Policy event, Kigali, Rwanda.
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Teacher voices on teaching quality, professional development, and learning outcomes in Rwanda

Leaders in Teaching

September 2024

In partnership with

mastercard foundation

Introduction

Research by Laterite and the Research for Equitable Access and Learning (REAL) Centre at the University of Cambridge for the Mastercard Foundation's Leaders in Teaching programme revealed important insights about secondary teaching and learning in Rwanda. These insights come from data collected between 2020 and 2023 and cover a wide range of subjects relating to teaching quality and student learning.

In June 2024, we shared these findings with education professionals to gather their feedback and recommendations on how to address the challenges identified in the research. This involved:

5
workshops

4
provinces of Rwanda

176
teachers and school leaders who participated in the research

The learning partners developed visual outputs sharing research findings on three themes: (i) teaching quality and student learning outcomes, (ii) continuous professional development (CPD), teacher motivation and student achievement, and (iii) stakeholders' perspectives on changes in teaching quality. These outputs were translated into Kinyarwanda and shared with workshop participants, who engaged in group discussions to develop recommendations to address challenges identified in the findings.

The teacher workshops were followed by an event with policy actors, programme implementers and development partners in August 2024. This event aimed to ensure the teachers' recommendations were discussed by decision-makers working in secondary teaching and learning in Rwanda.

This is the second time the researchers shared results of this work with educators who participated in the research. This second round followed completion of the research programme, meaning that researchers could share findings from the full five-year study in Rwandan schools. It also represented an opportunity to reach more teachers. The first round of workshops took place in 2022 with 122 Rwandan secondary school educators (a summary is available in English and Kinyarwanda). The second round of workshops reached 176 more educators representing different schools participating in the research.

This summary provides an overview of research findings presented to educators drawing on data collected pre- and post school closures related to the COVID-19 pandemic on two topics:

1. Teaching quality and student learning outcomes
2. Continuous professional development, teacher motivation and student achievement

It also summarises the teachers' recommendations on how education policy and practice can address the findings. Whilst international evidence supports some of the recommendations we describe, these come from the teachers and do not necessarily reflect the views of Laterite, the REAL Centre or the Mastercard Foundation.

The final section outlines policymakers' reflections on the teacher recommendations, and priorities for STEM and secondary teaching and learning in Rwanda.

