



Iterating the Role of School Leaders in Improving Foundational Numeracy through Individual and Group Targeting in India and Indonesia

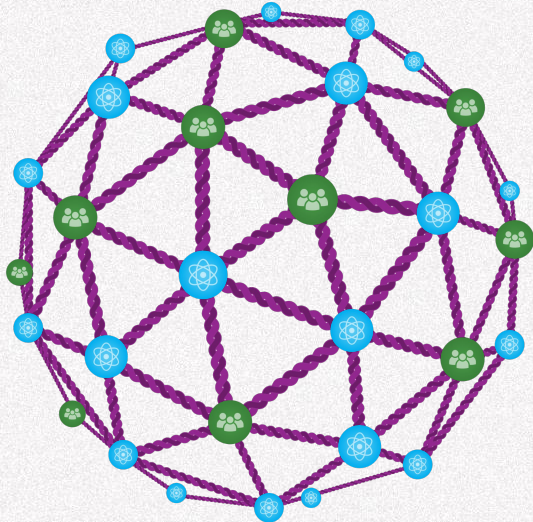
Initial Findings – Please do not quote

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**Global School Leaders ^Harvard Graduate School of Education*



Excellent schools begin with excellent leaders



GSL identifies, shares **knowledge & learning** insights, impactful and scalable and solutions to train and support SLs

GSL provides resources and support for **partner leadership organizations**

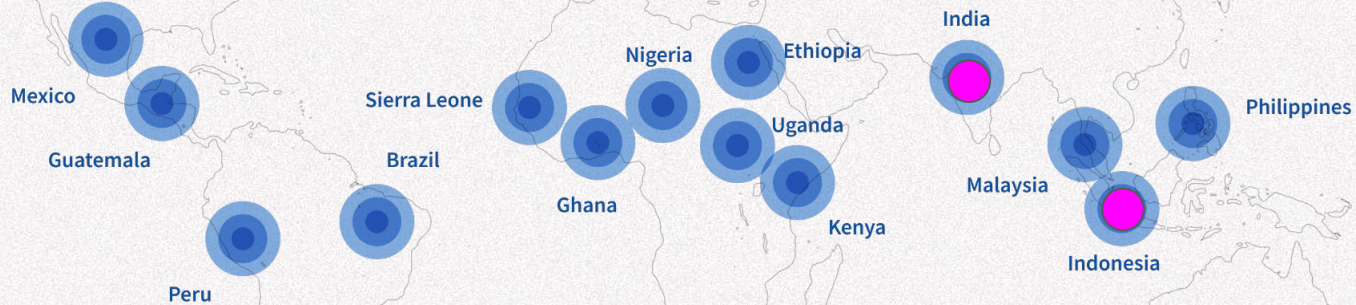
GSL **supports networks** of individuals, organizations and governments on school leadership

Improved school & teaching practices



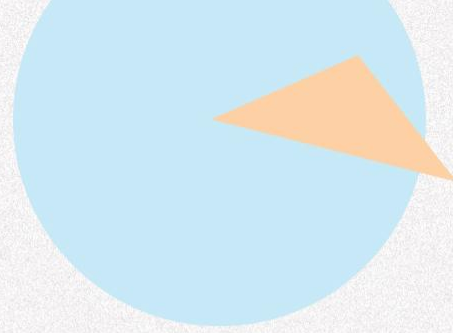
Improved student outcomes

*We have supported over 13,000 School Leaders across
Latin America, Africa, and Asia.*



Effective school leadership could improve student outcomes, but mixed-evidence on what the focus of training should be

- Effective school leadership is pivotal in enhancing student outcomes, primarily by shaping teaching practices, fostering teamwork among teachers, and boosting teacher satisfaction (*GSL Evidence Review, 2024*)
- Mixed evidence exists on which areas of SL training improve learning outcomes in LMICs (*Barros et al., 2019; Muralidharan & Singh, 2020; Romero et al., 2021; Cilliers & Habyarimana, 2021; Beg et al., 2021*)



