

FINAL TECHNICAL REPORT_MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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- [VVOB education for development](#) - implementing research partner in Zambia.

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Table of contents

Executive summary4

Full technical narrative report10

1.0 The research problem10

2.0 Progress towards milestones 13

 2.1 Summary of progress towards milestones..... 13

 2.2 Initial engagement and adaptation to COVID-19 (2020) 13

 2.3 Deepening engagement, qualitative scoping research, and knowledge dissemination (2021) 13

 2.4 Formalizing agreements and expanding outputs (2022) 13

 2.5 Scaling up and enhancing research rigor (2023-2024) 14

3.0 Synthesis of research results and development outcomes 17

 3.1 Identifying significant results 17

 3.1.1 Learning question 1..... 17

 3.1.2 Learning question 2..... 18

 3.1.2.1 Formative scoping results 19

 3.1.2.2 Piloting Innovations..... 20

 3.1.3 Learning question 3..... 21

 3.5 Outcomes and impact 22

 3.5.1 *Outcomes and impact across different dimensions* 23

 3.5.2 *Gender equality and social inclusion (GESI) from the studies* 24

 3.6 Research ethics..... 27

 3.7 Potential uptake..... 27

4.0 Methodology 30

5.0 Project outputs 33

6.0 Problems and challenges 36

7.0 Administrative reflections and recommendations 38

8.0 Overall assessment and recommendations..... 39

Executive summary

The Teaching at the Right Level (TaRL) intervention significantly improves learning across diverse contexts and delivery methods, particularly when incorporating critical mentoring and teacher-support components, such as continuous professional development (CPD). However, scaling the TaRL approach in Africa presents sustainability challenges due to the potentially expensive and labor-intensive nature of teacher support. **The primary research goal of this project was to evaluate innovative mentoring and monitoring approaches within the TaRL methodology across Zambia, Nigeria, and Côte d'Ivoire**, with the overarching objective of enhancing government systems' capacity to support teachers effectively on a larger scale in resource-constrained environments. This final report summarizes our research activities and findings, contributing to the larger global education's support of low- and middle-income countries to build stronger education systems and accelerate progress toward SDG 4 on quality education. Guided by 3 key learning questions, a summary of key findings follows:

Key findings

- 1. Learning question 1: How can TaRL systems more efficiently collect and act upon learning outcomes data?**
 - **Streamlined data flow and improved efficiency:** The data collection process in the TaRL systems was revised to reduce the frequency of data reporting to the Ministry of Education from monthly to once per term. This adjustment helped to streamline the process, reducing the turnaround time and minimizing errors, making the data more manageable and actionable for decision-making at higher levels.
 - **Enhanced data and training tools:** The introduction of revised digital tools with data validation mechanisms, automated graphs, and tables, along with comprehensive training for stakeholders, led to improved understanding and use of the data. This ensured that government officials and school mentors could effectively utilize the data for mentoring, monitoring, and decision-making in the TaRL program.
 - **Systematic testing, integration, and broader adoption:** The new data collection tools and processes were systematically tested, integrated, and adopted across various locations, with collective decisions and training sessions ensuring widespread implementation. These efforts are expected to have a lasting impact on data use in resource-constrained educational settings, supporting better prioritization and decision-making.
- 2. Learning question 2: How can effective mentors within a government system be supported and selected? How can the costs and difficulties of in-person mentoring be reduced?**
 - **Identifying effective mentors for teachers:** High-quality mentoring outcomes were linked to regular proactive mentorship and regular, structured support from mentors; however, time constraints and infrequent mentor visits posed challenges. Tailoring mentorship strategies to align with these findings is crucial for effective mentor selection and support.
 - **Innovative mentoring approaches to reduce costs and enhance mentoring efficiency:** Pilot studies across Zambia, Côte d'Ivoire (CIV), and Nigeria tested remote mentoring, peer mentoring, and continuous professional development (CPD) innovations. All the studies across the 3 countries showed promising positive outcomes on teaching behavior while offering practical solutions to overcome the cost challenges of traditional in-person mentoring. For example, in our Zambia research, use of short videos

to demonstrate how to correctly do TaRL class activities showed potential to reduce the time required of mentors when supporting teachers in quick refresher trainings. Our CIV research on hybrid mentoring model, combining targeted, data-driven in-person visits with guided remote support through phone calls, showed promise in addressing challenges associated with logistical and resource constraints limiting necessary mentorship support by external mentors. And in Nigeria, our pilot research similarly identified the potential for government mentor-led remote mentoring (using phone toll-free phone lines); as well as measuring positive outcomes from an in-school teacher-led peer mentoring pilot that ensured skilled teachers could offer mentoring support to fellow teachers regularly.

- **Scalable solutions:** The success of these pilots, particularly in tech-supported continuous professional development (WhatsApp chats and sharing of materials, and short videos), remote mentoring, and peer mentoring, demonstrated the potential for broader adoption to reduce costs and logistical challenges of in-person mentoring within government systems. Successfully scaling these strategies could significantly enhance mentoring effectiveness across diverse educational contexts.

3. Learning question 3: How much support is necessary from an external Non-Governmental Organization (NGO)?

- While the large-scale studies will be completed in 2025, preliminary observations indicate that **governments are hesitant to adopt innovations that incur additional costs**, particularly when these costs are outside of their existing budgetary constraints, suggesting the need for cost-effective and system-compatible innovations.
- While some **low-cost innovations** like teacher recognition and WhatsApp engagements are being embraced, more **resource-intensive interventions**, especially those involving new technology – such as an interactive IT system (i.e., chatbots and mastery challenges) associated with our CU-CPD innovation in Zambia; and toll-free phone lines associated with remote mentoring in Nigeria – may require external technical support to integrate into existing government systems.
- **Governments** in Zambia, Nigeria, and Côte d'Ivoire have **shown interest in adopting innovations but require external support for costlier components**, highlighting the importance of collaborative efforts between governments and NGOs to implement and scale these innovations effectively.

The studies collectively show encouraging outcomes associated with innovations in technology, hybrid teacher mentoring models, and peer support to strengthen teacher mentoring. Data from Zambia has indicated a higher inclination toward technological innovations and peer support; while Nigeria and Côte d'Ivoire have shown openness to innovative remote mentoring approaches but still require in-person support. In addition, in Nigeria, teacher-peer support was also identified as a viable innovation.

Key project outcomes

Engagement with government officials from project inception also led to the following key positive results:

- **Large-scale study testing approval:** Despite COVID-19 challenges, effective stakeholder engagement and collaborative design with the governments helped to

easily secure approvals for both the pilots and large-scale testing of the innovations in Zambia, Nigeria, and Côte d'Ivoire.

- **Innovation design involving teachers:** In Zambia, Nigeria, and Côte d'Ivoire, innovations were collaboratively designed with teachers, focusing on integrating technology and in-person support, though challenges like limited smartphone access and network reliability still need to be addressed.
- **Rapid uptake of innovations:** In Zambia, the Ministry of Education implemented the teacher point system as part of their national recognition system before the study ended.
- **Accelerated program scale-up:** In Nigeria, effective collaboration and quick adaptation by local governments enabled a larger-scale pilot of the remote mentoring innovation and the spread of the teacher-led mentor innovation to more schools due to the success in the pilot.

To reach these afore-mentioned findings, we conducted a multi-phase, mixed-method research approach:

Phase 1: Formative Scoping

The first step of our research involved **formative scoping mixed-method studies with an emphasis on qualitative data collection to understand current implementation practices, and what it takes to change teacher knowledge, behaviors, attitudes, and skills**. In **Zambia**, the study focused on understanding the drivers of teaching behavior change and leveraging existing tools to sustain pedagogical shifts. This was to contribute to addressing the problem of the costs and difficulties of in-person mentoring while seeking to ensure teachers are mentored to stay motivated and effective while leveraging technology to support them. The research identified three key drivers: team-based problem-solving, verbal encouragement, and practical skill demonstrations, supported by on-site training, biweekly group meetings, off-site training, and mentoring-monitoring. The findings informed the design of the Catch Up with Continuous Professional Development (CU CPD) packages that were tested through a pilot (2022) and later in a large-scale randomized controlled trial (RCT) in 2023-2024.

In **Nigeria**, process monitoring and teacher competency assessments of the Kano Literacy and Mathematics Accelerator (KaLMA) program revealed significant gaps in teacher proficiency, with many unable to perform basic literacy and numeracy assessments. In addition, we also tested a new training and mentoring model in the Kebbi Foundational Skills Accelerated (KeFSA) TaRL that sought to deliver the training during the weekends to impart specific knowledge and then allow teachers to potentially practice those skills they have been trained on during the weekday. Overall, through process monitoring data collection, we observed low attendance and minimal improvements in the teachers literacy and numeracy skills. The program further identified challenges in achieving periodic, quality, and effective mentoring due to low monitoring and mentoring capacity, as well as logistical constraints such as transportation costs, as issues for mentors. These findings reinforced the need for effective mentor support for teachers, given knowledge gaps and identified opportunities for innovation to increase the frequency and effectiveness of mentor delivery to teachers.

In **Côte d'Ivoire**, a qualitative survey of TaRL practitioners and stakeholders (teachers, principals, and teachers' external mentors) highlighted enthusiasm for the TaRL approach but identified challenges. External mentors are more effective mentors, given the feedback that they provide, but they do not visit schools as much as expected, as they oversee many schools. Further, sometimes the mentors tend to take on a supervisory role, jeopardizing the effectiveness of mentoring. In such scenarios, teachers may feel judged rather than

supported. On the other hand, mentors expressed a desire to get a better understanding of the school-level data they help collect and potentially get insight from this data that would help their mentoring, such as which schools to prioritize for mentoring.

Phase 2: Piloting Innovations

In response to the formative research and to inform and optimize mentoring during upcoming scale-up plans, **the team then piloted teacher support innovations in Zambia, Nigeria, and Côte d'Ivoire.** In **Zambia**, the Catch Up Continuous Professional Development (CPD) innovation involved WhatsApp groups for communication and material sharing, biweekly Teacher Group Meetings (TGMs), instructional material sharing, biweekly 'Mastery Challenges' (questions to assess how well teachers understand specific Catch Up activities), and a recognition system for teacher participation. The pilot showed positive outcomes, with promising changes in teaching behavior.

In **Nigeria**, to address challenges identified in the formative phase, a remote mentoring model was designed and piloted. In the first pilot, the learning objective was to design the model and test its operational viability, including cost considerations, accessibility, and user preferences related to modes of remote mentoring delivery (phone calls, text messages, and WhatsApp communication). This initial pilot was conducted by TaRL Africa-based mentors with support from government mentors.

