CHARITY ENTREPRENEURSHIP

Mass Communication for Education

AUTHOR M. LAUGHLIN

REVIEW M. FAIRLESS

FEBRUARY 2025

RECOMMENDED

Title: Using Mass Communication to Improve Learning Outcomes

Date of Publication: February 2025

Contributions: The primary author for this report was Mitchell Laughlin (Ambitious Impact Research Program Fellow), supported by Morgan Fairless (AIM Research Director).

Ambitious Impact (AIM) exists to increase the number and quality of effective charities improving human and animal well-being worldwide. We strive to achieve this goal through our rigorous research process and our Incubator Program, which connects talented individuals with high-impact ideas.

Our Charity Entrepreneurship Incubation Program provides potential entrepreneurs with two months of cost-covered, intensive training designed by founders for founders, along with ongoing support. Our researchers identify evidence-based, high-impact interventions and guide founders in finding co-founders to launch and scale these ideas.

Note to readers: Our research is designed for AIM decision-makers and Charity Entrepreneurship Incubation Program participants. It aims to identify the best ideas for our programs. Consequently, reports on those not recommended for incubation can often be less polished.

For questions about the content of this research, please contact Morgan Fairless at morgan@charityentrepreneurship.com.

Using Mass Communication to Improve Learning Outcomes / Summary

Description

A nonprofit organization that leverages mass-communication strategies (mobile messaging) to provide caregivers and students with information on various aspects of education—including the returns to education, student effort, and institution quality—as a low-cost way to improve both attendance and learning outcomes.

Counterfactual impact

Cost-effectiveness analysis: We modeled an SMS-based intervention targeting grades five and six in South Africa and estimated the number of students it would need to reach to meet AIM's cost-effectiveness bar of $30 (USD) per income doubling.[1] In our conservative model (assuming a 10% income increase from a one standard deviation (SD) improvement in test scores), the intervention would need to reach approximately 58,000 students per year at scale. In an optimistic model (assuming a 40% income increase from a one standard deviation improvement in test scores), it would need to reach approximately 8,700 students per year at scale. For context, this represents roughly 2.0% (conservative) or 0.3% (optimistic) of South Africa's 10–12-year-old students (see here).

Scale this charity could reach: Because this intervention primarily relies on SMS or other mass messaging, which are inexpensive per individual reached, we believe its potential scale is comparable to other nonprofits we have incubated, such as Family Empowerment Media (FEM).

[1] *Income doubling* refers to the intervention's estimated ability to increase a student's lifetime earnings by an amount equivalent to twice what they would have earned in a single year without the intervention (based on projected career earnings and adjusted for present value). To meet AIM's cost-effectiveness requirements, for every $30 spent, the intervention should generate additional lifetime earnings equal to at least one extra year of doubled income.

Potential for success

Robustness of evidence: This intervention design has been evaluated many times with generally positive findings—however, it is less studied as a mobile intervention and has not been evaluated as a radio intervention. It is endorsed by the Global Education Evidence Advisory Panel's 2023 Cost-effective Approaches to Improve Global Learning Report (GEEAP, 2023). More recently, researchers from the Centre for Global Development published a meta-analysis on the effects of providing information on the returns to education to parents and students, finding positive and significant average impacts on school participation and student learning (Evans & Acosta, 2024; see here).

Theory of Change (ToC): The ToC behind this intervention is that providing persuasive and informative messaging on education can lead to increased caregiver and student engagement, resulting in higher attendance and improved learning outcomes. The specific design of a new nonprofit's intervention will depend on contextual factors such as the suitability of different delivery mechanisms, and the availability of key information, such as test scores and data on school quality, (see here).

Neglectedness

Neglectedness: We identified one organization that works in this area as a for-profit focused on tertiary education in Brazil (see here). Our understanding of the field leads us to believe that this intervention is popular but lacks implementers delivering at scale, mostly remaining as an evaluative pilot or delivered sporadically through government programs.

Geographic assessment: Our geographic assessment suggests that several countries would be strong candidates for an intervention. We are confident that a new nonprofit could identify countries where its work would be additional (see here).

Relevance

Fit for the CEIP: Our best guess is that this idea fits the typical CEIP participant profile since it does not require specialized expertise, has historically been attractive to participants, and is well-supported by the international education and development community. However, the founding team must be comfortable with an intervention that depends on large-scale implementation for cost-effectiveness and has weak feedback loops.

Other

Expert views: We spoke with Guilherme Lichand, who founded a nonprofit that initially used SMS delivery before pivoting to work in tertiary education. He was generally positive about SMS interventions as part of a wider package of support to education. Other experts we briefly consulted were also generally supportive but expressed reservations about radio delivery (see here).

Implementation factors: Overall, we see this intervention as similar to others being tested or delivered by past cohorts, including FEM, No Violence at Home, Learning Alliance, Notify Health, and Suvita. We did not identify any major concerns, such as risks of harm or lack of funding. However, our main concern is the challenge of measuring impact. Given that the expected effect on student test scores is likely to be small, any impact evaluation would require a large sample size to detect significant effects. Monitoring intermediate outcomes, such as attendance and drop-out rates, may be more feasible (see here).

Using Mass Communication to Improve Learning Outcomes / Crucial considerations

What should the ToC for this intervention be?

We believe that SMS delivery is both cost-effective—allowing information to be delivered cheaply and at scale—and backed by some evidence of its effectiveness. This makes it the most promising option for founders to explore. While radio would have a lower per-person cost, it remains untested and is less applicable in many countries. We think salience plays a key role in the effectiveness of these messages but suspect there is a significant difference between generalized information about education received through a child's school, and a radio advertisement of sorts for education. SMS messaging would allow a nonprofit to share general information on the benefits of education and ways to support children's learning without requiring detailed data beyond phone numbers. However, the intervention could still be targeted—for example, by sending messages to students in specific schools or year groups at higher risk of dropping out or facing learning challenges (see discussions of "foot-in-the-door" strategies in our expert interview).

Is the evidence supporting this intervention robust?

Although this intervention is well-studied and supported by key stakeholders, there is significant variation in messaging content and delivery methods, making it difficult to determine the most effective ToC. Indeed, some of our preferred modes of delivery, like SMS, are relatively untested relative to direct face-to-face interactions (see here).

Overall, we find the evidence convincing that different types of information, delivered through different media, can influence behavior to improve educational outcomes. However, in line with our previous research on social and behavioral change interventions and mass media efforts, we recognize that these approaches carry some uncertainty and risk. The success of communication-based interventions depends largely on thoughtful design and careful adaptation to

ensure relevance and usefulness. Desk research alone can only provide limited insight into an intervention's potential effectiveness in isolation. If we decide to incubate this idea, the founding team should be keenly aware of these uncertainties and the requirement for careful ongoing testing.

At the time of writing, we had limited expert consultations—does this warrant pausing our recommendation?

We were unfortunately unable to have extensive conversations with experts for this report—we conducted one interview and exchanged some emails with two experts. For most of our ideas, expert consultations are a key step in validating our assumptions and concerns.

Given the strong support for this intervention within the education and development sector, we are not particularly concerned about lack of expert endorsements through our direct conversations. We think conversations with experts would add intervention design nuances to our recommendation, but suspect that the overall recommendation decision will likely not rely on expert inputs as much as it would if it was an untested or unsupported idea.

Table of contents

1 Background

Ambitious Impact (AIM) exists to increase the number and quality of effective nonprofits working to improve human and animal wellbeing. AIM connects talented individuals with high-impact ideas by providing potential entrepreneurs with intensive training and ongoing support to launch and scale these ideas. Our research team focuses on finding impactful opportunities.[2]

As part of our 2024 research agenda, we reviewed income and growth generating ideas . In that context, we researched using mass communication to improve learning outcomes. This report provides an overview of our findings.

1.1 Education as a cause area

While substantial progress has been made in expanding access to education globally, learning quality lags behind and requires significant improvements in many countries.

Quality education is transformative, improving children's life prospects and providing a safe environment for development. We detail our views on the returns and value of education elsewhere (Cox et al., 2024).

Some observers have noticed that despite rising attendance rates—even in mostly poor regions like sub-Saharan Africa (SSA)—true learning and minimum proficiency in topics such as reading and mathematics falls short. Over half of all children and adolescents worldwide do not meet minimum proficiency standards in reading and mathematics (World Bank, 2020a; United Nations Statistics Division, 2023).

There are massive global inequalities in educational quality and attainment between the richest and poorest countries worldwide, with the highest-performing SSA countries doing about as well (in terms of standardized test scores) as the lowest-performing European countries (Ritchie et al., 2018).