A teacher workshop held in Gicumbi district in June 2024

Schools involved in the Leaders in Teaching Research

358 schools in our sample

14 districts of Rwanda (does not include Kigali)
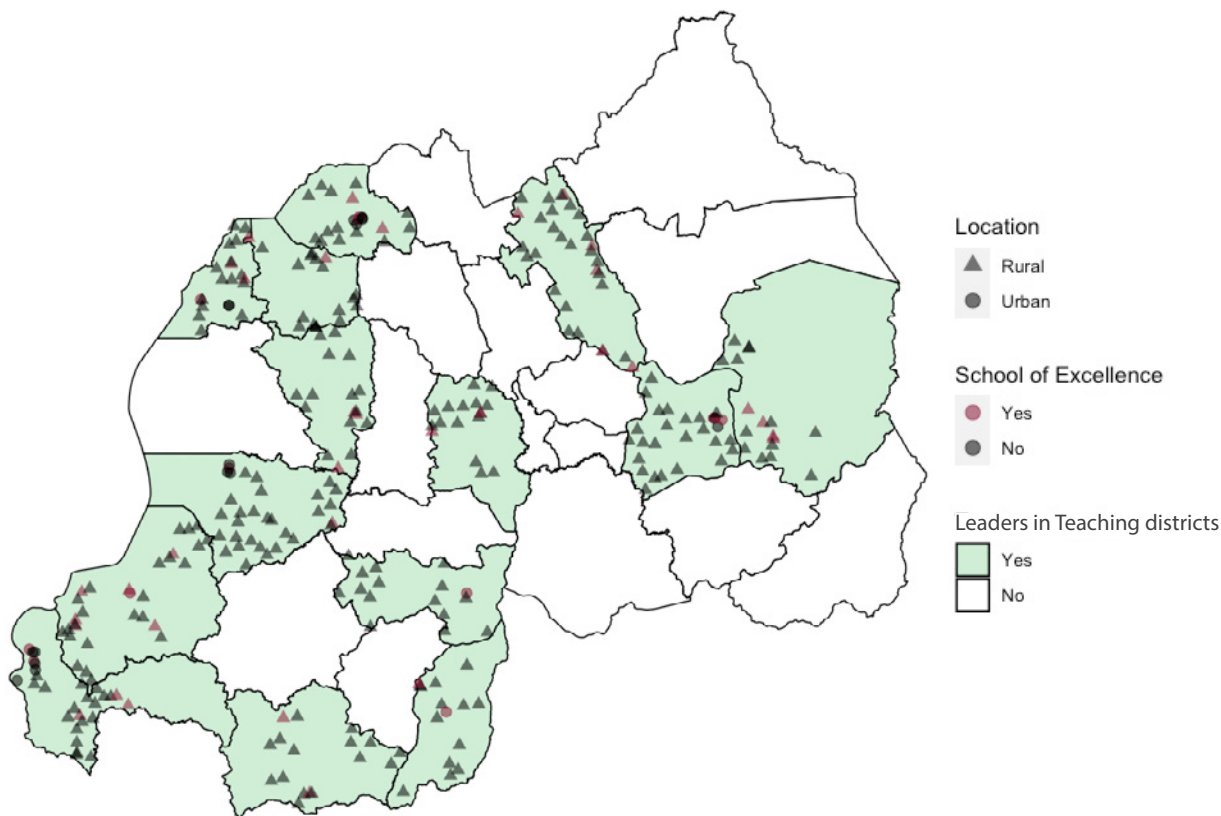
355 school leaders & 2,000 + STEM teachers

4,000+ Secondary 3 students

91% of schools are in rural areas

13% are schools of excellence[1]

Location
- ▲ Rural
- ● Urban

School of Excellence
- ● Yes
- ● No

Leaders in Teaching districts
- Yes
- No

1. Although the term "Schools of Excellence" is no longer used, it refers to schools established by the Minister of Education in 2011 to promote sciences with a focus on practical classes, serving as models for other schools. In this summary we refer to less selective "regular schools" and highly selective "Schools of Excellence" to outline this distinction.
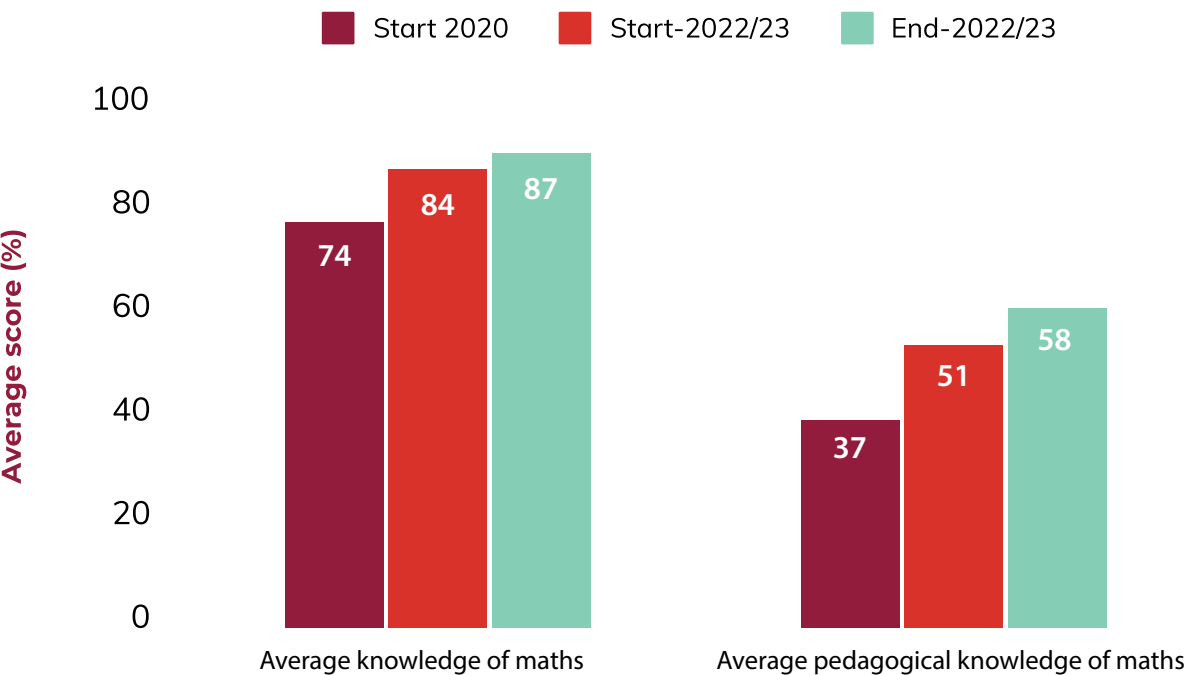
Summary of research findings