The operational pilot results demonstrated the feasibility and cost-efficiency of this model, though it also revealed constraints like inconsistent engagement and technological barriers like limited or no use of WhatsApp. Overall, phone calls proved to be the most effective mode of remote-mentoring delivery. Building on these findings, a second operational pilot study in 10 schools is underway (April - December 2024) using toll-free phone call lines for school support officers (SSOs) and teachers to speak for mentoring support, implemented in this iteration by government mentors. This is to further evaluate the model's potential effectiveness and sustainability on a scale.

Additionally, in Kaduna State, to address the challenge of limited government mentor (SSO) school visits and teacher need for ongoing TaRL support, a school-based teacher-led peer mentoring innovation was designed and tested at the pilot stage for impact using a small-scale but rigorous research design and measured student-learning outcomes (see details on the results below in the *Phase 3: Evaluating Implementation & Impact* section).

In **Côte d'Ivoire**, government-appointed mentors called pedagogical advisors (PAs) were trained to analyze school data to prioritize in-person school visits and to mentor schools remotely (making phone calls to teachers). The innovation entailed first training the PAs on how to use simple paper templates to analyze and use school-level student TaRL approach assessment data to help mentors identify priority schools or teachers to visit or call for mentoring. The choice of schools / teachers the mentors would prioritize for in-person or remote mentoring was to be based on the share of students who fail national exams, the share of students at beginner level- ASER French, school size, remote school, and the presence of special classes. The pilot was implemented in 2024 after an extensive period of design, with the goal of testing the PAs understanding of the new mentoring structure and testing the training approach.

Overall, the **appetite for innovation was evident across all three countries.** The positive pilot outcomes highlighted:

- 1) Teachers are open to and seek additional support to implement TaRL effectively in the classroom but often need more mentoring than is currently taking place;

- 2) Remote mentoring (phone calls and messages) holds potential to complement in-person mentoring and monitoring;
- 3) There is potential for continuous professional development (CPD) initiatives through the use of technology (WhatsApp and videos);
- 4) There is an opportunity and need to utilize available resources at the school level to support teachers sustainably; this includes teacher peer mentoring, teacher group meetings, and communities of practice;
- 5) There is opportunity and a need to increase mentor-teacher engagements, but barriers to in-person visits require mentors to prioritize and target their mentoring through data use and hybrid support models; and
- 6) There is potential to incorporate non-monetary recognition of outstanding TaRL program teachers as a way of motivating better delivery.

Phase 3: Evaluating Implementation & Impact

After incorporating adjustments to respond to pilot findings, **the research team rolled out rigorous studies to test the innovations' impact or implementation feasibility for larger policy-scale changes.** Due to delays from COVID-19 and subsequent timing challenges associated with government policy changes and TaRL program rollout schedules, not all studies reached a conclusion by the end of the grant period. Research will continue beyond this grant period, with findings and conclusions anticipated in late 2024 and 2025 for many of the rigorous studies.

In **Zambia**, TaRL Africa collaborated with an external academic for a large-scale RCT evaluating the impact of the Catch Up (TaRL) model as well as a Catch Up CPD innovation. Initial baseline survey findings indicated low student performance in mathematics and literacy, with no significant gender differences. Additionally, process monitoring data revealed a gender-balanced student sample and active engagement in professional development by both female and male teachers, highlighting the need for tailored CPD approaches. The study endline will take place late 2024 and results are anticipated in 2025. These results will be captured in a technical research report and a policy brief. Further, an academic paper will be written for publication. The dissemination of the learnings to the government is anticipated to take place through stakeholder meeting(s) and hybrid presentations from Q3 of 2025 during which they will also receive copies of the research report, policy brief, and PowerPoint presentation(s). *The dissemination plan for the remaining pending research findings is outlined on section 3.7 of this report.*

In **Nigeria**, a small-scale pilot study was conducted in Kaduna State to test a school-based teacher-led peer-mentoring program aimed at addressing a gap in teacher training time for TaRL and limited teacher mentoring support. Mentors from the Local Government Education Authority (LGEA) known as SSOs rarely visited the schools due to issues like distance, transportation costs, and mentor competency. To overcome this mentoring gap, the program identified schools with teachers who had mastered TaRL and organized peer-led mentoring sessions to ensure contextual relevance. The six-month program, which included 122 mentoring sessions across 30 TaRL classes, resulted in over a 50 percentage point improvement in students' ability to perform subtraction and division, and over an 80 percentage point improvement in reading Hausa or English sentences. Based on these promising results, the Kaduna state government began exploring expansion of the peer mentoring model; and some schools initiated the program on their own after seeing the results.

In **Côte d'Ivoire**, following an afore-mentioned successful pilot, a large-scale randomized study was designed with an external academic to evaluate the effectiveness of a hybrid mentoring innovation that provides school data and a planning tool to mentors, to help

them target priority in-person school visits and schools that can be mentored remotely (with a guide). Results studying outcomes of mentor behavior after the first year of implementation are anticipated in October 2024. Based on these results, the program may continue for an additional year, and if funding is secured, an endline data collection will be undertaken in May 2025 to measure the impact of the innovation on student learning outcomes.

Combined across the three countries, this research offered insights on both common themes associated with TaRL teacher support and mentoring, as well as highlighting findings about contextual differences that led to different innovative solutions. For example, data from Zambia indicated a higher inclination toward technological innovations and peer support; while Nigeria and Côte d'Ivoire showed openness to innovative remote mentoring approaches but still required in-person support. In addition, in Nigeria, teacher peer support was identified as a viable innovation.

While there were some observed Gender Equality and Social Inclusion (GESI) differences identified in the pilots and baseline data, the studies' conclusions on GESI cannot be shared until the end of the studies in 2025 (beyond the grant period). These will include GESI impact differences due to the innovations currently being tested. Further, governments adoption and policy uptake showed a tentative positive uptake during the project but will be analyzed further in line with the learning questions, cost-effectiveness analysis for the RCT, and subsequent dissemination of policy recommendations to government partners. These analyses will be built into future KIX research reports and policy briefs when possible, including new IDRC-KIX funded research.

Conclusion

At each phase in the study's research process, the team sought to share and promote the uptake and use of data and findings.

- The **Zambia** pilot and process monitoring from the on-going RCT showed that there is potential in team-based problem solving, verbal encouragement, and practical demonstrations to drive teacher behavior change and effective data use, leveraging the existing on-site training system for cost-effective impact.
- In **Nigeria**, we saw demand for government mentor-led remote mentoring and teacher-led peer mentoring, allowing for larger-scale testing and adaptation with enhanced technical rigor to inform conclusive policy recommendations to be made after the end of the study.
- Research in **Côte d'Ivoire** highlighted that, while teachers were enthusiastic about the TaRL approach, effective mentoring was hampered by logistical constraints and limited mentorship support from external mentors. The hybrid mentoring model, which combines in-person visits with data-driven remote support, showed promise in addressing these challenges. Initial findings from the pilot suggested this innovation could enhance mentor prioritization and effectiveness, with further results expected in 2025 to inform potential larger-scale implementation.

Overall, the studies demonstrated promising results in leveraging technology, hybrid delivery models, and peer support to enhance teacher mentoring. Upon conclusion of the studies that will be completed beyond this project period, we will incorporate any additional learning from the research into our findings to further refine the innovations for broader implementation.

Full technical narrative report

1.0 The research problem

A series of Randomised Control Trials (RCTs) have shown that the Teaching at the Right Level (TaRL) intervention improves learning across contexts and delivery methods, and these studies have revealed that TaRL is found to be effective when it has important mentoring components. However, in the context of current implementation conditions, the traditional mentoring approaches such as in-person coaching and teacher Continuous Professional Development (CPD) which is dependent on periodic off-site trainings risk being unsustainable at scale in Africa due to the potentially expensive and onerous (but critical) teacher support components needed for TaRL as well as the education system at large.

The primary research goal of this project remained consistent from the inception of the study. Specifically, the research aimed to assess innovative approaches within the mentoring and monitoring systems of the TaRL methodology across Zambia, Nigeria, and Côte d'Ivoire. The overall objective of this grant was to *test innovations in teacher mentoring and monitoring systems to scale up a proven approach to enhance learning for students with different abilities in Côte d'Ivoire, Nigeria, and Zambia*. While the central focus lay on strengthening and innovating elements of teacher support, the ultimate aim was to positively influence student outcomes (aligning with Sustainable Development Goal 4.1.1), while monitoring for equity in results by gender.

Findings related to the scoping and piloting phases of teacher support innovations are featured in sections 3.1.2.1 Formative Scoping Results and 3.1.2.2 Piloting Innovations.

In general, the initial phases of this project collectively show encouraging outcomes associated with innovations in technology, hybrid teacher mentoring models, and peer support to strengthen teacher mentoring. Data from Zambia has indicated a higher inclination toward technological innovations and peer support; while Nigeria and Côte d'Ivoire have shown openness to innovative remote mentoring approaches but still require in-person support. In addition, in Nigeria, teacher-peer support was also identified as a viable innovation.

Findings related to final student learning outcomes and impact, measured in the project's large-scale rigorous research activities, are largely still pending due to extended study timelines beyond the project end date. However, **more details about the ongoing research and anticipated outcomes are described in sections 3.5 and 4.0.**

Additionally, a pilot study in Nigeria was completed during the project period and offered key insights on student learning outcomes. The innovation, a teacher-led school-mentoring model, resulted in over a 50-percentage point improvement in students' ability to perform subtraction and division, and over an 80-percentage point improvement in reading Hausa or English sentences. Based on these promising results, the Kaduna state government began exploring expansion of the peer mentoring model; and some schools initiated the program on their own after seeing the results.

Findings related to Gender Equality and Social Inclusion (GESI) outcomes and impact are also still pending due to extended study timelines. Upon conclusion of the studies, we will analyze GESI impact differences due to the innovations currently being tested.

However, throughout the course of this project, we also endeavored to disaggregate and track **GESI descriptive data to understand and monitor indicative trends across genders**

in order to ensure innovations do not adversely disadvantage a gender and to learn more about potential variance within study results associated with gender.

In general, we found that our RCT baseline data revealed no significant gender differences in low student performance in mathematics and literacy, despite variations across provinces, poverty levels, and home languages. However, differences by gender were observed in teacher experiences and engagement associated with continuous professional development. Additionally, in CIV research, data collected throughout the project showed a decline in women's representation as responsibility levels in formal education jobs increased, necessitating – among other things – deeper gender-focused future analysis to assess differences in mentoring practices and perceptions of the TaRL approach and a continued need to address existing gender imbalances among government positions in education. **More detail on descriptive GESI results can be found in Section 3.5.2.**

Findings related to scalability indicated that engagement with government officials from project inception led to positive results, including: (i) Rapid uptake of innovations: in Zambia, the Ministry of Education implemented the teacher point system as part of their national recognition system before the study ended. Accelerated program scale-up. (ii) In Nigeria, effective collaboration and quick adaptation by local governments enabled a larger-scale pilot of the remote mentoring innovation and the spread of the teacher-led mentor innovation to more schools due to the success in the pilot (see Section 3.1.1 for more information).