[2] To read more about our approach to selecting intervention ideas for our program, please see Murár (2025)

1.2 Information as an intervention

One approach to improving educational outcomes is to address knowledge and motivation barriers by providing caregivers, students, and schools with information on the long-term value of education, the importance of school choice, and strategies for academic attainment and support. Programs can deliver information about caregivers' roles in education, school quality and cost, student behavior and learning, financial support, and economic and non-economic returns to education.

Proving information has been widely recognized as an effective and low-cost way to increase both the quantity and quality of schooling. In its 2023 report, the World Bank's Global Education Evidence Advisory Panel (GEEAP) recommended providing information on the benefits, costs, and quality of education as a "great buy" (its highest rating), alongside Teaching at the Right Level (TaRL) and structured pedagogy (GEEAP, 2023).

2 Theories of change

This section provides an overview of the theory of change (ToC) for this idea. It represents a broad depiction of our thinking behind how this intervention works.

The diagram below attempts to capture the high-level theory of change of this nonprofit.

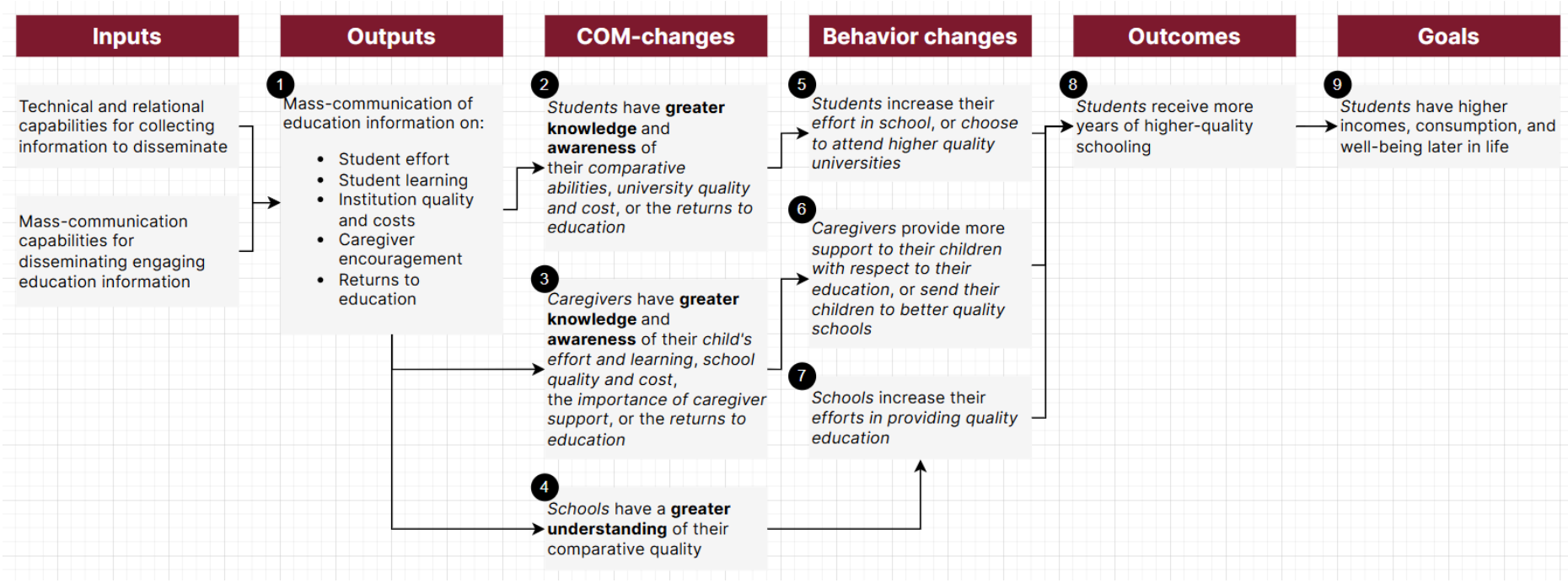

Figure 1: A broad theory of change for this nonprofit idea.

2.1 Assumptions and key factors supporting the ToC

1. The charity can collect relevant information, convert this into engaging content, and communicate it to its target audience.
2. Students have greater knowledge and awareness of the benefits, costs, and quality of education.
3. Caregivers have greater knowledge and awareness of the benefits, costs, and quality of education.
4. Schools have greater knowledge of their quality and feel social pressure to improve.
5. Students increase their effort in school and/or decide to enroll in higher-quality tertiary education.
6. Caregivers enroll their children in better schools, and/or support and encourage their children to learn.
7. Schools improve their quality.
8. Students have improved learning outcomes and receive more years of schooling.
9. Increased educational attainment translates to improved quality of life for students.

Scale: key uncertainty, high uncertainty, some uncertainty, low uncertainty, unconcerning.

The charity can collect relevant information to disseminate (1)

The availability of information will be a key factor in determining program design and location. Different ToCs may involve:

- personalized information (such as the child's performance in tests or attendance)
- school quality information (akin to Ofsted investigation reports in the United Kingdom)

- general information about the returns to education (such as the prospects of students who achieve good grades, average earnings increases, etc.)

Overall, we have concerns about the quality and quantity of information that may be available in any given context:

We expect the nonprofit to operate in low-resource settings where systemic data collection may be limited. While accessing this information for a pilot evaluation (like in the studies cited) is typically feasible, obtaining it at scale may be more challenging.

An organization disseminating any child- or school-specific information will need to work with local stakeholders to access this information. These stakeholders will likely be schools, government organizations, and other nonprofits. We are fairly confident that a new organization would provide value to stakeholders by increasing educational attainment with minimal additional work required on the provider's side. However, new nonprofits may face challenges in establishing credibility for large-scale partnerships, though AIM-incubated charities have successfully navigated this in the past.

The uncertainty around what messages and information will be conveyed adds complexity to our understanding of the promise of this idea:

The studies we reviewed vary significantly in the kind of information used. A new nonprofit will likely need to test and refine strategies through rigorous monitoring and evaluation.

The cheapest and easiest ways of delivering this intervention will involve delivering messages based on readily available data (i.e., the nonprofit would not collect data itself). So, we do not expect that the nonprofit would generate data itself, but rather leverage whatever information is available from the ministry of education and schooling system. The nonprofit may want to use data to calculate the return on investment for education or other metrics, however.[3]

[3] For example, calculating the returns to education in different contexts (see papers referenced in Evans & Acosta [2024]), or calculating school value-added (Allende et al. 2019).

School-quality information leads to improved education (4, 6, 7, and 8)

Overall, we have some uncertainty as to whether providing institution-quality information will lead to improved educational attainment.

As articulated in Section 3, **we believe there is moderate to strong evidence that providing information to households on relative school quality can lead to increased educational attainment.** However, we believe these effects are context-dependent and are most consistent where households are not resource-constrained concerning school choice.

Concerning assumption 7, **we believe there is weak evidence (**Andrabi et al. 2017**;** de Hoyos et al. 2021**) to support that schools can respond positively to information regarding their quality.** However, in most of the studies reviewed, test score improvements were hypothesized to be driven largely by caregivers enrolling their children in higher-quality schools. Highlighting this, Afridi et al. (2017) stated that in response to its intervention, *"schools alone may either not have the incentives or the resources to respond to new information."*

Student test scores and learning increases as a result of the intervention (8)

We have low uncertainty that providing information on the benefits, costs, and quality of education leads to increased test scores. Many studies delivering such interventions have demonstrated significant and positive effects on student test scores.

Lichand et al. (2022) and Berlinksi et al. (2022)—in our view the two most relevant studies on SMS-based interventions—found that sending weekly SMS messages to parents with information on child behavior and learning led to statistically significant test score improvements of 0.088–0.141 SDs.

A meta-analysis by Evans and Acosta (2024) reviewing interventions providing information on the returns to education to individuals in low- and middle-income countries found a small but positive and significant average effect size of information interventions on student learning of 0.05 SDs (p-value = 0.00).

For interventions where caregivers were provided information on relative school quality, the effect sizes on test scores ranged from 0.11 (Andrabi et al. 2017) to 0.38 (de Hoyos et al. 2021) SDs in optimal treatment arms.

Students receive more years of schooling as a result of the intervention (8)

We are fairly certain that providing information on the benefits, costs, and quality of education leads to increased educational participation. Many studies across different contexts delivering such interventions have demonstrated significant and positive effects on enrolment and attendance.