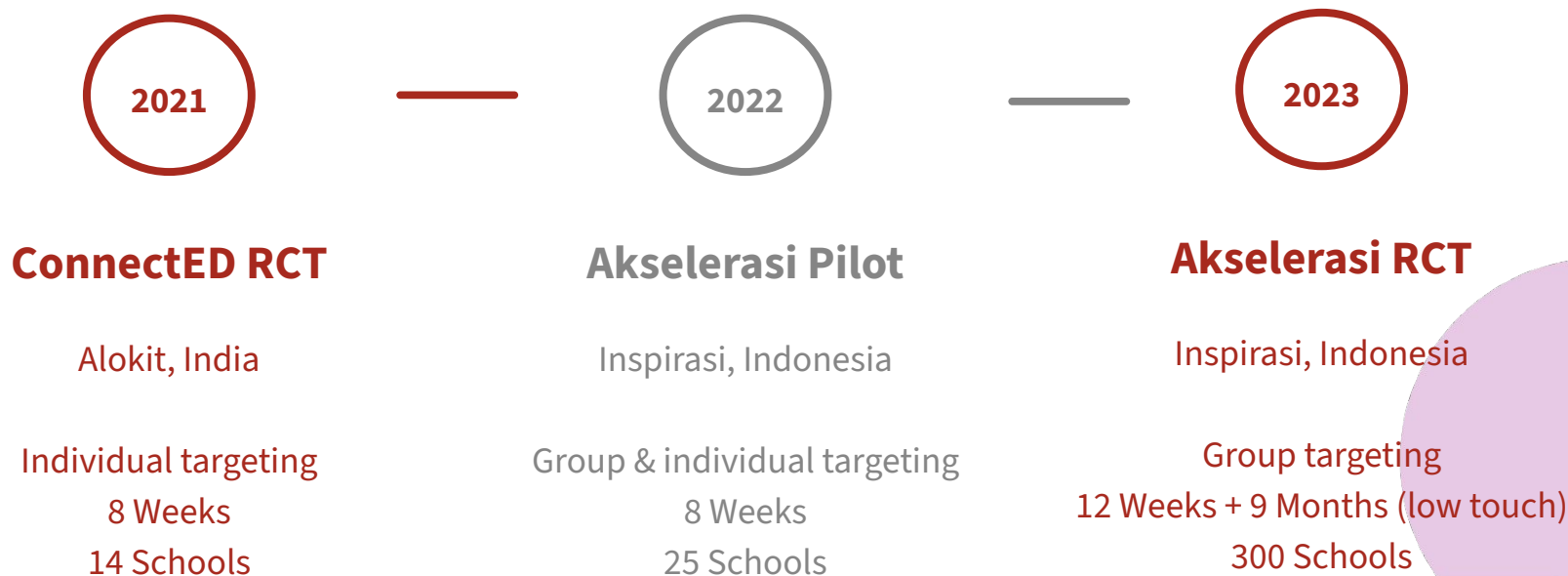
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*How can we leverage the role of school leaders
to scale effective teacher training programs?*

Differentiated Learning approaches have been largely effective in improving student outcomes

- The “Teaching at the Right Level” (TaRL) has been mostly effective in improving student outcomes through group targeting, in school and out-of-school (*Banerjee et al. 2007; Duflo et al., 2008; Banerjee et al. 2010; Duflo et al., 2011; Banerjee et al., 2016; Banerjee et al., 2017; Duflo et al. 2020*)
- But the evidence is more mixed on Differentiated Learning through individual targeting using high-tech (*Muralidharan et al., 2017*) and low-tech tutoring methods (*Angrist et al., 2022; Crawford et al., 2021*).

