical Coverage	Phone numbers gathered in schools across **4 administrative districts**, but over the course of programming our participating households **expanded to encompass 9 of Botswana's 10 districts**.
Targeted ages/grades	Target demographic included students between standards 3-5 matriculated in Botswana's public education system.
Number of targeted students (Population)	4,550 households, divided equally into the following three groups: ● 1516 control households ● 1516 SMS-only households (treatment 1) ● 1518 SMS+phone households (treatment 2)
Key Activities	Key activities for each household group are as follows: 1. **Control Group.** Students do not receive our digital intervention, but who are assessed at midline and endline 2. **SMS Group.** Students receive an SMS message with maths problems once per week 3. **SMS + Phone Group.** Students receive an SMS message with maths problems once per week and a follow up phone call with guidelines on how to solve maths operations
COVID-19 Activities	See the above program activities.

Key Project Indicators	Project indicators include: ● Differences in student learning outcomes between treatment, control groups ● Parent satisfaction regarding low-tech remote programming
Any adjustments to indicators due to COVID?	We designed the low-tech remote program based on the emerging needs of our endline beneficiaries during prolonged school closures. As lockdown continued, we began to add indicators to flesh out key learnings

Evaluation/Assessment Method	Descriptions
Study Design	Longitudinal Randomized controlled trial (RCT)
Sample Frame	Students in standards 3-5 matriculated in Botswana's public education system.
Number of units evaluated/assessed:	2250 students (random subset of population)
When were data collected?	Data collected over a 4-week period beginning on May 25. We are currently running a follow-up end-line evaluation that has been ongoing from July 13. [Wave 1 at week 4, and Wave 2 at weeks 10-14]
How were data collected?	12-15 minute phone calls with participating households. Participant responses collected using SurveyCTO.
What information was collected?	Information collected included: ● Student learning level of basic arithmetic. ● Parent knowledge of child's learning level ● Time spent on learning activitiesParent perception/opinions of child's education ● Parent perception/opinion of the low-tech remote program
Who collected the data?	64 enumerators recruited, hired and trained by Young 1ove.
How, when, where were enumerators trained?	See below for an explanation of enumerator training: ● **How:** enumerators convene in 'digital training rooms,' or a WhatsApp group chat where ● **When:** once per week, usually 2 days prior to weekly program delivery ● **Where:** remote

What data quality measures were taken?	**Pre-data collection:** ● Randomized control, treatment groups of equivalent population sizes ● Measurement instrument translated into English and Setswana **During data collection:** ● Data cleaned to ensure appropriate power and balance
What are the key challenges	Key challenges include: ● **Engaging parents in the intervention/phone-based assessments.** Parents were sometimes confused on whether our calls were scams. ● **Keeping content clear, simple and short.** Parents and students were often confused when we piloted complex activities or asked multi-faceted assessment questions ● **Calling logistics.** Phone-based programming and assessments can be easy and cost-effective, but there must be a time investment in front-end planning to ensure seamless, rigorous data collection.

Additional Information	Descriptions
Relevant Document Links	Please review the following relevant papers. ● [Practical lessons for phone-based assessments of learning](#) – Angrist, Bergman, Evans, Hares, Jukes, Letsomo ● [Stemming Learning Loss During the Pandemic: A Rapid Randomized Trial of a Low-Tech Intervention in Botswana](#) – Angrist, Bergman, Brewster, Matsheng
Contact details	Noam Angrist – nangrist@young1ove.org Moitshepi Matsheng – mmatsheng@young1ove.org