The meta-analysis of Evans & Acosta (2024) found a small but positive and significant average effect size of providing individuals information on the returns to schooling on schooling participation ("*like enrollment at a university and choosing a particular major*") of 0.02 (*p*-value = 0.01) SDs.

The findings of Dizon-Ross (2019 & 2021) serve as contrary evidence to our view. They found no positive or significant average effect on educational participation of providing Malawian caregivers with information on relative childhood academic ability. Additionally, dependent on parents' education, they found that some students received less education, and some students more education, as a consequence of the intervention. However, this was in a low-income setting, unlike the contexts where we would recommend a charity operate.

2.2 Potential theories of change

A note on delivery mechanisms and their effect on outcomes

The intervention designs we most promote in this report involve using low-cost forms of mass communication, most likely SMS/instant messaging. Although many studies have examined the effects of providing information, relative few have focused on SMS or instant messaging, and none have specifically evaluated radio-based delivery. As discussed in later sections, we remain highly uncertain about the relative impact of different delivery mechanisms, as effectiveness may depend on both content and context. Again, resolving these uncertainties will require contextual adaptation, and stringent monitoring and evaluation.

Delivery of student information to caregivers via SMS or instant messaging

We believe a charity focused on delivering information about student effort and learning to caregivers via SMS or instant messaging has the greatest potential for impact.

We believe that an intervention of this sort could target grades where drop-out rates were highest. Afridi et al. (2017) specifically targeted students in grades four and five, recognizing that dropout rates in their study context increased from nearly 1% in grades one to three to 3% and 7% in grades four and five, respectively. However, while we believe an intervention at this point would have the largest effect, targeting most grades would exceed our bar for cost-effectiveness. That said, we feel intuitively that caregiver-based interventions may become less effective as students age, enter high school, and exercise more authority over their decision-making.

Notably, an intervention of this type would require collaboration with schools to identify and reach target recipients. However, based on the successful track records of AIM-incubated charities in collaborating with public and private stakeholders at a small or medium scale, we are moderately confident that a new organization could do the same effectively.

Delivery of general information via radio

Our review of the evidence suggests that general information—when not tailored to a specific child or school—has weak support for improving learning outcomes. However, there may still be potential for delivering broad education-related messaging through radio.

Radio broadcasting could provide a cost-effective alternative to SMS, as it reaches a wide audience at a lower cost per person. Additionally, it would require less collaboration with public stakeholders, since it places a lower demand on collecting child- and school-specific information. That said, this approach lacks the precise targeting that SMS messaging allows.

A potential area for further exploration is the simultaneous use of both SMS and radio to deliver complementary messages in certain contexts. While combining these methods may enhance reach, it also raises concerns about information saturation, where recipients may become less responsive to repeated messaging..

Despite the scalability and cost advantages of radio, SMS/mobile messaging remains the safer and more evidence-supported approach. SMS allows for more precise targeting, ensuring that relevant messages reach the right individuals, which may be key to maximizing impact.

3 Quality of evidence

There is relatively strong evidence that providing information on the benefits, costs, and quality of education leads to improved educational attainment. However, studies vary widely in context, message content, and the mechanism of delivery. We found 24 randomized control trials (RCTs), one meta-analysis, two literature reviews, and two ongoing RCTs that are relevant to this report. There is significant variation in outcomes across studies and minimal replication of specific interventions.

Some key actors conducting research on effective education interventions endorse this strategy. The intervention was listed as one of three great buys in the Global Education Evidence Advisory Panel's 2023 Cost-effective Approaches to Improve Global Learning Report (GEEAP, 2023). More recently, researchers from the Centre for Global Development published a meta-analysis on the effects of providing information on the returns to education to parents and students, finding positive and significant average impacts on school participation and student learning (Evans & Acosta, 2024).

Intervention designs

Intervention designs differed significantly across studies. Information was provided to different audiences, including students, caregivers, schools, and the general public, using multiple delivery methods. These included reading information aloud, distributing physical copies, sending SMS messages, giving presentations, showing pre-recorded videos, and using interactive online quizzes. Often, multiple methods were combined.

The content of these interventions covered a range of topics, including school or university quality, the monetary and non-monetary returns to education, student behavior and learning, and caregiver motivation. These categories were not mutually exclusive; for instance, many interventions that shared information about university quality also provided details on the returns to attending higher-quality institutions.

Given the wide range of intervention designs, identifying a single ideal approach is challenging. However, we have some intuitions about promising models that can guide initial scoping for founders.

3.1 Evidence on the effectiveness of different delivery mechanisms

We chose to focus on SMS- and radio-delivered interventions for our literature review, given our perception that these would likely be the most cost-effective delivery mechanisms. We think these are likely to be very cost-effective if they produce effects given the low cost of delivering SMS or radio messaging.

Evidence on the effectiveness of delivering information via SMS

Lichand et al. (2022) **and** Berlinksi et al. (2022) **(the two most applicable studies to our preferred ToC) found that sending weekly SMS messages to parents with information on child behavior and learning led to statistically significant test score improvements of 0.088–0.141 SDs.** Results of an ongoing study (Kremer & de Laat, n.d.) conducted in Kenya are expected soon. These results warrant especially close attention for founders considering incubating in SSA.

Lichand et al. (2022) randomly assigned ninth-grade students in São Paulo, Brazil, to one of three treatment groups—salience, individual information, or relative information—or to a control group across five subsamples.[4,5] The intervention included 19,253 students, with 7,817 in control groups, across 934 classes and 287 schools.

The study found that weekly text messages to parents—whether emphasizing child-specific information (updates on the student's own behavior), relative information (comparisons to classmates), or salience (the importance of attendance and homework) had significant positive impacts on student outcomes.

[4] The figure in Section 3.2.2 on page 13 serves as a good visual aid of sample size (link to page here).
[5] Descriptions of each treatment group can be found on pages 10 and 11 (link to page 10 here).

These included improvements in attendance (0.021***; 0.022***; 0.021*** p.p.), test scores (0.097**; 0.141**; 0.095** SD), and grade promotion rates (0.029**; 0.017; 0.032*** p.p.).[6,7]

Berlinksi et al. (2022) found similar, albeit smaller and less significant, results (significant only at the 10% LOS[8]), of weekly text messages sent to parents on their child's attendance, grades, and behavior.

This study's main experimental sample included 1,000 children in the last five grades of primary school in seven low-income schools in a metropolitan area in Chile. Test scores increased by 0.088* SDs, and attendance increased by 0.011** percentage points, though larger effects were found for students at higher initial risk of grade retention and dropout.

Kremer & de Laat (ongoing) delivered information on student attendance and learning outcomes to parents of 2,600 (not including 1,505 control students) grades six and seven students in Kenya. The results of this study have not yet been published. Given that a founding team may choose to operate in SSA, they should be attentive to this study's upcoming results.

Compared to SMS-delivered information, we are less confident in the effectiveness of SMS-based behavioral nudges in consistently improving educational attainment, as results vary significantly across contexts and are often statistically insignificant.

We identified five additional studies that examined the impact of SMS-delivered, non-personalized information intended to improve educational attainment, with varying results across contexts.

Lichand & Wolf (2023) found meaningful but statistically insignificant impacts (noting the study was underpowered, meaning it had too small a sample size to detect a statistically significant effect) of providing parents with general information/salience on the returns to education (d[9] = 0.081, p = 0.158) in rural Cote d'Ivoire.

---

[6] p.p. = percentage points.
[7] Results taken from Table 7 on page 56 (link to page here). *p<0.1, **p<0.05, and ***p<0.01.
[8] LOS = level of significance, the threshold at which results are considered statistically significant.
[9] Cohen's d is a standardized measure of effect size, indicating the magnitude of an intervention's impact.

Wolf & Aurino (2023) found no average effect on child-caregiver engagement, with some variation, of nudges sent to Ghanian caregivers following the reopening of schools in 2021 (further results on child learning are forthcoming).

Lichand et al. (2024) and Lichand & Christen (2021) found that motivational messages sent to students about the returns to education reduced learning losses (meaningful but insignificant, noting this study was underpowered) and lowered dropout risk by approximately 26% compared to the control group (significant at the 10% LOS) in the State of Goiás, Brazil during the COVID-19 pandemic.

In partnership with GiveDirectly, Chibwana et al. (2023) evaluated SMS-based nudges aimed at improving parental engagement among cash transfer recipients in rural Malawi. The study found no clear effects on parental engagement or school attendance, though the results were inconclusive due to substantial spillovers between the treatment and control groups.