Iterative testing of school leaders' role in implementing Differentiated Learning approaches

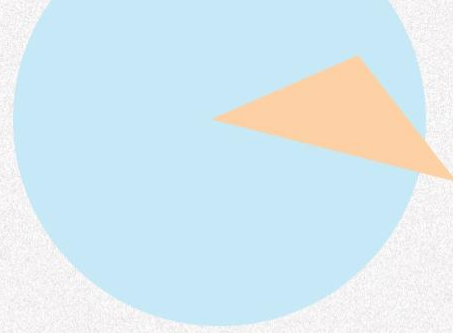


Mixed-methods research design with high-frequency monitoring

ConnectedED RCT	Akselerasi Pilot	Akselerasi RCT
<p>T: Teacher training on individual targeting through phone tutoring</p> <p>SL did not join training, but participated in implementation</p> <p>Control: No Intervention</p>	<p>Group A: Teacher training on differentiated learning in group</p> <p>Group B: A + additional individual tutoring for 10 students</p> <p>Group C: Group A + SL Training</p> <p>Group D: Group B + SL training</p>	<p>T1: Teacher training on differentiated learning in group</p> <p>T2: T1 + SL Training</p> <p>Control: No Intervention</p>

... combined with qualitative research to understand the mechanisms and pathways to improve effectiveness

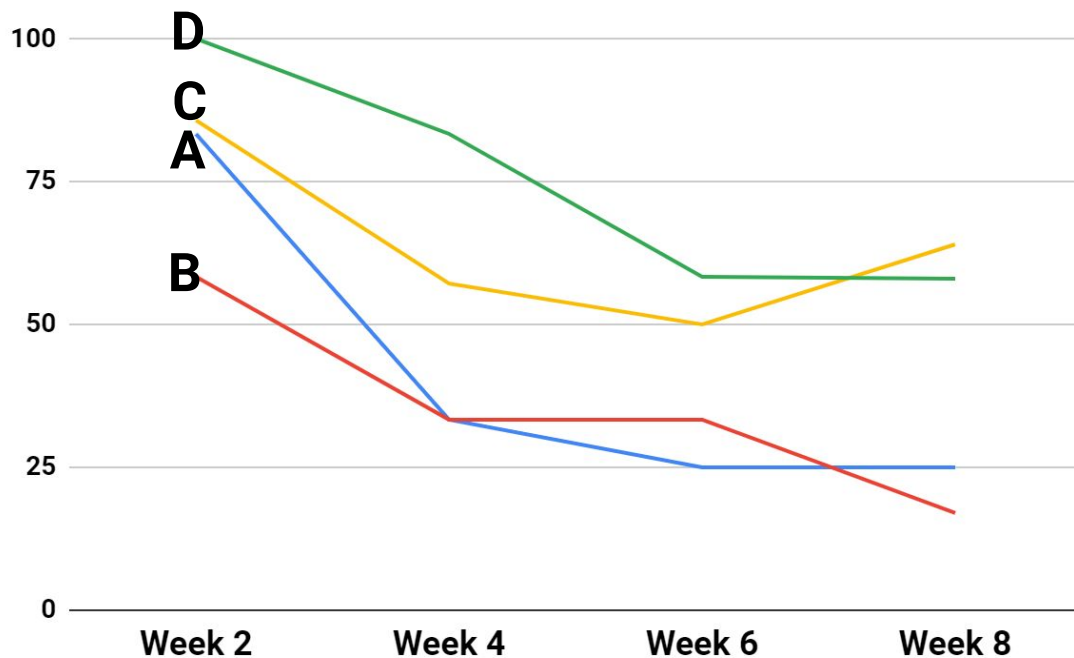
ConnectED RCT	Akselerasi Pilot	Akselerasi RCT
<p>Sampling:</p> <ul style="list-style-type: none">• All SLs• Teachers based on implementation fidelity & student outcomes data <p>1 round of data collection (endline)</p>	<p>Sampling:</p> <ul style="list-style-type: none">• 2 SLs from each from four groups based on admin student outcomes• 2 teachers from each school <p>2 rounds of data collection</p>	<p>Sampling:</p> <ul style="list-style-type: none">• 6 SLs from each of 2 districts based on implementation fidelity data <p>2 rounds of data collection</p>
<p>Semi-structured interviews:</p> <ul style="list-style-type: none">• 12 SLs• 11 teachers• 1 local government official• 1 Alokit representative	<p>Semi-structured interviews:</p> <ul style="list-style-type: none">• 8 SLs• 16 teachers• 1 local government official <p>Observations of meetings between SLs and teachers</p>	<p>Semi-structured interviews:</p> <ul style="list-style-type: none">• 12 SLs• 12 teachers• 2 local government official <p>Observations of 12 classroom</p>



