

Replication Instructions for "[Nudging Parents out the Door: The Impacts of Parental Encouragement on School Choice and Test Scores]"

Overview

This folder contains data and code to replicate the results in the paper. The analysis uses Stata throughout.

Software

Stata (version 19)

Packages required:

```
reghdfe, c:\ado\plus\r\reghdfe.ado
ftools, c:\ado\plus\f\ftools.ado
require, c:\ado\plus\r\require.ado
unique, c:\ado\plus\u\unique.ado
carryforward, c:\ado\plus\c\carryforward.ado
cv_regress, c:\ado\plus\c\cv_regress.ado
grclleg2, c:\ado\plus\g\grclleg2.ado
binscatter, c:\ado\plus\b\binscatter.ado
qreg2, c:\ado\plus\q\qreg2.ado
cfout, c:\ado\plus\c\cfout.ado
estout, c:\ado\plus\e\estout.ado
fre, c:\ado\plus\f\fre.ado
```

Folder Structure

```
Data\
  Raw data\      -- contains all original, anonymized source data used to construct the analysis dataset.
  Files in this folder should never be edited directly.
  Analysis data\ -- cleaned datasets used in analysis

Code\
  Master.do      -- master do-file, run this to replicate all results
  Data creation\ -- scripts to build analysis datasets
  Main analysis\ -- scripts to produce tables and figures

Paper outputs\
  Tables\        -- output tables (.tex)
  Figures\       -- output figures (.png)
```

How to Run

Run the master do-file:

```
open "Code/Master.do" in stata and execute the do file
```

This will execute all scripts in order (see below).

Scripts: Data Creation

- 0_randomization strata controls.do
- 1_create baseline test score file.do
- 2_create analysis file.do
- 3_create survey analysis file.do

Scripts: Analysis code

- balance.do
- effects_dropout_outreach.do
- effects_dropout_factorial.do
- effects_by_term_outreach.do
- effects_by_term_factorial.do
- effects_dropout_outreach_subgrp.do
- effects_by_term_outreach_subgrp.do
- effects_survey_outreach.do
- effects_survey_factorial.do
- forestplot.do
- blattitudes.do
- beliefs.do
- qregs.do
- effects_total_enrollment.do
- effects_dropout_individual.do
- followup_by_term_outreach.do
- followup_by_term_factorial.do
- followup_by_term_individual.do
- effects_by_term_individual.do
- effects_by_term_outreach_ipw.do

Approximate run time: 15 minutes

Main Tables

Table 1: Sample description and covariate balance

run "Code/Main analysis/balance.do"
output in: "Paper outputs/Tables/balance.tex"

Table 2: Effect of outreach on student turnover

run "Code/Main analysis/effects_dropout_outreach.do"
output in: "Paper outputs/Tables/effects_dropout_outreach.tex"

Table 3: Effects of outreach on student turnover by message type

run "Code/Main analysis/effects_dropout_factorial.do"
output in: "Paper outputs/Tables/effects_dropout_factorial.tex"

Table 4: Effects on test scores by term

run "Code/Main analysis/effects_by_term_outreach.do"
output in: "Paper outputs/Tables/effects_by_term_outreach.tex"

Table 5: Effects of outreach on test scores by message type

run "Code/Main analysis/effects_by_term_factorial.do"
output in: "Paper outputs/Tables/effects_by_term_factorial.tex"

Table 6: Effects on student turnover and test scores, sub-groups

Panel A: Student turnover effects

run "Code/Main analysis/effects_dropout_outreach_subgrp.do"

output in: "Paper outputs/Tables/effects_dropout_outreach_subgrp.tex"

Panel B: Test score impacts

run "Code/Main analysis/effects_by_term_outreach_subgrp.do"

output in: "Paper outputs/Tables/effects_by_term_outreach_subgrp.tex"

Table 7: Effects of messages on caregiver behavior

Panel A: Effect of outreach

run "Code/Main analysis/effects_survey_outreach.do"

output in: "Paper outputs/Tables/effects_survey_outreach.tex"

Panel B: Effect of outreach by message type

run "Code/Main analysis/effects_survey_factorial.do"

output in: "Paper outputs/Tables/effects_survey_factorial.tex"

Main Figures

Figure 1: Forest plot of experimental interventions using mobile phones to encourage parents

run "Code/Main analysis/forestplot.do"

output in: "Paper outputs/Figures/forestplot_ICT.png"

Figure 3: Effects on parent-reported educational engagement

run "Code/Main analysis/blattitudes.do"

output in: "Paper outputs/Figures/blattitudes.png"

Figure 4: Relationship between parent-reported percentile rank and observed percentile rank

run "Code/Main analysis/beliefs.do"

output in: "Paper outputs/Figures/beliefs.png"

Figure 6: Quantile effects

run "Code/Main analysis/qregs.do"

output in: "Paper outputs/Figures/qregs.png"

Appendix Tables

Table A1: Effects of message content on aggregate classroom enrollment

run "Code/Main analysis/effects_total_enrollment.do"

output in: "Paper outputs/Tables/effects_total_enrollment.tex"