Evidence on the effectiveness of delivering information via radio

We found no studies that delivered information on the benefits, costs, or quality of education via radio.[10] However, we believe there is reason to think that a nonprofit using radio to deliver education-related information could positively impact educational attainment.

There is evidence that radio-based campaigns can effectively improve knowledge and behaviors. Our 2020 Mass Media Campaign report (Finetti, 2020) contributed to the founding of Family Empowerment Media (FEM), an evidence-driven nonprofit that uses radio to enable informed contraceptive decisions through clear, engaging, and accurate communication. FEM has since been favorably evaluated by Founders Pledge (2022) and Rethink Priorities (2023). Similarly, Development Media International, which runs large-scale radio-based health information campaigns, is featured in The Life You Can Save's list of Best Charities. These examples suggest that radio may be a viable medium for behavior

[10] In Piper & Korda (2010), radio shows were delivered as part of community outreach efforts. However, this was part of a very extensive program and was not independently evaluated. "*The impact of radio shows is hard to measure, yet our anecdotal evidence indicates that the shows were well received*" (p. 14. Link to page here).

change in certain contexts, though further research would be needed to assess its impact on educational outcomes.

Further, some studies we reviewed reported that behavioral changes were driven by salience effects rather than specific information received. For the purpose of this report, we use the term "salience effect" to describe cases where an individual's behavior changes simply because an intervention has made them more aware of an issue, rather than because they received new or detailed information about it. We discuss the evidence for salience effects in Section 3.2.

Evidence on other delivery mechanisms

Delivery mechanisms varied significantly across studies. So as not to duplicate good work, below is a largely exhaustive excerpt on delivery mechanisms from the Centre for Global Development's *Changing Perceptions of Educational Returns in Low- and Middle-Income Countries* paper (Evans & Acosta, 2024):

> *"The medium of dissemination can range from in-person delivery (invited speakers, career counselors, or teachers), to technology-facilitated (phone-calls, text messages, online surveys, or emails), to interventions that use the popular media (radio stations or TV channels), to interventions that use written pamphlets or posters, or combinations of any of these (such as an implementer showing a video and then leading a class discussion). Depending on the choice of medium, information can be delivered in school settings, at home, or virtually."*

The results of this meta-analysis are discussed below.

3.2 Evidence on the effectiveness of different information contents

Evidence on providing information on the returns to education

We believe there is strong evidence to support that providing information on the returns to education increases test scores and, to a lesser extent, years of schooling.

A meta-analysis by Evans & Acosta (2024) reviewed 13 experimental or quasi-experimental studies providing information on the returns to education in low- and middle-income country contexts. The interventions in their sample covered students from grade four (primary school) until grade 12 (immediately prior to enrolling in tertiary education). As referenced in the excerpt in the section immediately above, there was significant variation in the delivery mechanisms utilized across interventions. Information content differed across interventions and many interventions provided information other than just on the returns to education.[11]

The meta-analysis found very small positive and significant average impacts on school participation (ES = 0.02[12*]; p-value = 0.01; 95% CI = 0.00 to 0.03; I^2 = 54.20%) and student learning (ES = 0.05***; p-value = 0.00; 95% CI = 0.00 to 0.11; I^2 = 95.25%).[13]**

They reference significant variation and suggest that impacts on school participation and learning may be larger for those who initially underestimated

[11] For further information, see "*Content: What is provided?*" on page 3 (link to page here).
[12] Effect size (ES) measures the impact of an intervention by quantifying the difference between treatment and control groups in each study. In a meta-analysis, ES is standardized so that results from different studies can be compared on the same scale. An ES of 0.02 means that, on average, interventions increased school participation by 0.02 standard deviations compared to the control group across all studies.
[13] I^2 measures how much of the variation in effect sizes across studies is due to real differences between studies rather than random chance. A lower I^2 (closer to 0%) is generally preferable when trying to generalize results, as it suggests the intervention produces similar effects across the studies included. In contrast, a higher I^2 (closer to 100%) means study results vary widely, often due to differences in interventions, populations, or settings, making generalization more difficult. In this meta-analysis, I^2 was 54.20% for school participation, indicating moderate variation between studies. However, I^2 was 95.25% for student learning, suggesting that the intervention's impact on learning depends heavily on context, making it harder to draw broad conclusions about its effectiveness.

returns compared to those who overestimated them. They also suggest that impacts on learning may be greater for comparatively less poor households.

However, they note that their sample was too limited to determine whether student or recipient type (caregivers vs. student) influenced effect sizes.

Evidence on information about student effort and learning

We believe there is moderate to strong evidence that providing caregivers with information on their child's learning and effort leads to improved educational attainment. As discussed above, Lichand et al. (2022) and Berlinksi et al. (2022) found positive and significant results of their interventions on test scores of (0.088–0.141 SDs) and school participation (1.1–2.9 p.p.).

However, findings from Dizon-Ross (2019 & 2021) provide counterevidence. These studies found no significant average effect on educational participation when Malawian caregivers were given information on their child's relative academic ability. Moreover, the intervention led to mixed effects depending on parental education—some students received more education, while others received less. Notably, this study was conducted in a particularly poor context, unlike those we would recommend a charity operate.

In total, we identified six papers with results (two examining the same intervention), one of which has additional findings forthcoming. We are also aware of two more ongoing experiments with results expected in the future and suggest that founders monitor these closely. Additionally, Piper & Korda (2010) may be of interest to a founding team, though we deprioritized reviewing it due to the complexity of its intervention.

Table 1: Studies on student effort and learning information interventions

Study	Sample	Intervention	Results
Kremer & de Laat (ongoing)	Parents of 2,600 students in grades **six to**	"*The **SMS messages** informed parents of their students' **academic***	**Results forthcoming**

Study	Sample	Intervention	Results
	seven in **Kenya**	***performance*** *and* ***encouraged them to be more involved in their child's education****."*	
Berry et al. (ongoing)	**Eighth** (22,359) and **12th-grade** (15,945) students in the **Dominican Republic** who scored in the **top 25 percent on the national exams**	**Salience:** a **letter congratulating** them on their **performance** **Ranking:** a **letter congratulating** them on their exam **performance** and stating the student's **rank** in the national percentile **Scholarship information:** a **letter congratulating** them on their exam **performance**, and stating that **scholarships** are available to students, and that better performance increases the chances of receiving a scholarship **Ranking and scholarship information**: a **letter** containing both national **ranking** and **scholarship** information	**Results forthcoming**
Lichand et al. (2022) & J-PAL	19,253 **ninth-grade** students in **São Paulo, Brazil**	Weekly **SMS messages** to parents **Child-specific information**: child-specific information about	Results below in order of child-specific information; relative information; salience **Student attendance**: 2.1***; 2.2***; 2.1*** p.p.

Study	Sample	Intervention	Results
		attendance, **punctuality** and **homework completion** **Relative information**: child-specific information about **attendance**, **punctuality** and **homework completion** framed relatively to their **classmates' median behavior** **Salience**: highlighting the **importance of school attendance**, **punctuality** and **homework completion**	**Test scores**: 0.097**; 0.141**; 0.095** SD **Grade promotion rates**: 2.9**; 1.7; 3.2*** p.p. **Additional results forthcoming**
Berlinski et al. (2022)	1,000 children in the **last five grades of primary school** in seven **low-income schools in a metropolitan area in Chile**	Weekly **SMS messages** sent to parents on their **child's attendance**, **grades**, and **behavior**	**Test scores** increased by 0.088* SDs, and **attendance** increased by 1.1** percentage points
Dizon-Ross (2021) & Dizon-Ross (2019)	2,634 households with students in **grades two** to **six** in **rural Malawi**	**Surveyors talked** parents through **reports** showing their children's **absolute** and **relative test performance**	**Parents invest more years of schooling in children with higher academic ability**: Treat x score ES = 0.10* Some students receive higher investments in their education as a result of the intervention and some lower.