Further, governments' adoption and policy uptake showed a tentative positive uptake during the project, but will be analyzed further in line with the learning questions, cost-effectiveness analysis for the RCT, and subsequent dissemination of policy recommendations to government partners. These analyses will be built into future KIX research reports and policy briefs when possible, including new IDRC-KIX funded research.

Our study outlined a comprehensive research portfolio that continuously refined the TaRL mentoring and monitoring models, aiming to render them more cost-effective for seamless implementation within large-scale, resource-constrained government systems.

We identified the following research questions:

1. How can effective mentors within a government system be supported and selected?
 - a. Who should mentor teachers?
 - b. How should these mentors be trained?
 - c. Who supports the mentors?
2. How can the costs and difficulties of in-person mentoring be reduced?
 - a. How often must teachers be mentored to stay motivated and effective?
 - b. Can technology help support teachers?
3. How can TaRL systems more efficiently collect and act upon learning outcomes data?
 - a. How can learning assessment data be collected more efficiently?
 - b. How can we help the system to better understand and act on this data?
4. How much support is necessary from an external Non-Governmental Organization (NGO)?

The research strategy outlined encompasses several key phases. Initially, comprehensive mixed-method formative scoping and qualitative analysis activities were conducted to gain deeper insights into the intricacies of the education systems and key stakeholders

involved in teacher support. Subsequently, in the next years (2 and 3), our focus shifted towards identifying potential innovative solutions to enhance teacher support in a financially efficient manner. This led to the design and implementation of pilot initiatives, culminating in the rigorous evaluation of these innovations in two out of the three targeted countries and a small-scale rigorous pilot study as well as operational pilot testing in the third country over year 3 and year 4.

Despite the research problem and focus remaining unchanged, due to the effects of COVID-19 on school closures as well as delays in government scale-up of TaRL, the team adjusted the timelines for the Zambia study and redesigned the studies in Nigeria and Côte d'Ivoire.

In **Zambia**, the large-scale evaluation completed a baseline and two rounds of process monitoring at the time of the grant close-out. The endline is expected to conclude in December 2024, and these results will be shared with IDRC, government partners, and various stakeholders in 2025. While we were unable to fully complete this study due to aforementioned delays, there is ongoing engagement with government partners in preparation for policy uptake of the results.

In **Nigeria**, the high demand for remote mentoring, particularly in the Local Government Areas (LGAs) we served, allowed us to lead in innovation by iteratively testing a remote mentoring scaled pilot study with government mentors. Further, the demand for continuous teacher support in a context with minimal mentor in-person visits led to an innovation supporting teacher-led peer mentoring, which showed significant impact in a rigorous small-scale pilot study. Our adaptability enabled us to gather additional data, enhancing rigor and demonstrating tangible impacts on learner outcomes.

In **Côte d'Ivoire**, conducting research for national programs was complex. Our strong relationship with the Ministry of Education allowed us to respond to emerging needs promptly. However, large-scale government-led programs presented challenges with dynamic timelines and policy changes. Our collaboration with government partners ensured we stayed informed and could adjust our research plans accordingly. This ensured our findings were relevant and influenced future Ministry of Education plans.

These adjusted designs helped us build partners' capacity, involve government officials in research decisions, create immediate scaling pathways, and share crucial results with the TaRL Africa community and GPE country governments through international education connections.

Despite these changes, the team was partially able to meet the main research objective to learn how to help government systems better support teachers at scale, even in settings with resource constraints. That is, we were able to identify teacher support gaps and potential innovations across the 3 countries and test them at scale (Zambia and Côte d'Ivoire) and small scale (Nigeria) to inform stakeholders and policy changes. These findings are discussed further in the next sections.

2.0 Progress towards milestones

2.1 Summary of progress towards milestones

Overall, we maintained great progress towards the target milestones during the study period. In 2020, the project focused on securing government buy-in across Zambia, Nigeria, and Côte d'Ivoire despite the challenges posed by COVID-19. In 2021, deeper collaboration led to the integration of TaRL innovations into government systems and the production of key knowledge products. In 2022, the project formalized agreements and expanded outputs, including significant policy briefs and research presentations.

From 2023 to 2024, the project scaled up and enhanced research rigor, with Zambia conducting a full randomized controlled trial on continuous professional development (CPD) innovations and publishing baseline findings. In Nigeria, innovations were tested at a larger scale, including a successful pilot of teacher peer mentoring that was later expanded. In Côte d'Ivoire, delays impacted timelines, but the final RCT design was implemented, with baseline and follow-up surveys conducted in 2024, leading to the ongoing operational study on a hybrid mentoring of teachers that combines in-person visits and remote mentoring informed by data.

2.2 Initial engagement and adaptation to COVID-19 (2020)

In 2020, IDRC funded TaRL Africa and Massachusetts Institute of Technology (MIT)'s Abdul Latif Jameel Poverty Action Lab (J-PAL) to conduct research on "learning how to improve mentoring and monitoring support to teachers at scale in African government systems," with initial project activities focused on securing government buy-in across Zambia, Nigeria, and Côte d'Ivoire. The primary aim was to introduce the research study and align with government and implementing partners. This was achieved through hybrid meetings that facilitated stakeholder understanding and approval for the initial scoping exercises. The COVID-19 pandemic significantly affected the research timeline, necessitating shifts from in-person to remote data collection methods, particularly in Zambia. Despite these challenges, the groundwork for stakeholder engagement and data collection was established, setting the stage for subsequent years.

2.3 Deepening engagement, qualitative scoping research, and knowledge dissemination (2021)

In 2021, the project advanced from initial buy-in to deeper government collaboration and ownership, particularly in Zambia and Côte d'Ivoire. More workshops and hybrid sessions were held to integrate TaRL innovations into government systems. In Nigeria, engagement included international funders and implementers due to the country's federal structure and the role they play. The year saw the production of significant knowledge products, informed by qualitative work that resulted in a white paper on 'What Drives Teachers to Change Their Instruction? A Mixed-Methods Study from Zambia' ([here](#)) and a draft policy brief. The findings were shared with the Zambia Ministry of Education and presented at the Research on Improving Systems of Education (RISE) annual conference ([presentation](#) and [video](#)). The COVID-19 pandemic continued to affect research activities, but increased vaccine availability and better understanding of the virus allowed for more in-person engagements and workshops, enhancing visibility and momentum for the TaRL initiative.

2.4 Formalizing agreements and expanding outputs (2022)

In 2022, with reduced COVID-19 restrictions, the focus shifted to updating study plans, formalizing agreements, and securing letters of support to scale TaRL innovations in

Zambia and Côte d'Ivoire. Nigeria saw proactive engagement with State Universal Primary Education Board (SUBEB) officials to integrate innovations into their systems. During the year scoping work was done in Zambia and Côte d'Ivoire. Ultimately the year produced notable outputs, including a policy brief from Zambia on 'What Drives Teachers to Change Their Instruction? A Mixed-Methods Study from Zambia' ([here](#)) and a blog from Côte d'Ivoire on 'Mentoring Teachers: What needs to change? Evidence from a qualitative research of the Teaching at the Right Level (TaRL) approach in Côte d'Ivoire' ([here](#)). These outputs were presented at the GPE KIX Continental Symposium for Education Research and Innovation, 2022. Nigeria faced challenges due to presidential elections, which disrupted school operations and delayed implementation timelines. However, the situation stabilized, and educational activities resumed, allowing the project to continue its efforts towards governmental engagement and innovation integration.

2.5 Scaling up and enhancing research rigor (2023-2024)

By 2023, the project aimed to test innovations in mentoring and monitoring within the TaRL approach.

Zambia made significant progress by conducting the baseline survey and initiating a full randomized controlled trial (RCT). Key outputs included a baseline report from Zambia. The full baseline report titled '*A randomized evaluation of the catch-up program in Zambia: baseline report*' was published in April 2023 and is available [here](#). In August 2023, during a meeting with the government to disseminate pilot findings and scale-up plans, the government reaffirmed its commitment to using the research findings for informed decision-making. A subsequent meeting in December 2023 focused on re-training Catch Up Continuous Professional Development (CU-CPD) teachers. Further, a presentation of the qualitative study findings and linkage to policy uptake took place at the Comparative and International Education Society (CIES) conference in March 2024 ([here](#)), and a webinar was organized by TaRL Africa in May 2024 to share research and experiences with teacher support, including Zambia findings.

As part of the research, a small-scale process monitoring was conducted in November 2023, covering 72 out of the 273 schools sampled for the study. A full process monitoring of all 273 schools is scheduled for June 2024. The results are currently being analyzed and will be disseminated to the government and other stakeholders. The endline survey will be conducted in October 2024. We anticipate at least one peer-reviewed publication from the Zambia research.

Nigeria experienced rapid governmental support, enabling the ability to test out innovations at a slightly larger scale than initially envisioned. TaRL Africa presented high-level findings at the International Conference on Education Research for Development in Africa (ICERDA) in Ghana. The presentation, titled 'Teaching at the Right Level (TaRL): A Means of Improving Teachers' Practice in Nigeria,' highlighted insights from the scoping work in the first two years of the grant period ([here](#), page 29). Despite the sensitivity of our findings in the Nigerian context and the challenge of engaging the government further, especially in year 3 due to government changes and elections, the project continued to adapt. It focused on both immediate and long-term outcomes to ensure the sustainable impact of the TaRL methodology.

To learn more on innovative ways to address the challenges a small-scale pilot study on teacher-led peer mentoring was conducted in Kaduna state, Nigeria. Following the success of the pilot, the government showed interest in the innovation by deciding to scale it up to

10 additional schools. Overall, the pilot tested a school-based teacher peer mentoring program aimed at addressing gaps in teacher training time for TaRL and limited teacher mentoring support. The findings of the small-scale pilot were presented at two international conferences: the [Comparative and International Education Society \(CIES\)](#) and [SALEX](#) conferences, both held in March 2024.

Further, to address challenges identified in the formative phase of the project in Nigeria, a remote mentoring model was also designed and piloted. In the first pilot, the learning objective was to design the model and test its operational viability, including cost considerations, accessibility, and user preferences related to modes of remote mentoring delivery (phone calls, text messages, and WhatsApp communication). This initial pilot was conducted by TaRL Africa-based mentors with support from government mentors.

The operational pilot results demonstrated the feasibility and cost-efficiency of this model, though it also revealed constraints like inconsistent engagement and technological barriers like limited or no use of WhatsApp. Overall, phone calls proved to be the most effective mode of remote-mentoring delivery. Building on these findings, a second operational pilot study on mentoring using toll-free phone lines was launched in 10 schools in Kebbi State in April 2024. The study involved 5 government school support officers mentoring the teachers via toll-free lines, allowing both mentors and teachers to make free calls. The study design included four rounds of data collection, with the first round in June 2024 and subsequent rounds in the fourth quarter of 2024. The study is scheduled to conclude in December 2024 and findings shared with the government in the first quarter of 2025.