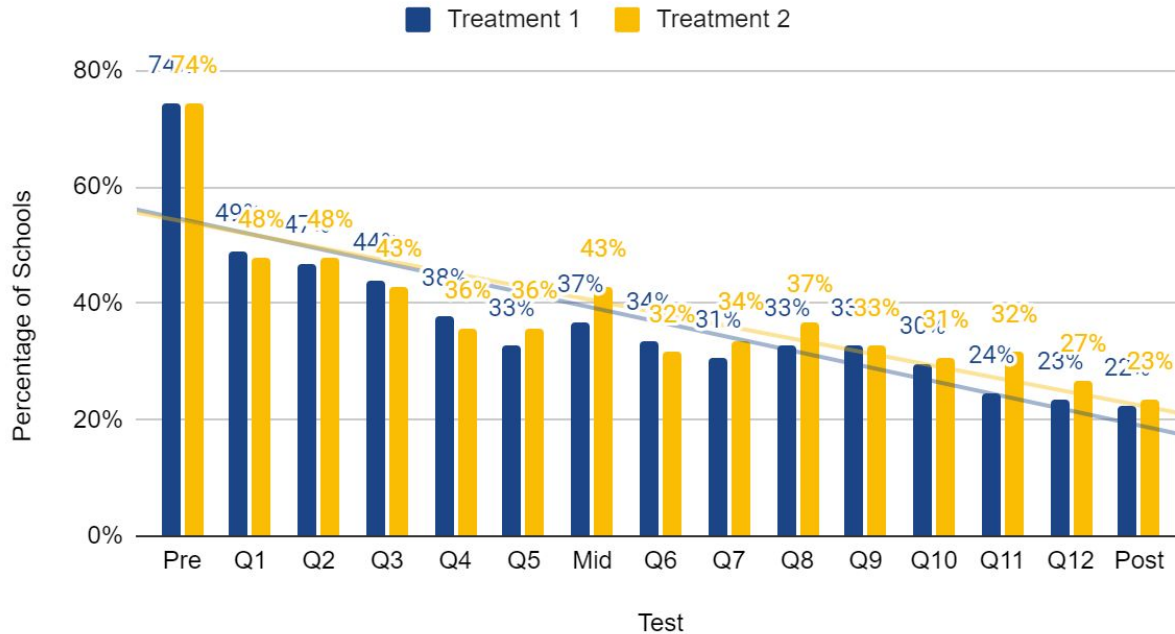
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Key Findings and Follow-up Questions

Findings 1: School leaders' ability to enhance implementation fidelity is contingent upon their capacity and motivation



In Akselerasi Pilot, teachers supported by trained school leaders (C, D) were more compliant in inputting student assessment data on biweekly basis ...



However, in Akselerasi RCT:

- The average difference is not statistically significant
- Data input compliance declined in both treatment groups at similar rates

This declining trend occurred despite different monitoring data collection methods and incentivized data inputs:

ConnectED RCT	Akselerasi Pilot	Akselerasi RCT
Data collection: Weekly student attendance and math progress 765 Students	Data collection: Biweekly student attendance and math progress 1545 Students	Data collection: Biweekly student attendance and math progress 7769 Students
Google Forms, with reminders through WhatsApp Group	Google Forms, with reminders through WhatsApp Group	Customized dialog-based data input through Discord, reminders through Discord, and incentivized through monthly challenge

Incentives initially work to motivate implementation, but not when more efforts are needed



"Because of the rewards, we were more enthusiastic." - Akselerasi RCT, T1 SL

"In the first semester, I was very motivated to earn points. I was very enthusiastic...when others shared all sorts of things, it became hard for me to find other [information], so I stopped and lost enthusiasm. I used to be very excited about earning points." - Akselerasi RCT, T1 SL

Most school leaders struggle more than teachers with technology and the time it requires to oversee and monitor implementation:

“...the principal doesn't fully understand [data input] either.” - Akselerasi RCT T2 Teachers

“I don't think we can do the data collection by ourselves that effectively, but because the [implementing NGO] was completely looking at the execution of the project and monitoring. Here in the school parallelly, if we have to do both the works it would be difficult.” - ConnectED SL

Thinking question: How do we balance the need for high frequency student data monitoring (which is crucial for Differentiated Learning programs at scale) with the capacity of teachers and school leaders?