Study	Sample	Intervention	Results
			Information does not decrease the average level of investments, although the results are imprecise.
Andrabi et al. (2017)	**56 Pakistani villages**	**Report cards explained at school meetings** reported **absolute and relative child test scores**, and **absolute and relative scores for schools**	**Test scores** increased by 0.11 SDs, **private school fees** decreased by 17 percent, and **primary enrolment** increased by 4.5 percent
Afridi et al. (2017)	**1,499 grades four** and **five** students in the Ajmer district in Rajasthan, **India**	**Surveyors** delivered report cards and **discussed** them with caregivers—schools were informed that some parents had received report cards. School report cards were **handed** over to principals—caregivers were informed that schools had received a report card. T1: **Caregivers** received report cards on their **children's absolute and relative (intra-school)** performance (P1). T2: **Caregivers** received report cards on their **children's absolute and relative (intra-school)** performance (P1), & **Schools** received report cards on their **absolute**	When information is provided on **relative school performance** learning **outcomes improve significantly more** than when information on only intra-school performance is made available to both sides of the market. **No treatments had a significant impact in public schools.** The **absence of any significant improvements** in test scores where **schools alone are informed of their relative positions** is not surprising. **Outcomes improved in more competitive markets.** **Test scores** (private schools) T1: 0.122* SD T2: 0.139** SD T3: -0.019 SD T4: 0.101* SD **Test scores** (private

Study	Sample	Intervention	Results
		performance (S1). T3: **Caregivers** received report cards on their **children's absolute and relative (intra-school)** performance (P1), & **Schools** received report cards on their **absolute and relative (inter-school)** performance (S1 & 2). T4: **Caregivers** received report cards on their **children's absolute and relative (intra- and inter-school)** performance (P1 & 2), & **Schools** received report cards on their **absolute and relative (inter-school)** performance (S1 & 2).	schools) w' controls T1: 0.129 SD T2: 0.111 SD T3: -0.020 SD T4: 0.308*** SD

Evidence on general information and salience effects

We believe there is weak evidence to support that learning outcomes can be improved by general information that is not child- or school-specific.

Lichand et al. (2022) **found that most of the effects of its intervention in Brazil were driven by salience**, as messages with only general information improved outcomes by between 0.89 and 1.26 times as much as messages with child-specific information.

As articulated in an earlier section on SMS-delivered interventions, weekly text messages to parents containing only general information improved attendance by

2.1 percentage points (significant at the 1% LOS), test scores by 0.095 SDs (significant at the 5% LOS), and grade promotion rates by 3.2 p.p. (significant at the 1% LOS).

Other work conducted in Brazil by Lichand and co-authors (Lichand et al. 2024**;** Lichand & Christen 2021**) found positive results**, with non-personalized motivational messages sent to students reducing learning losses (meaningful but insignificant, noting this study was underpowered) and stemming rises in dropout rates by 26% (significant at the 10% LOS) during the COVID-19 pandemic.

However, results have been less favorable amongst similarly delivered studies in poorer contexts. Lichand & Wolf (2023) found meaningful but statistically non-significant impacts of nudging parents on learning (d = 0.081, p = 0.158) in rural Côte d'Ivoire (though the study's statistical power was low). Wolf & Aurino (2023) found no average effect on child-caregiver engagement, with some heterogeneity, of nudges sent to Ghanaian caregivers following schools reopening in 2021 (further results on child learning are forthcoming). In partnership with GiveDirectly, Chibwana et al. (2023) found no impacts of SMS-based nudges sent to parents of cash transfer recipients in rural Malawi, though with the findings deemed inconclusive given substantial spillovers between treatment and control groups.

Kremer & de Laat's ongoing research into an SMS-delivered education intervention in Kenya included a treatment arm that promoted "*a growth mindset view of education to encourage greater parental involvement in their child's education*". Positive results from this treatment arm would lend support to a hypothesis that learning outcomes can be supported without child-specific information.

Many of the studies observed in our research for this report also included general information on caregiver encouragement and the importance of education. However, this was provided alongside specific information, making the disentanglement of attribution difficult.

Evidence on school and university quality and costs[14]

We believe there is moderate to strong evidence that providing information to households on relative school quality can lead to increased educational attainment. However, these effects are highly context-dependent and are most consistent where households are not resource-constrained concerning school choice.

Competition in the market for schooling appears to be important for interventions encouraging schools to increase their quality and for those encouraging parents to enroll their children in higher-quality institutions. This makes some intuitive sense given that one would require a certain flexibility of choice to be able to move a child from a worse to a better performing school. Afridi et al. (2017) found no significant impacts on students attending public schools, though other papers found significant effects extended to public schools.

Interventions targeted parents of children on the cusp of advancement from one level of schooling to another (e.g., from primary to high school). For example, Allende et al. (2019) reported effects for parents who had already enrolled their children in primary school and for parents who had not, finding significant positive results for the latter but not the former.

Effect sizes on test scores (for optimal treatment arms) ranged from 0.11 (Andrabi et al. 2017**) to 0.38 (**de Hoyos et al. 2021**) SDs for interventions where caregivers were given information on school quality.**

Interventions that provided information only to schools were less consistent in improving outcomes. Muralidharan & Sundararaman (2010) found no effect of providing feedback to Indian teachers on learning outcomes, and Afridi et al. (2017) found no significant improvements in test scores where Indian schools alone were informed of their relative positions. However, de Hoyos et al. (2021) found large effect sizes in an intervention that provided diagnostic feedback on student test scores to Argentinian primary schools.

[14] Note: In this section, we do not include studies from Evans & Acosta's (2024) meta-analysis, as they were already covered in an earlier section.

Allende et al. (2019) provided 1,832 caregivers across 133 Chilean preschools with a report card on the quality of local schools and showed them a video emphasizing the returns to schooling and the importance of choosing quality schools for their children.

It found that treated parents shifted their choices toward higher-quality and more costly schools, investing more in their children's education. For students who were not already enrolled in primary schools before the intervention, fourth-grade test (five years after treatment) scores were 0.216** and 0.221*** SDs higher than the control group.

Importantly for our research question, it found that treated families—whose children were not yet enrolled before the intervention—were between 15.9 and 17.2 % less likely to enroll their children in a school detailed on the provided report card (both significant at the 1% LOS). As articulated in the paper:

> *"The results are consistent with the idea that the more salient feature of the treatment was to increase search and awareness of the importance of school quality and not to focus on specific design features of the report card. In anything, this suggests the video and salience of the choice seemed to be the more likely channels through which the intervention affected choices."*

Table 2: Studies on school and university quality and costs

Study	Sample	Intervention	Results
Ainsworth et al. (2020)	**3,898 students** from 194 **middle schools** in 48 **Romanian** towns	**Flyer** explained the '***value-added***' (see p. 8 of paper for definition) of **tracks across local schools**.	Treated students enroll to attend high schools which gives them a **greater chance of passing the baccalaureate exam**: ATE: 0.56* pp. Low-achieving: 1.43** pp. High-achieving: -0.02 pp.
Allende et al. (2019)	**1,832 caregivers** across 133	**Report card** on the **quality of local schools** and showed	**Parents shifted children toward higher-quality and more costly schools**.

Study	Sample	Intervention	Results
	Chilean preschools	them a **video** emphasizing the **returns to schooling** and the **importance of choosing quality schools** for their children	Students not already enrolled in primary school before the intervention had **test scores 0.216[**] and 0.221[**] SD higher** five years following the intervention.
de Hoyos et al. (2021)	**105 public primary schools** in La Rioja **Argentina**	*"Diagnostic feedback"* group: **standardized tests** were administered with **results made available to schools** via **user-friendly reports**. *"Capacity-building"* group: **Schools provided with reports** & **Workshops and school visits**.	*"Our results suggest that **diagnostic feedback may be sufficient to elicit improvements in the management and instruction of public schools**"* *"After two years, **diagnostic feedback schools outperformed** control schools by **.34[***] and .36[***] SD** in third grade math and reading, and by **.28[**] and .38[***] SD** in fifth grade math and reading".*
Andrabi et al. (2017)	**56 Pakistani villages**	**Report cards explained at school meetings** reported **absolute and relative child test scores**, and **absolute and relative scores for schools.**	**Test scores** increased by 0.11 SDs, **private school fees** decreased by 17 percent, and **primary enrolment** increased by 4.5%.
Afridi et al. (2017)	**1,499 grades four** and **five students** in the Ajmer district in Rajasthan, **India**	**Surveyors** delivered report cards and **discussed** them with caregivers—schools were informed that some parents had received report cards. School report cards were **handed** over to	When information is provided on **relative school performance** learning **outcomes improve significantly more** than when information on only intra-school performance is made available to both sides of the market. **No treatments had a**

Study	Sample	Intervention	Results
		principals—caregivers were informed that schools had received a report card. T1: **Caregivers** received report cards on their **children's absolute and relative (intra-school)** performance (P1). T2: **Caregivers** received report cards on their **children's absolute and relative (intra-school)** performance (P1), & **Schools** received report cards on their **absolute** performance (S1). T3: **Caregivers** received report cards on their **children's absolute and relative (intra-school)** performance (P1), & **Schools** received report cards on their **absolute and relative (inter-school)** performance (S1 & 2). T4: **Caregivers** received report cards on their **children's absolute and relative (intra- and inter-school)** performance (P1 & 2), & **Schools** received	**significant impact in public schools.** The **absence of any significant improvements** in test scores where **schools alone are informed of their relative positions** is not surprising. **Outcomes improved in more competitive markets.** **Test scores** (private schools) T1: 0.122* SD T2: 0.139** SD T3: -0.019 SD T4: 0.101* SD **Test scores** (private schools) with controls T1: 0.129 SD T2: 0.111 SD T3: -0.020 SD T4: 0.308*** SD

Study	Sample	Intervention	Results
		report cards on their **absolute and relative (inter-school)** performance (S1 & 2).	
Muralidharan & Sundararaman (2010)	**100 rural primary schools** in Andhra Pradesh, **India**	Diagnostic tests and feedback were provided to teachers, alongside monitoring of classroom processes.	*"We find **teachers in treatment schools exerting more effort*** [0.107**] *when observed in the classroom but **students** in these schools **do no better on independently-administered tests*** [0.002] *than students in schools that did not receive the program".*

3.3 Returns to education

We generally believe there are returns to education and that these come from a mixture of economic and non-economic gains (Crawfurd et al., 2019; GiveWell, 2018; Calvert, 2019).