Additionally, in Kaduna state, to address the challenge of limited government mentor (SSO) school visits and teacher need for ongoing TaRL support, a school-based teacher-led peer mentoring innovation was designed and tested at pilot stage for impact using a small-scale but rigorous research design, measured student-learning outcomes (see details below).

In **Côte d'Ivoire** the formative qualitative and quantitative scoping pilot was completed in April/May 2023 after an extensive period of design, with the goal of testing the PAs understanding of the new mentoring structure, and testing the training approach. A draft policy brief was developed presenting key findings on the perceptions of data-driven mentoring by teachers' mentors, challenges faced during the implementation of the pilot, refinement needed for the intervention, and lessons learned for scaling up this pilot into a full randomized evaluation study.

In June and July 2023, the final innovation model was refined with government partners in workshops, and the full RCT design was finalized. However, Côte d'Ivoire faced delays as the Ministry of Education spearheaded and led the national scale-up planning and roll out. These delays had a direct impact on the study timeline, as it was originally synchronized with programme training and roll-out plans. As a result, mentors training on data use to inform in-person and remote mentoring was conducted in February 2024. Consequently, the full randomized evaluation study began in March 2024 with the baseline survey being conducted in March 2024 and a follow-up survey in May 2024.

Results from the May 2024 data collection will complete an operational study of the innovation. The operational study covers over 400 schools, randomly allocated to either control or treatment groups, in the Divo and Soubre regions of Southwest Côte d'Ivoire. The study looks at testing if the choice of schools / teachers the mentors would prioritize for in-



person or remote mentoring was to be based on share of students who fail national exams, share of students at beginner level- ASER math, share of students at beginner level- ASER French, school size, remote school, and presence of special classes would have an impact on teacher behavior and learning outcomes. Over 120 mentors were trained on the innovation, and data sources included surveys from mentors, headteachers, teachers, and over 4,000 learners to assess implementation fidelity and outcomes. TaRL Africa is in the process of mobilizing resources to conduct a small-scale process monitoring survey for the Côte d'Ivoire randomized evaluation in November 2024, and a full endline in May 2025, which will measure student learning outcomes for impact.

3.0 Synthesis of research results and development outcomes

3.1 Identifying significant results

The TaRL Africa project identified significant results and potential long-term outcomes within the 4 years of the study. Below the findings are broken down by thematic learning questions we identified based on the project work:

3.1.1 Learning question 1

1. How can TaRL systems more efficiently collect and act upon learning outcomes data?

We learned that TaRL systems can more efficiently collect and act upon learning outcomes data when: - (i) the frequency of data reporting from schools was reduced from monthly to once per term, as detailed monthly data was deemed most useful at the school level, with higher levels needing less frequent updates. (ii) Digital tools were also enhanced with data validation mechanisms and automated visualizations to improve data accuracy and usability.

These findings are explored further below.

Through our efforts, we achieved significant improvements in data collection and usage, including faster turnaround times, a reduction in errors, and a better understanding and application of the Teaching at the Right Level (TaRL) data by government officials. These improvements are critical for driving priority decision-making in resource-constrained contexts and for monitoring the outcomes of TaRL.

This was essential to learn, as accurate data collection and usage are central to the TaRL theory of change. Not only is assessment data used for grouping students by learning level, but it also serves as a crucial tool for informing decisions and tracking progress. To ensure the successful scaling of the TaRL program to more schools, it was essential to address existing challenges in the data collection process.

This was achieved by the TaRL Africa Monitoring, Measurement, and Review (MMR) team collaborating with governments in Zambia, Nigeria, and Côte d'Ivoire, as well as other partners, to understand their concerns and gather ideas for improving data collection and use.

In **Zambia**, government officials highlighted specific challenges in the data collection process, which we addressed as part of our responsive systems strengthening efforts:

1. The data collection process involved teachers assessing the children, school-based mentors compiling the data at the school level, and the data going through different government cadres compiling and sharing this data at the national level. The data collection process was becoming tedious given so many layers, and any error in the data had to be corrected by sending the data back to the lower level, which meant that the turnaround time of the data was high.
2. The government officials involved in the data collection process struggled to understand the data and use it for decision-making.

To address these challenges, the TaRL Africa team, along with the Zambian government counterparts and partner organizations decided to review and revise the existing data recording tools and processes. The group attended several workshops and brainstormed

access to critically review the data collection tools. From these exercises, the following key changes were made:

1. The frequency of the flow of data from schools was reduced from once every month to once every term. The group felt that the detailed monthly progression data was most useful only at the school level and did not need to flow up. For higher levels, it was enough to track progress once every term. Some indicators that were not useful were removed.
2. The digital tools were tweaked to include data validation mechanisms that highlighted errors in the data. Additionally, automated graphs and tables were included.

After the tools were revised, a process of testing and integrating them into sample schools and locations was established. This involved workshops and training to ensure all the relevant stakeholders were aware of the changes and found the new tool useful. That is:

1. Conducting orientations for the selected schools implementing the TaRL Africa program.
2. Selected schools and locations recompiling the baseline and midline data using the new tools.
3. Holding material review workshops for selected schools to share their experience working with the new tools.
4. The officials of other locations not used in the sample pilot reviewing the new tools and collectively deciding to adopt the new tools in all TaRL-implementing schools.
5. A collective decision that a session on 'data understanding and use' would be included in all levels of TaRL training.
6. Training on new tools and processes in all TaRL-implementing locations. This included action-oriented case studies on how to understand and use the data for decision-making.

These adjustments have already resulted in improved turnaround times, a reduction in errors, and a better understanding and usage of the TaRL data by government officials. These changes are expected to impact the long-term use of data by governments within the education sector.

Data collected during our formative scoping phase from government mentors in **Côte d'Ivoire** also further highlighted both the need, demand, and opportunity to encourage supportive and innovative use of data for prioritization and to build efficiencies in resource-constrained environments (see section 3.1.2.1).

3.1.2 Learning question 2

2. **How can effective mentors within a government system be supported and selected? How can the costs and difficulties of in-person mentoring be reduced?**

When it came to identifying effective mentors and supporting them to carry out in-person mentoring, we found the two research questions converging. **Through merging the two main learning questions, our research revealed that the effectiveness of mentoring in improving teaching behaviors in Zambia and Cote d'Ivoire was influenced by several factors.**

In Zambia, key drivers of change included team-based problem-solving, verbal encouragement, and practical demonstrations, supported by on-site training, biweekly group meetings, off-site training, and mentoring-monitoring. However, in Nigeria, a gap in program delivery was identified, mainly due to low teacher competency, with many

teachers struggling to perform basic literacy and numeracy assessments. In Côte d'Ivoire, high-quality implementation was linked to proactive headteacher mentorship and coordination, although headteachers faced time constraints due to administrative duties. Pedagogical Advisors provided valuable feedback during their visits but expressed a need for more data-driven insights to better plan their mentoring visits. Teachers in Cote d'Ivoire also struggled with aspects of the PEC methodology, including session planning, activity selection, and classroom facilitation, often relying on familiar activities and rarely conducting small group activities.

Based on these findings, the governments, implementing partners, and the research team collaboratively designed, piloted, and are in the process of evaluating innovations to address the identified challenges.

- In Zambia, the Catch Up Continuous Professional Development (CPD) innovation was launched, focusing on enhancing teacher engagement through WhatsApp and a points system.
- In Nigeria, three innovations were created: (1) a new training and mentoring model that provided weekend training to impart specific knowledge, followed by practice during the week; (2) a school-based teacher peer mentoring program to address the gaps in teacher training time for TaRL and the limited teacher mentoring support; and (3) remote-based mentoring.
- In Côte d'Ivoire, the team designed and tested an innovation that strategically used data (a template for collecting and analyzing school data) to inform in-person mentoring as well as phone-based remote mentoring.

These findings are explored further below.

3.1.2.1 Formative scoping results

The first step in this research process was to conduct formative scoping mixed-method and qualitative work to understand what it takes to change teacher knowledge, behaviors, attitudes, and skills.

In **Zambia**, the study aimed to understand the drivers of change that shift teaching behavior and leverage existing tools to sustain pedagogical shifts. The research team conducted a qualitative descriptive study involving teachers and support staff from 12 randomly selected schools delivering the Catch Up program in Eastern and Southern Provinces. A total of 103 roles were sampled, involving 83 individuals.

Interview data identified three common reasons for changes in teaching behaviors: team-based problem-solving, verbal encouragement and discussions, and acquiring new skills through practical demonstration. On-site training, biweekly group meetings, off-site training, and mentoring-monitoring were key enablers of these drivers of change.

In **Nigeria**, the study conducted process monitoring and teacher competency assessment of the Kano Literacy and Mathematics Accelerator (KaLMA) program across 30 schools each. This included classroom observations and qualitative interviews with school officials. Findings revealed a gap in program delivery, predominantly due to low teacher competency and proficiency. Many teachers could not perform basic literacy and numeracy assessments.

Lastly, in **Côte d'Ivoire**, the study surveyed a wide sample of TaRL practitioners and stakeholders to understand perceptions, feedback, and areas for improvement. Schools were purposefully sampled from each implementing region to ensure diverse representation while targeting areas with the longest implementation of the approach. Teachers and principals generally showed enthusiasm for the TaRL approach, appreciating the variety of activities and teaching materials.

The results show that high-quality implementation correlated with proactive headteacher mentorship and coordination. However, headteachers often lacked time for mentoring due to administrative responsibilities. Pedagogical Advisors, external government-appointed mentors, provided valuable feedback during their visits, though these were infrequent. They express an interest in getting more insight from data they help collect at the school-level, to the extent that this data can help them plan better their mentoring visits. Teachers struggled with PEC methodology aspects, including session planning, activity selection, and classroom facilitation, often repeating familiar activities and rarely conducting small group activities.

3.1.2.2 *Piloting Innovations*

In Zambia, Nigeria, and Côte d'Ivoire, the team piloted teacher support innovations to inform upcoming scale-up plans. TaRL Africa embarked on a learning process to uncover and test strategies to improve teacher support in TaRL programs.

For **Zambia**, the Catch Up Continuous Professional Development (CPD) innovation was piloted, involving:

1. WhatsApp groups for teacher communication and CPD material sharing.
2. Integrating Catch Up discussions in biweekly Teacher Group Meetings (TGMs).
3. Sharing instructional materials via WhatsApp and hard copies.
4. Bi-weekly Catch Up 'Mastery Challenges' to test knowledge and use of the methodology.
5. A recognition system to reward teacher participation.