Table A2: Effects of message content on student turnover

run "Code/Main analysis/effects_dropout_individual.do"

output in: "Paper outputs/Tables/effects_dropout_individual.tex"

Table A3: Effects of outreach on test score follow-up

run "Code/Main analysis/followup_by_term_outreach.do"

output in: "Paper outputs/Tables/followup_by_term_outreach.tex"

Table A4: Effects of outreach on test score follow-up by message type

run "Code/Main analysis/followup_by_term_factorial.do"
output in: "Paper outputs/Tables/followup_by_term_factorial.tex"

Table A5: Effects of message content on test score follow-up

run "Code/Main analysis/followup_by_term_individual.do"
output in: "Paper outputs/Tables/followup_by_term_individual.tex"

Table A6: Effects on test scores by term

run "Code/Main analysis/effects_by_term_individual.do"
output in: "Paper outputs/Tables/effects_by_term_individual.tex"

Table A7: Effects on test scores by term using IPW correction

run "Code/Main analysis/effects_by_term_outreach_ipw.do"
output in: "Paper outputs/Tables/effects_by_term_outreach_ipw.tex"

Data Availability Statement

All education record data was provided and anonymized by Bridge between the summer of 2019 and the summer of 2020. Data can only be used with the express permission of Bridge and NewGlobe. This data cannot be redistributed. I certify that the author(s) of the manuscript have legitimate access to and permission to use the data used in this manuscript.

Data in "sms_lit_review.xlsx" was compiled by the authors from the papers cited in the excel sheet based on drafts available in November 2024. Estimates and study characteristics in the file can be recreated from the individual paper drafts.

Data File	Source	Description
KE_C3_T3_COMBINED_ALL.csv	Bridge/NewGlobe	2018 Term 3 mid- and end-term test scores for class 3 students in NewGlobe schools in Kenya.
KE_C3_T12_HISTORICAL_ALL.csv	Bridge/NewGlobe	2018 Term 1 and term 2 mid- and end-term test scores for class 3 students in NewGlobe schools in Kenya. These exams took place before the experiment and serve as baseline data.
KE_C4_T1_ETE_ALL.csv	Bridge/NewGlobe	2019 Term 1 end-term test scores for class 4 students in NewGlobe schools in Kenya. These are students who started the experiment in class 3 and moved to class 4 after the intervention.
KE_C4_T1_MTE_ALL.csv	Bridge/NewGlobe	2019 Term 1 mid-term test scores for class 4 students in NewGlobe schools in Kenya.
KE_C4_T2_ETE_ALL.csv	Bridge/NewGlobe	2019 Term 2 end-term test scores for class 4 students in NewGlobe schools in Kenya.
KE_C4_T2_MTE_ALL.csv	Bridge/NewGlobe	2019 Term 2 mid-term test scores for class 4 students in NewGlobe schools in Kenya.
KE_C6_T3_COMBINED_ALL.csv	Bridge/NewGlobe	2018 Term 3 mid- and end-term test scores for class 6 students in NewGlobe schools in Kenya.
KE_C6_T12_HISTORICAL_ALL.csv	Bridge/NewGlobe	2018 Term 1 and term 2 mid- and end-term test scores for class 6 students in NewGlobe schools in Kenya. These exams took place before the experiment and serve as baseline data.
KE_C7_T1_ETE_ALL.csv	Bridge/NewGlobe	2019 Term 1 end-term test scores for class 6 students in NewGlobe schools in Kenya. These

		are students who started the experiment in class 6 and moved to class 7 after the intervention.
KE_C7_T1_MTE_ALL.csv	Bridge/NewGlobe	2019 Term 1 mid-term test scores for class 7 students in NewGlobe schools in Kenya.
KE_C7_T2_ETE_ALL.csv	Bridge/NewGlobe	2019 Term 2 end-term test scores for class 7 students in NewGlobe schools in Kenya.
KE_C7_T2_MTE_ALL.csv	Bridge/NewGlobe	2019 Term 2 mid-term test scores for class 7 students in NewGlobe schools in Kenya.
G3_G6_2018 pupils.csv	Bridge/NewGlobe	Administrative data on student withdrawals in 2018 for class 3 and class 6 pupils in NewGlobe schools in Kenya
KE_academy_sms_c3 blinded.dta	Bridge/NewGlobe	School level statistics for class 3 NewGlobe schools in Kenya
KE_academy_sms_c6 blinded.dta	Bridge/NewGlobe	School level statistics for class 6 NewGlobe schools in Kenya
KE SMS Baseline Study_Blinded.csv	Bridge/NewGlobe	2018 baseline survey responses of a sample or parents of class 3 and class 6 students in NewGlobe schools in Kenya
KE SMS Endline Study_Blinded.csv	Bridge/NewGlobe	2018 endline survey responses of a sample or parents of class 3 and class 6 students in NewGlobe schools in Kenya
sms_lit_review.xlsx	Compiled by authors	Estimates from previous studies on the impacts of parental outreach on student performance