In ConnectED, schools that performed well on the program outcomes had **school leaders who had positive attitude:**


- initially excited about the program,
- had a clear understanding of why it was being done, and
- wanted to continue it in the future

Thinking question: How can program implementation improve the participants' motivation and keep it going over time?

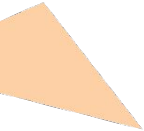
Program understanding	Initial investment	Sustainability desire
Positive	Positive	Positive
Positive	Positive	Negative
Positive	Negative	Positive
Positive	Negative	Positive
Positive	Positive	Positive
Negative	Positive	Positive
Positive	Positive	Negative
Negative	Negative	Negative
Negative	Negative	Negative
Negative	Negative	Negative
Positive	Negative	Negative
Negative	Negative	Positive

Findings 2: Mix of instructional and managerial leadership training approaches are needed based on contextual factors

ConnectED RCT	Akselerasi Pilot	Akselerasi RCT
SL component: Managerial, focusing on monitoring and implementation fidelity	SL component: Instructional, focusing on classroom observation and giving feedback	SL component: Managerial, instructional, and growth mindset. Scaffold training with practice.



Scheduling remedial learning classes was a major logistical challenge in Akselerasi Pilot. Training school leaders on how to integrate it into regular math lessons addressed this challenge.

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- In hierarchical societies with higher-power distance from the center, school leaders tend to focus more on administrative/managerial roles than instructional support (*Gumus et al., 2024*)

Thinking question: What are the knowledge, skills, and behaviors that school leaders in LMICs need in order to shift from administrative to instructional leaders and balance the two roles?

Findings 3: School leaders encounter challenges in observing classroom and providing feedback to teachers


School leaders struggle to find time. In both Akselerasi Pilot and RCT:

- Routine observations and debriefs were infrequent and sporadic
- Low observation frequency → low instructional support → low effectiveness on Differentiated Learning implementation by teachers



School leaders often do not provide any feedback, which could be due to a lack of time, but also skills

“He just came to school, observed the classroom from the back, didn’t give any suggestions, we didn’t discuss anything. He just came for 20 minutes and then left [the classroom].” - Akselerasi RCT T2 Teacher



School leaders struggle between inserting their authority and giving teacher autonomy:

*“Principal can only make suggestions, it is up to the teacher to carry out” -
Akselerasi RCT T1 SL*

“If the classroom teacher informs me about [the implementation of] differentiated lessons, I will, Insha Allah, come to observe” - Akselerasi RCT T2 SL

Thinking question: How could school leaders find more time, improve their skills, and provide direct supervision without being intrusive of teachers autonomy?

Findings 4: Contextual challenges affect school leadership and disrupt teaching and student learning

School leader transfers massively disrupted an academic year, affecting any interventions/ reforms implementation. In Akselerasi RCT, it affected 41% of the 200 schools over the one year implementation:

- 34% percent of the treatment school leaders were transferred in district 1 a few months after the start of program in the first semester (December)
- 52% percent of treatment school leaders were transferred in district 2 in the middle of the second semester (March)

School holidays and extended breaks also disrupted student learning. In both Akselerasi Pilot and RCT:

- One of 8 weeks of Akselerasi Pilot implementation was disrupted by exams for Grade 6 students (the program was for Grades 3 & 4)
- Two of 9 months of Akselerasi RCT implementation was disrupted by school and religious holidays

We have not evaluate the impact on student outcomes for Akselerasi RCT.

Thinking question: How can education ecosystem be more aligned with optimizing teaching and learning in schools?

Summary of Key Findings

Findings 1: School leaders' ability to enhance implementation fidelity is contingent upon their capacity and motivation

Findings 2: Mix of instructional and managerial leadership training approaches are needed based on contextual factors

Findings 3: School leaders encounter challenges in observing classroom and providing feedback to teachers

Findings 4: Contextual challenges affect school leadership and disrupt teaching and student learning

Thank You



**Douglas B.
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