The pilot showed positive perceptions and rollout, with 70% of schools having good network access and 70% of teachers understanding the CPD program, leading to changes in teaching behavior. Feedback was used to refine materials and ensure consistency.

In **Nigeria**, a new training and mentoring model was tested, delivering weekend training to impart specific knowledge, followed by practice during the week. Data collected included teacher competency tests, attendance records, and practice class monitoring. The findings showed low attendance and weak training efficacy, prompting the team to pilot *remote mentoring* and *teacher peer mentoring*.

To address the gap we carried out two interventions in Nigeria. One was under the Kebbi Foundational Skills Accelerated (KeFSA) TaRL program where a *remote mentoring model* was designed and piloted, leveraging phone calls, text messages, and WhatsApp communication to provide mentoring support to teachers regularly. This model was done using TaRL Africa based mentors and a few government mentors. Remote mentoring involved regular communication via phone, text messages, and WhatsApp, tracking feedback from 40 selected teachers. Phone calls were the most effective communication method, with an average duration of 223 seconds. Text messages were ineffective, and WhatsApp engagement was low due to internet bundle limitations. Building on these findings, a second operational pilot study in 10 schools is underway (April - December 2024)

using toll-free phone call lines for school support officers (SSOs) and teachers to speak for mentoring support. This is to further evaluate the model's effectiveness and sustainability.

Further, we ran a small-scale pilot study in Kaduna state to test a school-based teacher *peer mentoring program* aimed at addressing a gap in teacher training time for TaRL and limited teacher mentoring support. The program identified schools with teachers who had mastered TaRL and organized peer-led mentoring sessions to ensure contextual relevance. The six-month program, which included 122 mentoring sessions across 30 TaRL classes, **resulted in over a 50 percentage point improvement in students' ability to perform subtraction and division, and over an 80 percentage point improvement in reading Hausa or English sentences.** Based on these promising results, the Kaduna state government is considering expanding the peer mentoring model to 970 schools.

Finally, in **Côte d'Ivoire**, the innovation involved creating: i) a template to help pedagogical advisors (PAs) analyze school data to identify target schools for priority in-person visits, and ii) a remote mentoring framework based on phone calls to support other schools remotely. The pilot was designed to test whether participants understood and could implement the innovation. The results showed participants planned to change their mentoring activities consistent with the training tools, while also offering suggestions to improve the innovation and the training.

Overall, the appetite for innovation was evident across all three countries. The positive pilot outcomes highlighted the need to use available resources at the school level to support teachers. The team rolled out rigorous studies to conclusively prove the innovation's impact for larger policy scale changes.

3.1.3 Learning question 3

3. How much support is necessary from an external Non-Governmental Organization (NGO)?

Findings from this study suggested that governments in Zambia, Nigeria, and Côte d'Ivoire are open to adopting low-cost innovations, such as teacher recognition and WhatsApp engagements. However, they are hesitant to embrace more resource-intensive interventions, particularly those involving new technology, due to budgetary constraints. This highlights the need for external NGO support to integrate costlier innovations into existing government systems and underscores the importance of collaborative efforts for effective implementation and scaling of the TaRL program in a country.

During this project, we collected cost data at both implementation and research levels to analyze the cost-effectiveness of the innovations. Final analysis is pending and will be shared after completing all studies (2025). However, observations during the project indicated that governments cannot bear additional costs beyond those already existing within their education systems. Therefore, examining the cost-benefit tradeoffs and prioritizing innovations that can increase efficiency and effectiveness in existing systems to maximize outcomes in resource-constrained environments should be an important consideration. Nevertheless, it will be instructive to further investigate the findings on the effectiveness of the innovations informed by the on-going large-scale studies. This may influence the government's and development partners' decisions to financially support such innovations at scale.

In **Zambia**, we informally noted that government stakeholders had hesitation to adopt additional costs related to a new IT system (Engagespark) associated with the CU-CPD innovation. These were due to concerns with internet challenges, like internet connectivity in some rural locations; and resulted in a recommendation to also print some materials to ensure the most marginalized were reached. However, other elements adopted were more cost-effective innovations that required minimal or no expenses, such as the point system, engagements with teachers on Whatsapp groups, teacher group meetings, and teacher recognition.

In **Nigeria**, both teachers and government officials verbally acknowledged the benefits of additional training and technology if the costs were borne by an external party or if they are able to fit what exists within their system; that is, incorporating training with their own training plans and using WhatsApp which all teachers have. However, there are ongoing discussions with government officials aimed to allocate existing mentoring resources for remote mentoring, given the capacity gaps identified during the study.

In **Côte d'Ivoire**, the government indicated a willingness to cover some innovation costs, such as printing templates, but remote mentoring expenses would need external support given their already limited resources.

Thus, governments showed a clear appetite for innovation but need support to implement additional technological innovations if these costs were not already part of their systems. The team is in discussions with governments to identify ways to incorporate aspects of the innovation within existing systems. The pending randomized control trial results will offer additional data to further build evidence that informs governments and external stakeholders about adoption of these innovations.

3.5 Outcomes and impact

The primary research goal of this project was to **evaluate innovative mentoring and monitoring approaches within the TaRL methodology** across Zambia, Nigeria, and Côte d'Ivoire, with the overarching objective of **enhancing government systems' capacity to support teachers effectively on a larger scale in resource-constrained environments**. As such, we measured ongoing implementation outcomes and designed large-scale studies measuring impact realized towards achieving this objective at the end of the funded phase of the project in June 2024, while also highlighting other anticipated outcomes beyond the funded period.

In general, the initial phases of this project collectively show encouraging outcomes associated with innovations in technology, hybrid teacher mentoring models, and peer support to strengthen teacher mentoring. Data from Zambia has indicated a higher inclination toward technological innovations and peer support; while Nigeria and Côte d'Ivoire have shown openness to innovative remote mentoring approaches but still require in-person support. In addition, in Nigeria, teacher-peer support was also identified as a viable innovation.

Findings related to final student learning outcomes and impact, measured in the project's large-scale rigorous research activities, are still pending due to extended study timelines beyond the project end date. However, more details about the ongoing research and anticipated outcomes are described in section 4.0.

Findings related to Gender Equality and Social Inclusion (GESI) outcomes and impact are also still pending due to extended study timelines. Upon conclusion of the studies, we will analyze GESI impact differences due to the innovations currently being tested.

However, throughout the course of this project, we also endeavored to disaggregate and track GESI descriptive data to understand and monitor indicative trends across genders in order to ensure innovations do not adversely disadvantage a gender and to learn more about potential variance within study results associated with gender.

In general, under GESI we found that our RCT baseline data revealed no significant gender differences in low student performance in mathematics and literacy, despite variations across provinces, poverty levels, and home languages. However, differences by gender were observed in teacher experiences and engagement associated with continuous professional development. Additionally, in CIV research, data collected throughout the project showed a decline in women's representation as responsibility levels in formal education jobs increased, necessitating – among other things – deeper gender-focused future analysis to assess differences in mentoring practices and perceptions of the TaRL approach; and continued need to address existing gender imbalance among government positions in education.

Findings related to scalability indicated that engagement with government officials from project inception led to the following key positive results: (i) Rapid uptake of innovations - in Zambia, the Ministry of Education implemented the teacher point system as part of their national recognition system before the study ended. Accelerated program scale-up. (ii) In Nigeria, effective collaboration and quick adaptation by local governments enabled a larger-scale pilot of the remote mentoring innovation and the spread of the teacher-led mentor innovation to more schools due to the success in the pilot.

The project's implementation and results indicated promising positive impact on primary education and populations from pilot phases, including key descriptive insights on gender equality and social inclusion (GESI) in the targeted countries. It is worth noting that TaRL program is designed to help disadvantaged students. TaRL is a transformative idea and approach that works with education systems to flip inequality on its head. The vast majority of students in government rural schools in Africa are learning very little, and TaRL offers them a solution to open the door to education and eventually all the life benefits that come with knowing how to read and do basic math.

These findings are explored further below.

3.5.1 Outcomes and impact across different dimensions

Findings related to final student learning outcomes and impact, measured in the project's large-scale rigorous research activities, are largely still pending due to extended study timelines beyond the project end date. However, more details about the ongoing research and anticipated outcomes are described in section 4.0.

However, **a pilot study in Nigeria was completed during the project period and offered key insights on student learning outcomes**. The innovation, a teacher-led school-mentoring model, resulted in over a 50-percentage point improvement in students' ability to perform subtraction and division, and over an 80 percentage point improvement in reading Hausa or English sentences. Based on these promising results, the Kaduna state

government began exploring expansion of the peer mentoring model; and some schools initiated the program on their own after seeing the results.

Engagement with government officials from project inception led to positive results in innovation design, innovation uptake, program scale-up, policy changes, and large-scale study testing approval in Zambia, Nigeria, and Côte d'Ivoire. Specifically:

1. **Innovation Design:** In Zambia, Nigeria, and Côte d'Ivoire, we observed a strong appetite for using data and technology to support teachers and peer mentoring. In Zambia, the innovation included teacher-led support through soft copy materials shared via WhatsApp and a recognition system that motivated teachers. However, 20% of teachers lacked access to smartphones or consistent mobile networks, highlighting a need for future innovations to reach this group. In Nigeria, limited resources and a teacher capacity gap led to a dual approach: in-person teacher training on basic literacy and numeracy, followed by remote mentoring due to resource constraints. This initiative is ongoing, with results to be shared in 2025. In Côte d'Ivoire, the innovation was designed in consultation with teachers and the government to support in-person mentoring through data and remote mentoring where needed due to high resource constraints. These innovations demonstrated the need to leverage technology and in-school support as persistent resource issues continue.
2. **Innovation Uptake:** In Zambia, the Ministry of Education (MoE) implemented the teacher point system as part of their national recognition system before the study ended. This showed a clear demand for the innovation and confidence in its ability to effect change at the classroom level. In Kaduna State, Nigeria, the local government committed to scaling up the peer mentoring innovation to additional schools implementing TaRL in the area.
3. **Program Scale-up:** In Nigeria, several state governments scaled up the program faster than expected. This allowed for a larger-scale pilot of the remote mentoring innovation and additional teacher-led mentor support learning. For example, in Kaduna State (Nigeria), the teacher-peer mentor innovation that resulted from the initial scoping work by the project was tested and presented internationally at the Comparative and International Education Society (CIES); and selected as an example of government take-up of pilot innovations in a SALEX lightning round, due to the quick spread of the school-based mentor concept to study control schools and indication by the LGA that resources would be sought to scale the initiative ([SALEX conference proceedings page 11](#)).
4. **Large-Scale Study Testing Approval:** Despite reduced pilot timelines due to COVID-19 effect on school closures, systematic stakeholder engagement and collaborative innovation design led to approvals for large-scale testing across the three countries.