Topic 1: Teaching quality and student learning outcomes

Data sources:
- Teacher pedagogical and content knowledge assessments carried out in 2020 and 2023 with 103 mathematics teachers from 103 schools
- Student numeracy assessments carried out in 2020 and 2023 with more than 4,000 Secondary 3 students from the same 103 schools

Teachers' content knowledge of mathematics (how to *do* maths), and pedagogical knowledge of mathematics (how to *teach* maths) improved over the period of the Leaders in Teaching initiative.

Even though it increased, pedagogical knowledge started from a lower base and remained low at the end of the programme.

Legend: ■ Start 2020 ■ Start-2022/23 ■ End-2022/23

Y-axis: Average score (%) — 0, 20, 40, 60, 80, 100

Average knowledge of maths: 74, 84, 87

Average pedagogical knowledge of maths: 37, 51, 58

Teachers' classroom practices showed improvement in the following areas:

Classroom culture
- Creating a supportive classroom culture
- Promoting positive behavior in the classroom

Instruction
- Facilitating the lesson to promote comprehension
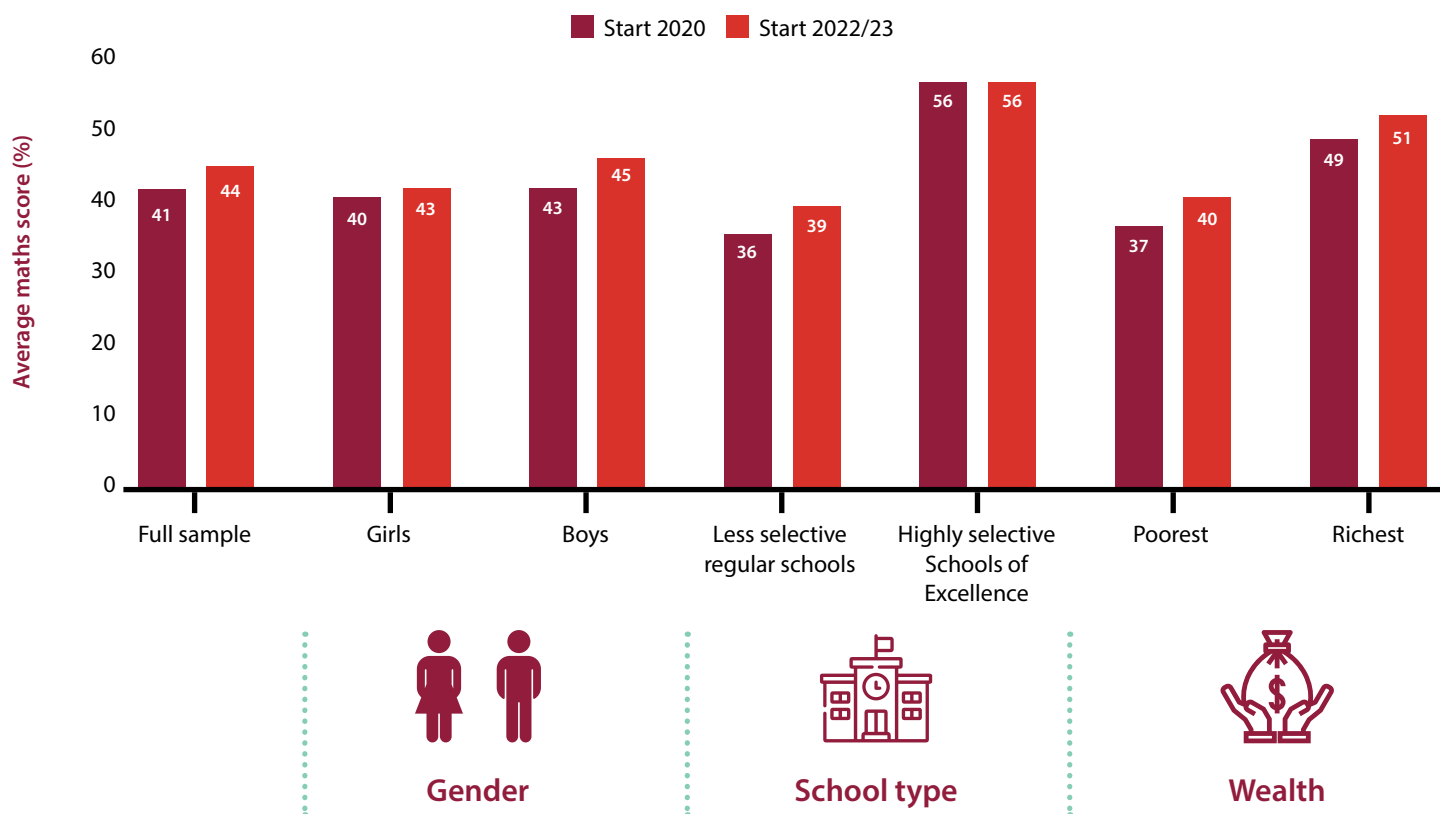- Providing feedback to deepen student understanding