To simplify modeling, we use income gains as a measure of improved welfare later on in life.

We are highly uncertain about the magnitude of returns but expect that for a primary school child in an LMIC, the benefits will be between 10% and 40% increased income across their working life per one SD improvement in test scores.

When modeling, we will model both a conservative case (10%) and an optimistic case (40%). We think the conservative case is likely closer to the true returns.

Our views are articulated in greater detail in our Returns to Education Report (Cox et al., 2024).

4 Expert views

Guilherme Lichand (GL)

Assistant Professor of Education at Stanford University and co-Director at the Stanford Lemann Center. Advisory board member for Movva (and co-founder).

GL supports implementing SMS interventions to enhance caregiver engagement and child learning but acknowledges that these interventions are unlikely to be transformative and that their effects will likely fade after SMS messages are discontinued.

He believes that SEL and growth mindset messaging that increases the salience of education can be a complement to the ordinary curriculum. Increasing the salience of education can lead parents to engage more in educational choices and support their children.

GL noted that there are challenges in accessing information, but he believes that there is no need for personalization, as his research has shown that the important aspect of the intervention was salience and pushing parents to be engaged. GL noted that SMS did as good a job as audio in his research. Anecdotally, where parents didn't understand the SMS messages, they went to the school to inquire further.

He did note that it is important not to overburden teachers, especially in rural settings where teachers are generally not motivated.

Finally, GL noted that reaching scale has been challenging in resource-constrained contexts. In Côte d'Ivoire, for instance, SMSs turned out to be expensive, and cost became a significant barrier to scale. Despite interest from government, progress has been stuck given logistical constraints (especially in enrolment) and negotiations with telecommunication providers.

5 Geographic assessment

5.1 Where existing organizations work

We are aware of one organization, Movva, which supported and may still support interventions similar to those proposed in this report. Other organizations may also be valuable partners for data collection.

Movva

From the Jacobs Foundation (likely published in 2021):

> "Movva *is a global edtech that sends weekly reminders and encouragement messages (also known as 'nudges') directly to caregivers' cell phones to engage them in their children's school life. All content is non-curricular, entirely aimed at bringing children and parents closer together, discouraging child labor and violence against children, and making education top-of-mind, despite the impending pressures of poverty-induced financial worries".*

To our knowledge, **Movva has supported interventions across Brazil** (Lichand et al. 2024; Lichand et al. 2022; Lichand & Christen. 2021), **Côte d'Ivoire** (Wolf & Lichand. 2023), **Ghana** (Wolf & Aurino. 2023), **Guatemala**, **Honduras**, and **Malawi** (Chibwana et al. 2023).

Results from Movva-powered interventions **have been positive in Brazil** (across three papers), **mixed in Côte d'Ivoire**, **ineffectual** (based on preliminary results) **in Ghana**, **and inconclusive** (based on substantial spillovers between treatment and control groups) **in Malawi**.

We believe that Movva operates in Brazil as a commercial provider with a social purpose, serving tertiary education institutions. The above interventions were carried out between 2016 and 2023. Movva currently appears to be exclusively

focused on reducing dropout rates in higher education through commercial partnerships with Brazilian universities.

We became aware of Movva—and all papers referencing it except Lichand et al. (2022)—late in our research process and, as a result, have not interviewed any employees.

Other

Some organizations that collect student learning data, such as ASER Centre, Twaweza, and Bridge International Academies—partners in Kremer & de Laat (ongoing) Kenyan intervention—may also be valuable partners.

5.2 Geographic assessment

In our geographic assessment, we included indexes and data that provide proxies for the scale, neglectedness, and tractability of the intervention in different countries.

Based on our potential theories of change, we built two models: one for an SMS-delivered intervention and one for a radio-delivered intervention (not reported here).

We consider this a rudimentary geographic assessment that provides a rough indication of the most promising countries.

Scale

- **0–14 population:** a proxy for the number of students in a country
- **Expected years of schooling for a child:** capturing the length of schooling a child is expected to receive[15]
- **Harmonized Test Score:** a measure of the quality of student learning[16]

[15] *"Expected years of schooling is the number of years a child of school entrance age is expected to spend at school, or university, including years spent on repetition. It is the sum of the age-specific enrolment ratios for primary, secondary, post-secondary non-tertiary and tertiary education."* – World Bank Group, 2024.

[16] *"Harmonized test scores from major international student achievement testing programs. They are measured in TIMSS-equivalent units* [Trends in International Mathematics and Science Study], *where 300 is minimal attainment and 625 is advanced attainment."* – World Bank Group, 2024

Neglectedness

- **Gross domestic product (GDP) per capita (PPP-adjusted)**

Tractability

- **Fragile States Index (2024)**
- **Freedom in the World (2024)**
- **Elite consultation (2024)**
- (SMS only) **Public education spending as a percentage of GDP:** a proxy of a government's expected willingness to partner, and the quality of existing education information available to disseminate
- (SMS only) **Public education spending as a percentage of government spending:** as above
- (SMS only) **Cellphone access:** mobile phone subscriptions per 100 people
- (SMS only) **Mobile phone ownership:** proportion of individuals who own a mobile telephone
- **Teachers per thousand students under 15:** a proxy for the number of schools in a country

Countries were discarded for safety reasons if they were rated as "*Do not travel*" by the Australian Government's Smartraveller.

Together, these indexes generate a weighted average score to assess the potential of target countries. Based on our models, the 10 most promising countries are:

Table 3: Most promising countries—weighted factor model for SMS

Country	Score
South Africa	0.639
Ghana	0.503
Morocco	0.471
Philippines	0.456
Brazil	0.417
Argentina	0.393
Nigeria	0.351
Chile	0.350

Côte d'Ivoire	0.333
Indonesia	0.324

Some countries in this list will likely not be viable candidates due to narrower contextual reasons, wider safety concerns, or the desired potential scale.

Founders should also consider the history of interventions in that region. For example, Wolf & Aurino (2023) found that an SMS-delivered intervention nudging parents in Ghana to engage more in their children's education was ineffective.

Other considerations

Where interventions are delivering information on school quality, we expect effect sizes to be larger where individuals:

- are considering, or are about to consider, enrolling themselves (e.g., in grades 10-12 for university) or their children (e.g., in the later years of primary school) at an institution,
- have access to a competitive schooling market (i.e., there are many [preferably private] schooling options available to them),
- receive information on relative, not just absolute, school quality, and
- have resources such that they can invest in education for their children.

We also believe that the proposed interventions may be most effective in lower-middle-income countries or in relatively less poor regions of low-income countries. Dizon-Ross (2019 & 2021) found that providing parents in Malawi—a least developed country (LDC) as defined by the World Bank, where annual household income was around $663—with information on their child's learning led some to reduce their investment in education. In higher-income settings, where households have more resources for education and keeping a child in school instead of working is less of a financial burden, this is likely to be less of an issue. However, in poorer contexts, these negative effects may be mitigated by providing additional information on the returns to education.

Similarly, behavioral nudges delivered via SMS have shown positive results in three studies from Brazil (Lichand et al., 2024; Lichand et al., 2022; Lichand & Christen, 2021)—an upper-middle income country—but have been less effective in lower-income contexts such as Côte d'Ivoire (Lichand & Wolf, 2023), Ghana (Wolf & Aurino, 2023), and Malawi (Chibwana et al., 2023.