However, it is worth noting that these studies are ongoing, and additional results are anticipated upon completion and publication of the results.

3.5.2 Gender equality and social inclusion (GESI) from the studies

In Africa, TaRL Africa deliberately chooses the countries of focus based on locations with very low levels of basic skills, even after the foundational years of primary school. In Zambia, Nigeria, and Côte d'Ivoire, TaRL is being rolled out primarily in government schools (or sometimes even community schools in the case of Zambia) and rural, very poor areas. In Nigeria, we are working in the severely under-resourced and conflict-prone areas in the

North West and North East. The government of Côte d'Ivoire is also targeting rural areas with low learning outcomes. Thus, our starting point is extremely disadvantaged schools.

Moreover, even within these disadvantaged schools, we try to restructure the classroom to encourage teachers to focus on disadvantaged students within the classroom and give them the tools and support they need to help these students realize their potential. In the randomized evaluation in Zambia and Côte d'Ivoire, we investigated program effects among two sets of subgroups of learners who may be more disadvantaged than others, with a focus on gender and equality as highlighted above.

Findings related to Gender Equality and Social Inclusion (GESI) outcomes and impact are also still pending due to extended study timelines. Upon conclusion of the studies, we will analyze GESI impact differences due to the innovations currently being tested.

Throughout the course of this project, we endeavored to disaggregate and track Gender Equality and Social Inclusion (GESI) data to understand and monitor indicative trends across genders in order to ensure innovations do not adversely disadvantage a gender and to learn more about potential variance within study results associated with gender. Much of the collected gender data was from scoping and pilot innovation phases is descriptive, while results from rigorous impact evaluations will provide additional data on impacts by gender.

Specifically, our GESI outcomes and impact are as detailed below:

In **Zambia**, TaRL Africa collaborated with external academics for the RCT evaluating the impact of the Catch Up model and CPD. Zones were assigned to control, Catch Up, and Catch Up with CPD arms, and balance tests indicated comparable representation across genders in treatment and control groups. That is, the baseline study revealed **no gender differences in low student performance in mathematics and literacy, despite variations across provinces, poverty levels, and home languages.**

The first small-scale process monitoring of the RCT, conducted in November 2023, revealed that 71% of headteachers were male, while 63% of primary school teachers were female. The student sample was balanced, with 49% boys and 51% girls. **This gender balance among students indicates a positive trend toward equal educational opportunities for boys and girls.**

Gender dynamics from CU-CPD participation reveal that **both female and male teachers actively engage in professional development activities, though their experiences and contributions can vary.** These differences highlight the need for continuous tailored approaches in the on-going CU-CPD study. At the end of the project, we will be able to draw learnings on how to address and leverage the unique perspectives and strengths of both genders in using the technology-based and other platforms for CU-CPD.

Another element of social inclusion that will be explored at the end of the RCT pertains to **access to the internet**, and equity of participation in the CU-CPD innovation. While preliminary scoping data indicated a large percent of schools and teachers have access to smartphones and access the internet, monitoring data and anecdotal feedback indicates some locations may be disadvantaged with lack of smartphones and internet access. We will explore implications with process monitoring results and endline outcomes to learn more about the technology element.

In **Nigeria**, specifically Kaduna State, a pilot innovation for additional mentoring involved 22 school-based mentor teachers (8 female, 14 male) supporting 30 mentee teachers. Despite the higher proportion of male mentors, **the female mentors were more active during the study**. In terms of students, the pilot baseline assessment included 135 students (69 female, 66 male), which decreased to 112 by endline (57 male, 55 female). The **maintenance of learner gender balance** in distribution from baseline to endline was encouraging, given the historical challenges of girls attending school in the north of Nigeria; however, **attrition was noted for both genders**.

In Kebbi State, the remote mentoring pilot revealed that female teachers (constituting 20% of the participating teachers) were more comfortable facilitating lower-level activities compared to their male counterparts. However, female-led schools were generally less proactive, indicating areas for **improved leadership support particularly for female teachers and headteachers**.

Taking into account use of technology in remote mentoring innovations, we have committed to multiple rounds of operational piloting in part to ensure maximized equitable access to the mode of delivery. The first pilot showed WhatsApp and text had a low response rate, and feedback from teachers stated this was in part due to cost of data / airtime and internet access. For the second pilot we are studying a subsidized model through a toll-free line to remove the barrier of cost, and are using phones as they are the most accessible means of delivery.

In **Côte d'Ivoire** data on the gender of participants was collected at every step of the research. Data collected throughout the project showed a **decline in women's representation as responsibility levels in formal education jobs increased**. For example, while at the student level, in a sample of grade 3 and 4 students, girls made up just under half (48%) of the learner population, indicating balance across gender; only 10% of school directors sampled for the ongoing RCT were female, and only, around one-third of teachers were female. The number of female mentors (pedagogical advisors) was also strikingly low, making up only 9% of the RCT sample, indicating a need to conduct deeper future gender-focused analysis to assess differences in mentoring practices and perceptions of the TaRL approach.

These gender compositions in the RCT are representative of the current situation in the two regions in southwest Côte d'Ivoire where the approach is being implemented. The low number of female mentors in the study is also a reflection of the numbers for the government pedagogical advisors in the study region because the study includes all the 124 mentors in the region, with some in the control group and others in the treatment group. In short, a significant **existing gender imbalance among government positions in education was observed**.

Moving forward, baseline and follow-up data collected later this year after the project end will be analyzed along gender lines to assess whether mentoring practices and perceptions of the TaRL approach differ by gender. Endline results in the pending round 2 next year will offer additional insights for student progress disaggregated by gender measured by learning outcomes.

Throughout the course of this project, we endeavored to disaggregate and track gender data to understand and monitor indicative trends and impact across gender, in order to ensure innovations would not adversely disadvantage a gender and to learn more about potential variance within study results associated with gender. Much of the gender data

collected during the course of the project from scoping and pilot innovation phases were descriptive; while results from the rigorous impact evaluations will provide additional data on impacts by gender once complete.

3.6 Research ethics

In Zambia, Nigeria, and Côte d'Ivoire, the research team mitigated potential research ethics issues through rigorous protocols. These protocols included obtaining informed consent where necessary, ensuring confidentiality, and maintaining anonymity of all participants. Additionally, the team secured both governmental and institutional approvals from relevant bodies.

Governmental and Institutional Review Boards (IRBs) including but were not limited to Massachusetts Institute of Technology (MIT) Research Board, University of Zambia Biomedical Research Ethics Committee (UZABREC) for the Zambia RCT; Ethics Committee for the Humanities (ECH), University of Ghana to cover the Côte d'Ivoire randomized evaluation; Kaduna State Ministry of Health Research Ethics Committee (KSHREC); and the Kebbi State Ministry of Health Research Ethics Committee (KSHREC) to cover the remote mentoring study in Nigeria.

Participants were fully informed about the purpose and scope of the studies, as well as their rights as research participants. This comprehensive approach ensured that ethical standards were upheld throughout the studies in the three countries.

By adhering to these protocols, the research team did not encounter any ethical or research issues. This rigorous ethical oversight was crucial in maintaining the integrity of the research and the protection of participant rights.

The adherence to ethical standards not only facilitated smooth conduct of the study but also ensured that the findings are credible and ethically sound. The commitment to ethical research practices underscored the team's dedication to conducting responsible and respectful research across the countries.

3.7 Potential uptake

The project's results were taken up by various stakeholders within the course of the project, and we foresee larger scale take up upon study completion in the three countries. For example:

Overall, the TaRL Africa project made significant progress in strengthening education systems in Zambia, Nigeria, and Côte d'Ivoire. The project's results improved data recording and management systems, teacher support models, and TaRL implementation. These outcomes are expected to have a lasting impact on education systems in these countries. Upon completion of the final project research activities in late 2024 and 2025 (after the project period), dissemination activities will be done as per the below plan, leveraging co-funding and building on ongoing committed activities by TaRL Africa.

The dissemination plan for the remaining pending research findings is as follows:

Title	Phase	Expected Deliverables	Target audience	Tentative Timeline
A randomized evaluation of the catch up program in Zambia	Small scale process monitoring	Outcome log: Research brief/blog and powerpoint	Ministry of Education VVOB <i>(implementer)</i>	November 2024
	Large scale process monitoring	Outcome log: Research brief/blog and powerpoint	Ministry of Education VVOB IDRC KIX	February 2025
	Endline	Outcome log: Research brief/blog and powerpoint Output log: Research report Outcome case: Policy brief	Ministry of Education VVOB IDRC KIX KIX regional partners Various conferences and journals	August 2025
A randomized evaluation of the strategic use of data and remote mentoring in Côte d'Ivoire	Baseline	Outcome log: Research brief/blog and powerpoint	Ministry Of National Education And Literacy (Directorate Of Pedagogy And Continuing Education)	October 2024
	Midline	Outcome log: Research brief/blog and powerpoint	Ministry Of National Education And Literacy (Directorate Of Pedagogy And Continuing Education)	December 2024

Title	Phase	Expected Deliverables	Target audience	Tentative Timeline
	Endline	Outcome log: Research brief/blog and powerpoint Output log: Research report Outcome case: Policy brief	IDRC KIX Various conferences and journals Ministry Of National Education And Literacy (Directorate Of Pedagogy And Continuing Education) IDRC KIX KIX regional partners Various conferences and journals	September 2025
An operational research study on the impact of remote teacher mentoring in Nigeria	Baseline	Outcome log: Research brief/blog and powerpoint	Kebbi State Universal Basic Education Board (SUBEB)	September 2024
	End of survey (after all 4 rounds of surveys)	Outcome log: Research brief/blog and powerpoint Output log: Research report and Journal article Outcome case: Policy brief	Kebbi State Universal Basic Education Board (SUBEB) IDRC KIX KIX regional partners Various conferences and journals	March 2025

4.0 Methodology

The main research objective of this project was to test innovations in mentoring and monitoring systems within the Teaching at the Right Level approach in Zambia, Nigeria, and Côte d'Ivoire. The general aim was to understand how to help government systems better support teachers at scale, even in settings with resource constraints. This objective was to be achieved through a three-phase process each with its own distinct methodology:

Phase 1: Formative scoping, mixed-method, and qualitative research

This phase involved scoping for formative understanding with an emphasis on use of quantitative data where available through monitoring data, assessment data, and process evaluation data where available; but a focus on conducting high-quality qualitative research. The objective was to explore how teacher support functioned within TaRL-supported systems compared to the normal system. For the qualitative research, the team used purposeful randomization to assess a subsample of respondents. Qualitative data were collected through phone interviews, classroom observations, FGDs, and interviews. Additionally, quantitative data was collected using Kobo Collect and SurveyCTO and analyzed using Stata and Excel.