Socioemotional skills
- Allowing students to make choices and encourage students to participate in the classroom
- Fostering a collaborative classroom environment

This was the case across teachers in regular schools and schools of excellence.

Mathematics learning outcomes improved between 2020 and 2023. The achievement gap in maths persists, but narrowed particularly among students who were more disadvantaged to begin with (students in regular schools, and students from the poorest backgrounds). This suggests that Leaders in Teaching may have supported the students with the greatest needs in catching up with their peers.

Average maths score (%)

Legend: ■ Start 2020 ■ Start 2022/23

Category	Start 2020	Start 2022/23
Full sample	41	44
Girls	40	43
Boys	43	45
Less selective regular schools	36	39
Highly selective Schools of Excellence	56	56
Poorest	37	40
Richest	49	51

Gender   **School type**   **Wealth**

Improvement in teachers' knowledge of maths is likely to close the achievement gap in the long term, given that:

- Higher teacher knowledge of maths and higher teacher competence in facilitating instruction are associated with improvement in student maths learning, especially for girls.

- Students in regular schools particularly benefit from higher teacher knowledge of maths, compared to students in schools of excellence.

Teachers recommended the following actions in response to this research:

Create a supportive teaching environment that enables quality learning by:

- Regularly **reviewing and updating the curriculum** to ensure it is relevant, appropriate for students' levels, and balanced across the subjects

- **Rebalancing subject hours** to ensure time is allocated for practical work in science subjects to enhance practical learning

- **Providing regular training for teachers** to keep them updated on the latest technologies and teaching methodologies

- **Reducing weekly teaching hours** to enable teachers more time to prepare and attend professional development, while adjusting the content of subjects to match allocated teaching periods

- **Building more classrooms** to reduce overcrowding, ensuring equitable distribution of teaching materials, and equipping schools with science and ICT facilities.

Continue to close the student achievement gap by:

- **Supporting girls to succeed in STEM** by:
  - Inviting successful women in STEM to visit students as **role models to build confidence**
  - Increasing **scholarships and awards** for girls studying science to build motivation and inspiration
  - **Encouraging equal participation** in classroom discussions and leadership roles
  - **Training teachers** regularly on gender-inclusive education; ensuring that every **school has facilities** such as well-equipped bathrooms to ensure a safe environment for girls, particularly during menstruation
  - **Engaging parents in discussions on the importance of equal education** for boys and girls, taking into consideration the balance of household chores and study time.