6 Cost-effectiveness analysis

Our initial expectation was that this intervention was very likely to surpass our bar for recommendation. This was based on several factors, most notably extensive cost-effectiveness analyses by reputable organizations and academics. These analyses suggest that information provision is highly cost-effective among educational interventions—more so than structured pedagogy (which we have incubated), in some cases by at least an order of magnitude (Angrist et al., 2025).

Given the our prior expectations and the fact that the charity's cost-effectiveness is heavily sensitive to how many students an intervention can reach, we have chosen to use a simpler model than is standard for our reports.

We have based this on the design of the intervention in Berlinski et al. (2022). Our model estimates how many students an SMS-based intervention targeting grades five and six students in South Africa would need to reach to meet AIM's bar for this round of $30 per income doubling.

In our conservative (optimistic) model—assuming a 10% (40%) increase in income from a one SD increase in test scores—we estimate that we would need to reach approximately 58,000 (8,700) students per year at scale to match AIM's bar. For context, this would be approximately 2.0% (0.3%) of our assumed targetable population of 10–12-year-old South African students.

6.1 Effects

We built a simple cost-effectiveness model of this intervention. [include headline result]

Our model uses the effect size from Berlinski et al. (2022), which found a 0.088 SD increase in test scores.

To account for replicability and generalizability (as recommended in Bettle, 2023), we adjusted this estimate by multiplying it by 0.69 (from Coville & Vivalt, 2017).

Finally, we discounted the effect size based on the ratio of adult female literacy in South Africa (our target country) to that in Chile (the country studied in Berlinski et al., 2022).

Our conservative (optimistic) model—assuming a 10% (40%) increase in income from a one SD increase in test scores— returns a 0.56% (2.24%) increase in income per student, for 0.01 (0.03) income doubling per student per year.

To account for multiple individuals receiving the benefits of that increased income, this value is multiplied by a factor of two, giving 0.02 (0.06) income doublings per household per year.

Taking the present value of the lifetime benefits of this increase gives a total of 0.32 (1.28) income doublings per student over their lifetime.

6.2 Costs

Fixed costs: At scale, we modeled the charity as having a fixed cost of $280,000, including an annual maintenance fee of approximately $1,800 to maintain SMS operations.

Additional upfront costs: We believe that setting up SMS operations will have upfront costs, such as regulatory registration and service fees. We estimated this cost at approximately $3,500.

We followed the approach used in our 2023 Childhood Vaccination Reminders and Encouragement Report (Fairless, 2023).

Variable costs: Per message costs were assumed to be $0.08. This is roughly equivalent to what was assumed in (Fairless, 2023).

Based on an assumption of sending 60 messages per student per year, this gives an annual variable cost of $4.54 per student.

6.3 Reasons for errors

Reasons this intervention could be more cost-effective than modeled, all else equal.	Reasons this intervention could be less cost-effective than modeled, all else equal.
• The multiplier used to capture household size could be too conservative. • The effect size on incomes may be overly discounted by either the replicability adjustment or the literacy adjustment factors. • We did not model spillover effects on economic growth. • We did not model non-economic gains (socialization, health outcomes, delayed pregnancy, societal values, etc.).	• The multiplier used to capture household size could be too optimistic. • We may be optimistic about extrapolating the results of a Chilean study to South Africa, and the effect size may be smaller. • Individuals may benefit from increased incomes for less years than we modeled. • We have not modeled costs to South African schools or the government.

7 Implementation

7.2 Key factors

This section summarizes our concerns (or lack thereof) about different aspects of a new charity putting this idea into practice.

Table 4: Implementation concerns

Factor	How concerning is this?
Talent	Low concern
Access to information and stakeholders	Moderate concern
Feedback loops	Moderate-high concern
Funding	Low concern
Neglectedness	Low concern
Execution difficulty/Tractability	Low concern
Complexity of scaling	Low concern
Risk of harm	Low concern

Talent

We do not expect that sourcing talent for this intervention will be a significant challenge for a new organization. We believe many different profiles and backgrounds would be suitable to this intervention, yet the following backgrounds or skills would benefit the co-founding team or early hires:

- Experience working with government stakeholders (e.g., Ministries of Education)
- Experience in marketing or communications strategies, or creative industries
- Experience with education delivery and/or policy
- Monitoring and evaluation, focusing on large data monitoring.

Access

If delivering personalized, or non-general information, the charity working on this intervention will need to work closely with schools and secure buy-in from a country's Ministry of Education. This will be important to the charity's ability to operate successfully and sustainably.

If engaging with governments proves challenging, the charity could initially work with private school networks first and run a pilot in its first year of operations. The findings from this pilot could then be used to persuade governments to partner with the charity and scale up the intervention.

Provided that the charity can contribute funding and pilot results are favorable, it seems feasible to secure the necessary political support. Governments already spend a significant amount on education—around 4% of GDP, with some variation across countries (Calvert, 2019). We speculate that governments will be interested in improving the quality of education in their countries, so this might not be a particularly hard sell.

We do not anticipate opposition from schools or teachers, as data collection should require minimal effort on their behalf. The intervention could also benefit schools by helping students achieve higher test scores. However, schools may be more resistant to delivering information on school quality.

If delivering general information via SMS or radio, we do not expect access to stakeholders to pose a challenge.

Feedback loops[17]

We have moderate concerns about a nonprofit's ability to reliably evaluate and communicate its impact. Since the average impact per student on test scores is expected to be small, randomized trials will require large sample sizes to detect significant effects. However, effects on intermediate outcomes, such as attendance and drop-out rates, may be easier to track.

These concerns are even greater when delivering the intervention via radio. Robust monitoring will require creative usage of multiple data sources and triangulation. While randomized trials are possible, they may be challenging to implement in this space. A nonprofit delivering information via radio will likely need especially strong monitoring and evaluation capacities.

Funding

Funding from funders in the AIM network

Founders Pledge has researched the returns to education and identified the following organizations as the most promising this space:

- TaRLAfrica: addresses the mismatch between teaching and students' educational levels by teaching to the current education level of the student, rather than to the level set by the curriculum. This can involve grouping students by ability for certain parts of their education, remedial classes for underperforming pupils, or adaptive learning software that adjusts content to each student's level.
    - Founders Pledge's Global Health and Development Fund has given $25,000 to TaRL Africa (Founders Pledge, n.d.).
- Iodine Global Network: Iodine deficiency affects approximately 250 million children and even moderate deficiency can reduce IQ by 3–5 points (IGN, n.d.). Salt iodization is a cheap and effective solution to this. Iodine Global Network advocates for national salt iodization programs globally.

[17] By *feedback loops*, we refer to the nonprofit's ability to gather data on the intervention's impact, analyze it effectively, and use that information to refine its approach over time.

- Global Alliance for Improved Nutrition (GAIN): GAIN also works to address iodine deficiency through its universal salt iodization program. This work includes advocacy, equipment provision, training for government officials and salt producers, monitoring, and technical assistance.

These organizations might also be interested in evaluating and potentially recommending this new charity as a giving opportunity within education.

GiveWell has previously researched education in developing countries but has deprioritized further work in this space based on its assessment of the evidence base. It says it may consider individual education interventions in the future, but it seems unlikely that it would fund a new education charity (GiveWell, 2018).

Open Philanthropy does not seem to have researched education and therefore has not given any funding to education charities.

Broader funding sources

Our assessment of broader funding comes primarily from Founders Pledge's cause area report on education (Calvert, 2019a):

- The World Bank and other multilateral institutions—$4 billion annually
- International aid programs, such as USAID and the United Kingdom's Foreign, Commonwealth & Development Office (FCDO, formerly DFID)—$8 billion annually
- Mastercard Foundation—interested in funding education interventions, though it seems to be mostly focused on post-secondary education.
- Global Innovation Fund—has made donations to multiple education organizations, ranging from $300,000 to $2.7 million
- Co-Impact—its "Foundational Fund" provides large, long-term, flexible grants (typically $5–20 million over a period of five to six years) for organizations working to improve education, health, and economic opportunity in Africa, Asia, and Latin America.

Neglectedness

We are not concerned about neglectedness. While we are aware Movva has supported interventions in this area, we do not know whether they are currently active working in this space or if other organizations are working in it.

Tractability

We do not anticipate significant challenges in delivering this intervention through our proposed ToCs.

Our preferred ToC—delivering information to parents via SMS—is modeled on the intervention design of many published studies. Assuming governments can be convinced of its merits, we see little added difficulty in scaling. We have previously incubated Suvita, and Notify Health, which have been able to deploy these interventions at increasing scale.