For **Zambia**, data were analyzed using qualitative software tools and incorporated machine learning in Zambia. Using primary qualitative data from 78 Zambian education personnel from the school to provincial level, we combined qualitative thematic analysis with an unsupervised machine-learning technique (topic modeling) to identify drivers of pedagogical shifts. We generated qualitative data, through in-depth telephonic interviews. Thereafter, during thematic analysis, we integrated open coding (treating text as qualitative data) with an unsupervised machine-learning technique (topic modeling, treating text as quantitative data), observed the extent to which the two methods converged, and thus generated a coding framework.

In **Nigeria**, a scoping study was conducted in 2021 in Kebbi and Kano States to assess implementation fidelity and identify teacher support needs. This involved qualitative interviews with key stakeholders to better understand the education systems and those involved in teacher support, aiming to uncover cost-effective innovations to enhance it. The findings informed a 2022 pilot that delivered TaRL teacher trainings on weekends, allowing teachers to apply what they learned during the week. A similar scoping exercise was conducted in Kaduna State in 2023 before the rollout of the teacher peer mentoring study.

In **Côte d'Ivoire**, an initial scoping exercise (qualitative study and observational data collection) of the TaRL program was kick-started in late 2021. This exercise was led by the TaRL team with support from a survey firm. The scoping activities aimed to understand how PEC (CIV's TaRL program) is being implemented, with a focus on teacher mentoring needs, classroom management, and other school-level program support needs. In each of the eight schools selected for the exercise, two enumerators spent six days observing a total of 94 PEC classes with and without mentors present.

Phase 2: Pilot innovations

This phase focused on adaptive learning and design-based methods to test and refine promising innovations in small-scale pilots. Ministry of Education (MoE) counterparts selected a few innovations identified during Phase 1 to pilot over several months. The TaRL Africa team supported the MoE in implementing and monitoring these innovations on the ground, with results discussed with Ministry counterparts. This phase was descriptive, and both quantitative and qualitative data were collected using key informant interviews (KII) and structured questionnaires administered through Kobo Collect and SurveyCTO software. The pilot involved iterative learning, with data collected from all sample schools and analyzed using Stata and Excel.

Phase 3: Evaluations measuring outcomes and impact

This phase focused on designing and implementing larger-scale, rigorous evaluations that would capture key implementation and learning outcomes data to understand impact. MoE officials in our study locations selected 1-2 promising innovations for rigorous testing at scale in each of the government systems. All the main survey datasets in the randomized evaluations in Zambia, Nigeria, and Côte d'Ivoire were collected using Survey CTO and are analyzed using Microsoft Excel and Stata software. The analysis entailed sample balance tests, descriptive statistics, inferential statistics and regression models. This also applies for the yet to be collected datasets.

As reported in other sections of this report, delays in the timeline meant phase 3 impact evaluation activities were not completed in any of the core countries; as of the project end date, each was still underway. Thus, results from these large-scale evaluations – particularly findings reporting student learning outcome impact – will be discussed with MoE counterparts and used to inform the future scale-up of TaRL, upon completion of the research. Most of the dissemination including discussions with MoE, conference presentations, policy briefs and research papers will happen in quarter 4 of 2024 and in 2025 as shown in Section 3.7 on *Potential Uptake*.

Activities in phase three (conducting full-scale randomized evaluations) included:

- a. **A randomized controlled trial (RCT) in Zambia** to evaluate and compare the effectiveness, functionality, scalability, and impact of TaRL approach locally known as 'Catch Up (CU)' and Catch Up CPD models on student learning and engagement, while diagnosing contextual constraints and identifying solutions. The TaRL Africa team was supported by VVOB (implementing partner) and the Ministry of Education (MoE) in implementing and monitoring these innovations on the ground, with available updates and intermediate results discussed with Ministry counterparts. This study was started in January 2023 and will continue through December 2024. Across the four rounds of data collection (baseline, small-scale process monitoring, large scale process monitoring, and endline), data was collected using structured questionnaires administered to headteachers, school-based mentors, teachers, and learners. Data on usage of the Catch Up Continuous Professional Development (CU-CPD) was collected monthly through the Engagespark digital platform and Whatsapp. At the end of the project timeline, the study was still ongoing including data collection via the Engagespark platform.

Endline data collection will take place in Q4 of 2024 with analysis and results available in 2025.

- b. A **remote mentoring study in Kebbi State, Nigeria** to evaluate the effectiveness of toll-free lines for remote mentoring. The TaRL Africa team was supported by the Kebbi State Universal Basic Education Board (SUBEB) in implementing and monitoring these innovations on the ground, with available updates and intermediate results discussed with Ministry counterparts. This was a longitudinal study with four rounds of data collection that started in April 2024 and continued through December 2024. Data was collected using structured questionnaires that were administered to headteachers, school support officers (SSOs), teachers, and learners. The first round of data collection was conducted in June 2024 and subsequent three rounds of data collection took place in Q4 of 2024, that is after the project end date.
- c. A **randomized evaluation study in Côte d'Ivoire** to evaluate an innovation for mentors, including analysis of school data to identify target schools for priority in-person mentoring visits and remote mentoring. The TaRL Africa team was supported by the Ministry of National Education and Literacy (MENA) in implementing and monitoring these innovations on the ground, with ongoing intermediate implementation findings shared with Ministry counterparts as they became available. The full study runs from February 2024 to December 2025. Across the 3 rounds of data collection (baseline, small-scale process monitoring/follow-up survey, and endline) data was collected using structured questionnaires administered to headteachers, pedagogical advisors (mentors), teachers, and learners. At the end of the project timeline, the study was not complete; endline data collection is anticipated in May 2025.

We selected SurveyCTO, Stata, Microsoft Excel software and acquired licenses to use them. We identified these as the preferred technologies for these reasons:

- *SurveyCTO* is advantageous for data collection due to its robust offline capabilities, customizable forms, and strong data security features, making it particularly suitable for fieldwork in varied and challenging environments.
- *Stata* is particularly effective for data analysis due to its powerful scripting/stata command capabilities through do-files, which ensure reproducibility, alongside its robust tools for data cleaning, manipulation, and comprehensive statistical analysis.
- *Microsoft Excel* is ideal for data analysis and presentation due to its user friendliness (popular even among non-researchers), extensive range of built-in functions, and simple ways to present charts and tables charting capabilities.

5.0 Project outputs

Project outputs and outcomes

The matrix describing the project's final outputs and outcomes framework has been summarized below. However, the detailed document has been provided in the [KIX IDRC MEL online tracker](#).

We reached or exceeded our milestones in all indicator areas except our uptake logs.

Explanation for variance in uptake log where the target was 20 but the achieved ones were 11: The studies are still on-going beyond this project timeline until the end of 2024 for Zambia and Nigeria, and into 2025 for Côte d'Ivoire. This will generate additional secondary knowledge products for the external community, in particular for government and education stakeholders' uptake.

Item	Indicator	Project milestones	Actual / achieved milestone	Year	Event title	Description
Event logs	4.2.2 # events and meetings where KIX research was presented (disaggregated by KIX component, type, and GESI content).	27	33	July 2020 - June 2024	KIX Research Studies in Zambia, Nigeria, and Côte d'Ivoire	With the assistance of local teams and implementation partners, we actively cultivated relationships and fostered engagement with our partners, aiming to enhance their ownership of the research and utilization of its outcomes. This led to us exceeding the milestone. These included TaRL Africa-led events or events that the TaRL Africa team participated in during the project period such as meetings, trainings, conferences, webinars, and workshops.
Output log	4.1.1 # new primary research outputs presenting new knowledge or innovation in KIX thematic areas and/or DCP specific education	12	12	July 2020 - June 2024	KIX Research Studies in Zambia, Nigeria, and Côte d'Ivoire	This milestone was achieved. The team conducted scoping and research work in Côte d'Ivoire and Zambia and were able to externally publish blogs, conference proceedings, and policy briefings, as well as posting baseline data for the Zambia RCT. These are publicly available and already reviewed by education counterparts and shared in prior reports. In the last six months additional data products have

Item	Indicator	Projecte d milesto nes	Actual / achieve d mileston e	Year	Event title	Description
	needs and priorities (disaggregated by KIX component, type and GESI content).					been generated, associated with ongoing research. Additionally, a previously submitted pending log for qualitative research in Zambia has now been accepted by the Comparative Education Review (CER) journal. We will share the details once published for the public.
Uptake log	2.4.3 # mentions of KIX-supported research (disaggregated by KIX component which produces the research)	20	11	July 2020 - June 2024	KIX Research Studies in Zambia, Nigeria, and Côte d'Ivoire	We made progress but did not reach our milestone associated with uptake. This was due in part to delays in research so that results have not been finalized. The team concentrated on establishing and involving Ministry and implementation counterparts concerning the diverse pilot outcomes and large-scale research initiatives. Additionally, beyond the period of this grant, we anticipate significant additional mentions of KIX-support research associated with completion of our ongoing research and associated with dissemination, as we pursue discussions pertaining to scale-up strategies.
Outcome cases	3.7.1 # of outcome cases of education stakeholders reporting new knowledge and skills	10	7	July 2020 - June 2024	KIX Research Studies in Zambia, Nigeria, and Côte d'Ivoire	With the backing of our diverse stakeholders, TaRL Africa effectively piloted and established evaluations for diverse teacher support initiatives. Our research is not yet concluded and we anticipate additional outcomes cases beyond the grant period.

Item	Indicator	Projecte d milesto nes	Actual / achieve d mileston e	Year	Event title	Description
	2.5.1 # of outcome cases of DCPs exploring to scale innovations from KIX grants, including innovations related to GESI		2			The team prioritized engagement with Ministry and implementation counterparts to address diverse pilot outcomes and upcoming research. Our objective for the upcoming year will be to inform Ministry counterpart policies and strategies leading to outcome changes through the use of upcoming dissemination of findings and the initiation of scale-up strategy discussions. This includes changes in government behavior / programs, stakeholder behavior, mentor behavior, teacher outcomes, and learner outcomes.
	2.4.1 # of outcome cases of uptake of KIX-supported research by education stakeholders in DCPs and international development community		1			A TaRL partner expanded the work done with TaRL Africa in support of teacher capacity innovation in Nigeria.
	Total for outcome cases	10	10			We achieved our outcome case milestone at the end of the grant.

6.0 Problems and challenges

The past 4 years of this study posed several key global and national challenges due to the impact of COVID-19, planned program scale up delays, and other external factors. **Despite these obstacles, the team made significant strides in adapting to the changing environment, securing government support, and advancing research objectives.** Specifically;

1. **COVID-19 Effect on School Closures:** The COVID-19 pandemic significantly disrupted project timelines and research approaches, extending the research into the second year. The availability of vaccines and increased knowledge about the virus brought hope and urgency, replacing earlier confusion and delays. This situation highlighted the critical need to focus on foundational skills amid a learning crisis exacerbated by the pandemic.