- **Supporting students from the poorest households** with **financial assistance**, scholarships and educational resources; increasing support for **school feeding programmes**; and strengthening **remedial programmes** for students who need support catching up.

- **Supporting students at all school types to succeed** by:
  - Increasing funding for regular schools to **provide laboratories and ICT equipment**, or organising **study trips** to Schools of Excellence for science practicals and reduce the divide between less selective regular schools and highly selective Schools of Excellence
  - Ensuring **capitation grant funds are sufficient**, disbursed on time, and adjusted for rising costs of school supplies
  - **Building more classrooms** in regular schools to reduce class sizes and enable individualised support
  - **Allocating more study time** in regular schools to match Schools of Excellence, ensuring students have time for lesson review and support.

Support inclusive learning of children with disabilities by:

- **Incorporating disability components in the curriculum** and ensuring that there is time provided to support these students
- Developing **evaluation criteria tailored to students** with disabilities
- **Creating a supportive environment** for students with disabilities by providing accessible reading materials, seating arrangements, inclusive activities with all students, and time to complete homework
- Providing **specialised training to teachers, renovating school buildings** with accessibility requirements in mind, and **educating parents and local communities** about disability inclusion would also help support these children to thrive in their education environments.
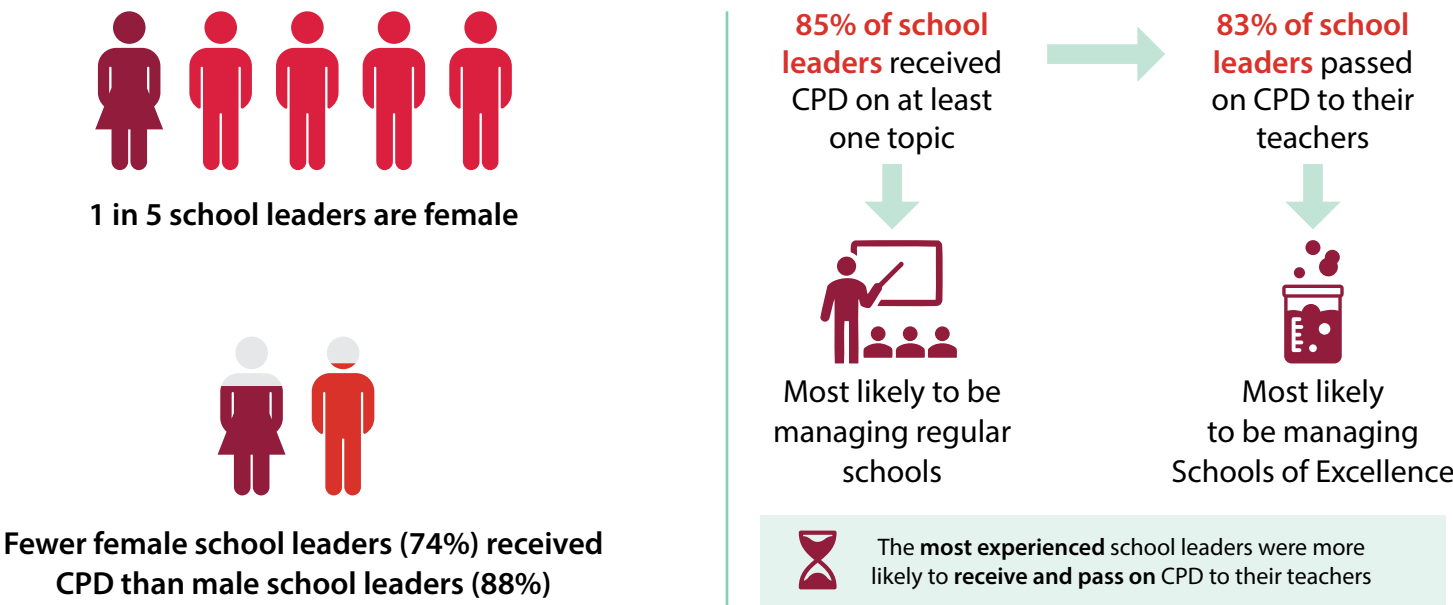
Topic 2: Continuous professional development, teacher motivation and student achievement