Risk of harm

We have low concerns regarding the risk of harm but note that risks are context dependent.

Dizon-Ross (Dizon-Ross, 2019; Dizon-Ross, 2021) found parents reduced their investment in their children's education when informed they were performing below average.

In addition, Evans & Acosta (2024) found that parents may also reduce investments in children where they had overestimated the returns to education.

We believe that these concerns are exacerbated in poorer contexts, where the opportunity costs of schooling (e.g., instead of working) are higher.

8 Conclusion

Bridging information gaps has the potential to be one of the most cost-effective ways to improve attendance and learning outcomes, both of which contribute to future earnings and wellbeing. Despite broad support from the international education community, large-scale implementation of this intervention remains relatively neglected. We believe that a team of motivated founders, with a focus on cost-effectiveness and scalability, could drive meaningful impact in this space.

References

Afridi, F., Barooah, B., & Somanathan, R. (2017). *Improving Learning Outcomes through Information Provision: Evidence from Indian Villages*. https://docs.iza.org/dp10971.pdf

Ainsworth, R., Dehejia, R., Pop-Eleches, C., & Urquiola, M. (2020). *Information, preferences, and household demand for school value added* (No. 28267; Working Paper Series). National Bureau of Economic Research. https://doi.org/10.3386/w28267

Allende, C., & Gallego, F. (n.d.). *Approximating the equilibrium effects of informed school choice*. Retrieved January 31, 2025, from https://christopherneilson.github.io/work/documents/SchoolChoiceInfoExp.pdf

Andrabi, T., Das, J., & Khwaja, A. I. (2017). Report cards: The impact of providing school and child test scores on educational markets. *American Economic Review*, *107*(6), 1535–1563. https://doi.org/10.1257/aer.20140774

Angrist, N., Evans, D. K., Filmer, D., Glennerster, R., Rogers, H., & Sabarwal, S. (2025). How to improve education outcomes most efficiently? A review of the evidence using a unified metric. *Journal of Development Economics*, *172*(103382), 103382. https://doi.org/10.1016/j.jdeveco.2024.103382

Berlinski, S., Busso, M., Dinkelman, T., & Martínez, C. (2021). *Reducing parent-school information gaps and improving education outcomes: Evidence from high-frequency text messages* (No. 28581; Working Paper Series). National Bureau of Economic Research. https://doi.org/10.3386/w28581

Berry, J., De Giorgi, G., Neilson, C., & Otero, S. (n.d.). *Education mismatch and motivational messages*. The Abdul Latif Jameel Poverty Action Lab (J-PAL). Retrieved January 31, 2025, from https://www.povertyactionlab.org/evaluation/education-mismatch-and-motivational-messages

Bettinger, E., Cunha, N., Lichand, G., & Madeira, R. (2020). Are the effects of informational interventions driven by salience? *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3644124

Bettle, R. (2023). *Replicability and generalisability*. https://docs.google.com/document/d/1eJBSmNG-iRJ-twoHaoztQUmB4pmEHut8_oT3xgtIdnI/edit?tab=t.0

Calvert, C. (n.d.). *Cause Area Report: Education*. Retrieved January 31, 2025, from https://www.founderspledge.com/downloads/fp-education

Chibwana, A., Thunde, J., Mwanza, M., & Brailovskaya, V. (2023). *Evaluation of a Parental Engagement Program Endline report on impacts of a parental engagement SMS intervention*. IDInsight. https://www.idinsight.org/wp-content/uploads/2023/10/GD_Movva-IE-Endline-Report-FINAL.pdf

Coville, A., & Vivalt, E. (2017). How often should we believe positive results? Assessing the credibility of research findings in development economics. In *BITSS*. https://doi.org/10.31222/osf.io/5nsh3

Cox, V., Murár, F., & Fariless, M. (n.d.). *What are the returns to education?* (p. o). https://docs.google.com/document/d/18v_i5NLxG5QSQIfNm3ADmcT5qEuJEeY6R4N0Eq9ilN4/edit?tab=t.0

Crawfurd, L., Hares, S., Le Nestour, A., & Rossiter, J. (2019). *Does Education Need a QALY and Is LAYS It?* Center for Global Development. https://www.cgdev.org/blog/does-education-need-qaly-and-lays-it

Dizon-Ross, R. (2019). Parents' beliefs about their children's academic ability: Implications for educational investments. *American Economic Review*, *109*(8), 2728–2765. https://doi.org/10.1257/aer.20171172

Dizon-Ross, R. (2021). *Using randomized information shocks to understand how parents' investments depend on their children's ability* ∗. https://www.povertyactionlab.org/sites/default/files/research-paper/Using_Randomized.pdf

Education in developing countries. (n.d.). GiveWell. Retrieved January 31, 2025, from https://www.givewell.org/international/technical/programs/education

Evans, D., & Acosta, A. M. (2024). *Changing Perceptions of Educational Returns in Low- and Middle-Income Countries: A Meta-Analysis*. Center for Global Development. https://www.cgdev.org/publication/changing-perceptions-educational-returns-low-and-middle-income-countries-meta-analysis

Experimental Evidence on Diagnostic Feedback. (n.d.). *Teaching with the test*. Retrieved January 31, 2025, from https://documents1.worldbank.org/curated/en/488751511886071513/pdf/WPS8261.

pdf

Family empowerment media. (n.d.). Retrieved January 31, 2025, from https://www.founderspledge.com/research/family-empowerment-media

Family Empowerment Media: track record, cost-effectiveness, and main uncertainties. (2023, May 16). Rethink Priorities. https://rethinkpriorities.org/research-area/family-empowerment-media/

Finetti, J. (2022). *Mass media Campaign*. Ambitious Impact. https://3394c0c6-1f1a-4f86-a2db-df07ca1e24b2.filesusr.com/ugd/9475db_8191df3e42444b30b5005a2ae500bd34.pdf

GEEAP. (2023). *2023 Cost-effective approaches to improve global learning*. https://thedocs.worldbank.org/en/doc/231d98251cf326922518be0cbe306fdc-0200022023/related/GEEAP-Report-Smart-Buys-2023-final.pdf

Kremer, M., & de Laat, J. (n.d.). *The impact of personalized SMS messages to parents on student achievement in Kenya*. The Abdul Latif Jameel Poverty Action Lab (J-PAL). Retrieved January 31, 2025, from https://www.povertyactionlab.org/evaluation/impact-personalized-sms-messages-parents-student-achievement-kenya

Lichand, G., & Christen, J. (2020). Behavioral nudges prevent student dropouts in the pandemic. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3724386

Lichand, G., Christen, J., & Van Egeraat, E. (2024). Neglecting students' socio-emotional skills magnified learning losses during the pandemic. *Npj Science of Learning*, *9*(1), 28. https://doi.org/10.1038/s41539-024-00235-9

Muralidharan, K., & Sundararaman, V. (2010). The impact of diagnostic feedback to teachers on student learning: Experimental evidence from India: Diagnostic feedback to teachers. *Economic Journal (London, England)*, *120*(546), F187–F203. https://doi.org/10.1111/j.1468-0297.2010.02373.x

Nudges to improve parental engagement and gender disparity in the return to school during COVID-19 in Ghana. (n.d.). Retrieved January 31, 2025, from https://poverty-action.org/study/nudges-improve-parental-engagement-and-gender-disparity-return-school-during-covid-19-ghana

Piper, B., & Korda, M. (2010). *EGRA Plus: Liberia*. USAID. https://pdf.usaid.gov/pdf_docs/pdacr618.pdf

Ritchie, H., Samborska, V., Ahuja, N., Ortiz-Ospina, E., & Roser, M. (n.d.). *Global Education*. Our World in Data. Retrieved January 31, 2025, from https://ourworldindata.org/edu-quality-key-facts

School enrollment, primary (% net)—Sub-Saharan Africa. (n.d.). World Bank Open Data. Retrieved January 31, 2025, from https://data.worldbank.org/indicator/SE.PRM.NENR?locations=ZG

United Nations Statistics Division. (n.d.). — *SDG indicators*. Retrieved January 31, 2025, from https://unstats.un.org/sdgs/report/2019/goal-04/

Wolf, S., & Lichand, G. (2023). Nudging parents and teachers to improve learning and reduce child labor in Cote d'Ivoire. *Npj Science of Learning*, *8*(1), 37. https://doi.org/10.1038/s41539-023-00180-z

World Bank. (2024). *Expected years of schooling* [Data set]. https://databank.worldbank.org/metadataglossary/world-development-indicators/series/SE.SCH.LIFE