To cope with the upending effects of COVID-19 on study plans and timelines, the research team leveraged remote data collection during the first year. With the reopening of countries across Africa in the second year of the study, the team initiated in-person engagements, workshops, and inter-Africa learning journeys. This resurgence of activities renewed the visibility of the TaRL IDRC-KIX research initiative even while schools remained closed and full research data collection activities were not yet possible. During this phase, the team successfully grew their research capacity, shared early-stage learnings, and built government engagement, setting up pilots and evaluations despite the disruptions. Ultimately, the research team was able to initiate full study data collection activities. However, due to the delays from COVID-19, a no-cost extension was necessary and as of the end of this project period of performance, final results for many of the studies are still underway until 2025.

2. **Government Scale-Up and Study Implementation:** In Zambia and Côte d'Ivoire, a primary challenge was aligning the government's scale-up plans with the study's implementation timeline. In both cases, the government's commitment to using research findings for informed decision-making was crucial, but the pandemic and availability of scale up funding caused delays in implementation, and therefore, the research.

To address this, in Zambia the team continued to make progress by working closely with the government, ensuring that the scale-up and study implementation were on track and harmonized with expansion plans. For example, the RCT sampling structure had to be quickly adjusted to accommodate unexpected, last-minute changes in funding which affected scaling timelines; but ultimately with government and PI support, a new design allowed the RCT to progress. This close collaboration ensures the research findings can be generated and shared to shape educational policies and practices during a vital time in Catch Up (TaRL)'s expansion in Zambia.

In Côte d'Ivoire, in response to delays in PEC (TaRL) scale-up timelines, the team adjusted our study to focus on mentor and teacher behavioral changes and implementation fidelity of our innovation as primary outcomes. Student learning outcomes were considered secondary with the short timeline left for implementation; as the government program scale-up was rescheduled to January 2024, only allowing for a comprehensive evaluation over two academic terms. However, the study design was powered to allow an option for a second round of future evaluation measuring impact on student learning outcomes in 2025, after

adequate implementation time is achieved. Plans to extend the study for an additional year are underway, pending additional funding.

- 3. Unexpected Government Support and Rapid Scale-Up:** Nigeria experienced unexpected substantial government support and rapid scale-up, positioning the team to test remote mentoring at a larger scale. However, presidential elections caused extended disruptions, affecting school operations and implementation timelines.

Despite these disruptions, the situation stabilized, and educational activities resumed. The research team set up a pilot remote mentoring research study with state government support, ensuring continued improvement in children's learning outcomes even during periods of disruption. Additionally, TaRL activities expanded to new states, opening up additional opportunities for future innovation scale-up plans. An outgrowth of the expansion coupled with insufficient delivery of in-person monitoring visits, for example, led to identifying an additional innovation to pilot and test: school-based teacher peer mentoring.

The past four years highlighted the challenges of conducting research through program activities that are directly dependent on government policy and implementation timelines; but also underscored that with resilience and adaptability on the part of research teams, and government partners and funders, research associated with scaled government programming is still possible - and important for policy-driven evidence. By addressing challenges head-on and leveraging government partnerships, the research team made significant progress in advancing educational research and implementation. Moving forward, TaRL Africa will continue fostering strong government relationships, remain flexible in research planning, and seek to secure additional funding to extend studies in order to gather comprehensive, long-term data. These efforts will ensure the sustained impact and scalability of the innovations across Zambia, Nigeria and Côte d'Ivoire.

7.0 Administrative reflections and recommendations

Reflecting on our recent experiences, we appreciate IDRC's flexibility in accommodating necessary research timeline (no cost extension) and study design changes, as well as their guidance and efforts in creating a network of researchers. At the same time, several administrative improvements could further enhance future projects.

One of the key challenges we faced was establishing and maintaining strong relationships with government stakeholders during political transitions. Given IDRC's position as a respected governmental entity, assistance in facilitating introductions and supporting ongoing engagement – particularly with new/incoming government officials when there is a political change – can support continuity in the research process and ensure that findings are integrated into policy decisions regardless of political leadership.

A second recommendation is to further encourage and catalyze new collaboration with academics in the education sector and with a wide range of methodological expertise, to enhance the quality and impact of research. Our experience at TaRL Africa is that it can be challenging to be connected to new academics interested in supporting research like ours, particularly beyond development economists (which we work with through MIT J-PAL). IDRC could play a pivotal role in connecting research teams within implementation organizations to a wider range of academic experts who are, in order to foster broader knowledge exchange and encourage new collaborative research efforts - especially for researchers focused on implementation science. This would also help validate research methodologies and findings, adding credibility to the results; for example, incorporating qualitative researchers or researchers focused in behavioral science.

A third recommendation to ensure research relevance and impact would be that IDRC continue adapting to dynamic timelines and policy changes through supportive facilitation of collaboration between grantees and government partners. This approach allows for flexibility in responding to evolving circumstances, ensuring that research aligns with current educational policies and needs. Engaging government stakeholders early and continuously throughout the project can facilitate smoother implementation, timely adjustments, and greater integration of research findings into policy decisions, ultimately enhancing the effectiveness and sustainability of educational innovations.

Lastly, clarifying and potentially supporting grantees more deeply in setting up appropriate Monitoring, Evaluation, and Learning (MEL) deliverables ahead of project kick-offs would ensure realistic milestone setting. While supporting documents were provided, some of the deliverables we committed to were overly ambitious because they were reliant on unrealistic timelines on our side. For example, we committed to examples of uptake by governments of the research and peer reviewed primary research outputs, yet our research timeline indicated we would not have many results until the end of the period of performance. This was more so the case because our large-scale research activities have studied government programs, and some of these were delayed due to policy changes and other delays in implementation beyond our control. As a result, some of the research-policy-use deliverables dependent on government timelines became impossible to achieve. Annually reviewed/adjusted, clearly defined MEL deliverables that highlight dependencies would help research teams align their dynamic activities with expected outcomes, particularly if policy and government partner timelines or priorities change.

By enhancing support for government relationships, fostering deeper academic collaboration, and defining MEL deliverables through a deeper and more dynamic annual

review and revise process, IDRC can further support future grantees to improve the effectiveness and impact of future research projects that influence policy. These recommendations aim to build on the strong foundation already established and drive continuous improvement in research administration and outcomes.

8.0 Overall assessment and recommendations

Zambia

Insights:

- 2021: Clear picture of behavior change and data use driven by team-based problem solving, verbal encouragement, and practical demonstration. Existing on-site training system SPRINT can be leveraged for cost-effective impact.
- 2022: Expansion of Catch Up to additional provinces, moving towards national scale. Focus on government integration and strengthening governance.
- 2023: Programme scaled to 8 out of 10 provinces, increased senior national engagement, and global acknowledgment. Randomized evaluation study well set up.
- 2023/2024: Integration of process monitoring for nuanced exploration of factors influencing outcomes. Larger-scale process monitoring planned to understand implementation fidelity and impact.
- As at June 2024: Large scale process monitoring to evaluate the implementation fidelity of program take up in schools implementing the TaRL methodology and schools with additional teacher continuous professional development (CPD) support program

Recommendations:

Continue integrating process monitoring to understand implementation challenges and strengths, ensuring a nuanced impact assessment.

Nigeria

Insights:

- 2021: Need to refocus the study to ensure relevant process monitoring data for government buy-in and scale-up.
- 2022: Expansion to new states and preparation for TaRL programs. Testing teachers support pilots to inform future scale-up.
- 2023: Sustained TaRL activities despite election disruptions. Stabilized program resumption with ongoing remote mentoring and peer mentoring research study.
- 2023/2024: Government demand for teacher-led peer mentoring and remote mentoring, allowing testing at a larger scale. Flexibility to adapt to evolving circumstances for enhanced technical rigor and tangible impact on learner outcomes.

Recommendations:

Leverage the high demand for remote mentoring to enhance data collection and technical rigor, ensuring tangible impacts on learner outcomes.

Côte d'Ivoire

Insights:

- 2021: Anticipation for compelling insights as the project progresses.
- 2022: Potential for PEC (Programme d'Enseignement des Compétences) to reach national scale and be institutionalized, with pilots to be evaluated in 2023.
- 2023: Pathway to institutionalization and national scale established through priority areas and unified strategies (EGENA, SNAPAS, PNAPAS). PEC identified as the chosen remedial approach.
- 2023/2024: Close relationship with the Ministry of Education allows prompt response to emerging needs, but large-scale government-led program research poses challenges due to dynamic timelines and policy changes.

Recommendations:

Continue leveraging the close collaboration with the Ministry to adjust and respond to policy changes, ensuring research relevance and impact on future plans.

Cross-Cutting Insights and Recommendations

Insights:

- 2021-2024: Consistent optimism about learning and strengthening TaRL programs through IDRC initiatives. Context-specific scoping exercises revealed important nuances and opportunities for cost-effective strategies to support teachers.
- 2021: IDRC monitoring data aids systematic thinking and stakeholder engagement for effective scale-up.
- 2022-2023: Scale-up strategies and opportunities to pilot and evaluate innovations at scale across all three countries.
- 2023/2024: No-cost extension due to COVID-19 disruptions allowed updated studies. Emphasis on building partners' capacity, involving government officials in research decisions, and sharing results with the TaRL Africa community.

Recommendations:

- 2021: IDRC should consider providing project extensions due to COVID-19 impacts and continue supporting engagement with grantees and partners in the education sector.
- 2022: Similar recommendation for project extensions due to ongoing COVID-19 disruptions.
- 2023: The granted no-cost extension was beneficial for continuing research.
- 2023/2024: Continue adapting to dynamic timelines and policy changes, ensuring research relevance and impact through close collaboration with government partners.

Overall, the appetite for innovative approaches to improve mentoring and monitoring support for teachers at scale was evident across all three countries. The positive learnings from the studies highlighted:

- 1) Teachers are open to and seek additional support to implement TaRL effectively in the classroom but often need more mentoring that is currently taking place;
- 2) Remote mentoring (phone calls and messages) hold potential to complement in-person mentoring and monitoring;
- 3) There is potential for continuous professional development (CPD) initiatives using technology (WhatsApp and videos); and
- 4) There is opportunity and need to utilize available resources at the school level to support teachers sustainably this includes teacher peer mentoring, teacher group meetings, and communities of practice;
- 5) There is opportunity and need to increase mentor-teacher engagements, but barriers to in-person visits require mentors prioritize and target their mentoring through data use and hybrid support models; and
- 6) There is potential to incorporate non-monetary recognition of outstanding TaRL program teachers as a way of motivating better delivery.

By synthesizing insights and recommendations from this project's four-year period, this summary captures the evolution and continuous adaptation of the TaRL programs in each country, highlighting specific contextual challenges and strategic recommendations for future improvement on mentoring and monitoring support to teachers and scale-up.