Data sources:
- Pre- (2020) and post-pandemic (2022) interviews with 294 STEM teachers and 173 school leaders
- Student numeracy assessments carried out in 2020 and 2022 with more than 4,000 Secondary 3 students from 103 schools
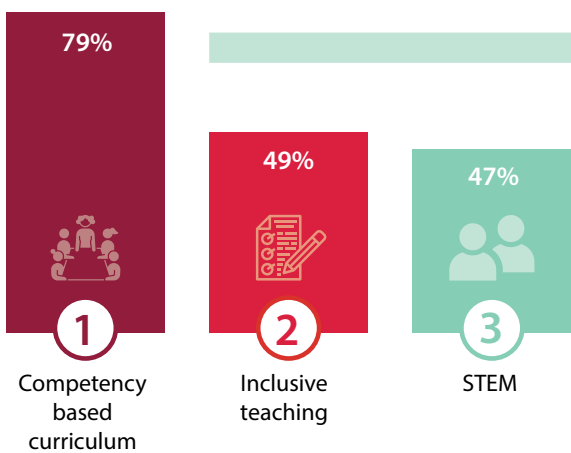
Pre-pandemic (early 2020), most school leaders participated in CPD. Those managing Schools of Excellence, and those who were most experienced, were more likely to receive and pass on CPD to their teachers.

In our sample:

1 in 5 school leaders are female

Fewer female school leaders (74%) received CPD than male school leaders (88%)

85% of school leaders received CPD on at least one topic

83% of school leaders passed on CPD to their teachers

Most likely to be managing regular schools

Most likely to be managing Schools of Excellence

The **most experienced** school leaders were more likely to **receive and pass on** CPD to their teachers

Pre-pandemic CPD focused primarily on the competency-based curriculum.

CPD delivered to school leaders

- 79% — ① Competency based curriculum
- 49% — ② Inclusive teaching
- 47% — ③ STEM

Top areas of CPD school leaders delivered to their teachers

① Competency based curriculum

② Analysis & use of student assessment

③ Coaching & mentoring

While half of the school leaders received CPD on inclusive teaching, only a quarter of them were trained on gender-sensitive teaching practices.
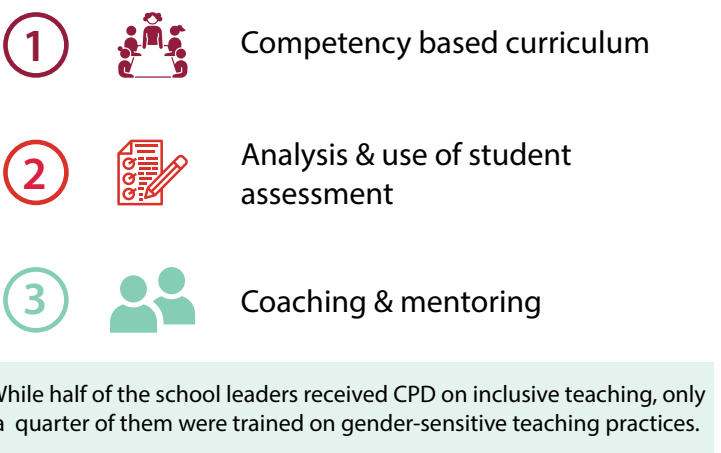
After schools reopened in the 2022-23 school year, CPD uptake increased for both STEM teachers and school leaders. The focus of CPD shifted to STEM & ICT, coaching and mentoring, and remedial learning. Few teachers reported having input in the type of CPD they received.

	STEM teachers		School leaders	
CPD uptake	— Stable during school closures	↑ Increased after schools reopened	↓ Dropped when schools closed	↑ Increased after schools reopened
CPD focus	−+×÷ STEM & ICT	👥 Coaching & mentoring	👥 Coaching teachers	📖 Remedial learning, school management
Agency in choosing CPD	**13%** of STEM teachers chose the CPD they received		**25%** of school leaders chose the CPD they received	
Effects of CPD on motivation	↑ Teachers reported **increased motivation** after training		↑ Improved capability to **manage** their schools, including **motivating** their staff	

Teachers with higher motivation for the teaching profession were significantly associated with improvement in student test scores in mathematics.

Teachers recommended the following actions in response to this research:

Promote participation in CPD by:
- Ensuring **CPD sessions cover relevant and practical topics** that meet the needs and interests of teachers
- **Providing financial support** for teachers to attend
- **Providing certificates** for CPD training that hold value for career progression
- Regularly **monitoring and evaluating CPD participation rates** to identify and address gender disparities or barriers to participation
- **Establishing feedback mechanisms** for teachers to suggest improvements to CPD programmes.

Promote women's participation in CPD by:
- **Scheduling CPD at times that do not conflict with family responsibilities** and/or providing alternative opportunities to attend (e.g. by recording sessions or providing multiple time options)
- **Providing support for female teachers** during training such as amenities for breastfeeding mothers
- **Assigning specific roles to female teachers during CPD** sessions to encourage active participation.

Promote teacher agency in CPD by:
- **Conducting needs assessments** to tailor CPD topics to identified needs and interests
- **Giving teachers notice of CPD availability** to enable them to plan around other commitments
- Regularly meeting with CPD providers to **coordinate CPD content with the curriculum, and classroom** and teacher needs.

Increase teacher motivation by:
- **Engaging teachers in decision-making** to make them more invested in the school's success
- **Establishing mentorship programmes** to connect new and experienced teachers
- **Giving teachers more time** for lesson preparation and professional development
- Providing **daycare facilities** for working parents
- **Ensuring schools have adequate teaching materials and resources** and teachers are trained on how to use them in the classroom
- **Organising relevant CPD** aligned with teachers' needs and schedules
- Placing **teachers in schools close to where they live**
- Regularly **recognising outstanding teachers**
- **Aligning salary increments** with additional training and certification.

Bringing teacher voices to policymakers

In August 2024, Laterite hosted a policy event with representatives from the Rwandan Ministry of Education (MINEDUC), the Rwanda Basic Education Board, the Mastercard Foundation, educators from Rwandan secondary schools, and development and implementing partners.

In his opening remarks, the guest of honour Mr. Pascal Gatabazi, Chief Technical Advisor at MINEDUC, said:

> **"Our teachers are more than just educators, they are the cornerstone of our education system. They have a deep understanding of the realities within our classrooms. It is essential that we listen to their voices and allow their experiences and insights to guide our discussions."**

Chief Technical Advisor at MINEUDC, Mr. Pascal Gatabazi, gives his opening remarks

The full-day event included wide-ranging discussions between key education stakeholders on the research findings and the teachers' recommendations. Discussions touched on what has already been done to address these issues, and where policy- and decision-makers might best focus their efforts to make the greatest impact. The following section provides some highlights from these discussions under each research theme.

Theme 1: Teaching quality and student learning outcomes

Attendees discussed the teachers' recommendations and noted that many of them could positively impact on teachers' abilities to support students in the classroom within allocated teaching hours, as well as supporting student and teacher motivation.

They also acknowledged that the suggested changes require financial and human resources, making prioritisation and planning essential. One way to approach this is by using existing resources, for example by leveraging the expertise of experienced and specialised teachers to provide school-based training and mentorship, and by organising study trips for students to make use of laboratories and ICT facilities at better resourced schools to enable all students to access the learning materials they need.

Theme 2: Continuous professional development, teacher motivation and student achievement

Attendees discussed the educators' recommendations and were interested in improving CPD provision to make it more relevant and accessible for teachers, both in terms of their interests as well as their career progression.

Challenges identified in implementing the recommendations included scarce financial and material resources, however attendees saw several of these recommendations as feasible. In particular, the CPD needs assessment, updating the Teacher Management Information System (TMIS) to track CPD attendance, and providing certification and recognition of CPD participation, were seen as possible.

Attendees of the policy event on 14 August 2024 at the Marriott Hotel in Kigali

Further research results and publications from the Leaders in Teaching learning partners are available online.

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