SPOTLIGHT ON BASIC EDUCATION COMPLETION
AND FOUNDATIONAL LEARNING

Rwanda

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Sustainable
Development
Goals

Global
Education
Monitoring
Report

Ushirika wa Maendeleo ya Elimu Barani Afrika
الرابطة لأجل تطوير التربية في إفريقيا
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SCHOOL-TO-SCHOOL
INTERNATIONAL

Republic of Rwanda
Ministry of Education

The Education 2030 Incheon Declaration and Framework for Action specifies that the mandate of the Global Education Monitoring Report is to be 'the mechanism for monitoring and reporting on SDG 4 and on education in the other SDGs' with the responsibility to 'report on the implementation of national and international strategies to help hold all relevant partners to account for their commitments as part of the overall SDG follow review'-up and. It is prepared by an independent team hosted by UNESCO.

This programme document accompanies the 2022 *Spotlight Report on Basic Education Completion and Foundational Learning in Africa* and was commissioned by the Global Education Monitoring Report to base the analysis of the 2022 *Spotlight Report on Basic Education Completion and Foundational Learning in Africa* firmly on the national context. The views and opinions expressed within should not be attributed to the Global Education Monitoring Report, its Director, or to UNESCO.

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Acknowledgements

Foreword

Rwanda aspires to become an upper-middle-income country by 2035, and a high-income country by 2050. Her development agenda is centred on prosperity and high-quality standards of life for all Rwandans. The realization of this vision is anchored on human capital development: the transformed workforce for higher productivity.

To realize the transformative power of education, children need to acquire foundational literacy and numeracy skills as the building blocks for more advanced skills. Over the last two decades, Rwanda has made great strides and reforms, which have led to many successes, especially in access to education for all. There is, however, more to be done in order to fully realize the required education quality. Thus it is time to take stock of the current situation and think more about effective education transformation. We need to identify, agree and pursue the scientifically evident key drivers of this transformation.

The Government of Rwanda has recently made unprecedented investments in education through the massive construction of classrooms to ease pupil overcrowding and reduce long distances to schools. Investments also include large-scale recruitment of additional teachers and their capacity building, and increased availability of learning resources. All of these efforts aim at ensuring a conducive learning environment for all without leaving anyone behind.

The Spotlight initiative, led by the Global Education Monitoring (GEM) Report in partnership with the Association for the Development of Education in Africa (ADEA), offers a contextually relevant, evidence-based approach on the critical factors that must be addressed to advance a key enabler of education transformation – foundational learning.

I am delighted to see the Rwanda Spotlight report completed and published at this time when the Ministry of Education and partners are working on elaborating an evidence-based *National Strategy on Foundational Learning*. The findings and recommendations of the Spotlight will add significant value to this strategy.

It is my hope that the report's findings – the challenges, good practices, examples of innovation – and Rwanda's participation in the first cohort of 12 countries and as one of 5 countries to produce an in-depth report, can contribute to peer learning across the continent. As the Spotlight series expands across countries, together, we can make foundational learning and universal basic education completion a reality.

Let me take this opportunity to congratulate and thank all who made this excellent work a success.

Thank you,

Dr. Valentine Uwamariya
Minister of Education
Rwanda

Table of Contents

1. Executive summary

The 1994 Genocide against the Tutsi resulted in more than one million people being killed in 100 days and Rwanda became considered a failed state. Since then, Rwanda has steadily managed to move from an emergency phase into a development phase. Rwanda's education system has undergone significant change during the country's national Vision 2020 (Republic of Rwanda, 2012). In 2015, the government drafted Vision 2050 (Republic of Rwanda, 2015), setting out a long-term strategic vision for the nation. Vision 2050 states that Rwanda's education system will be market driven and competence based. Thus Rwanda has undertaken education reforms and implemented new policies aimed at ensuring universal enrolment, improving quality and promoting the acquisition of foundational learning. Key reforms include providing fee-free basic education, changing the language of instruction, introducing a competence-based curriculum, taking steps to improve equity, expanding infrastructure, and implementing a comprehensive assessment system.

One of Rwanda's most notable achievements is universalizing access to primary school education, with a net enrolment rate of 99% (NISR, 2021, p. 33). However, while there has been tremendous progress in enrolment, at least 3 in 10 children do not complete primary education, and foundational literacy and numeracy levels remain low. In 2019, the Rwanda Basic Education Board (REB) and the Soma Umenye (Read and Understand) project funded by the US Agency for International Development (USAID) together developed early grade reading benchmarks for Kinyarwanda oral reading fluency (ORF) and reading comprehension for grades 1–3. The ORF benchmark for grade 2 students was set as at least 28 correct words per minute (characterized as 'meets expectations'. Only 16% of students tested met those expectations, while 4% exceeded them and the remaining 80% fell below expectations (Evans and Haba, 2019). Over the last two years, Rwanda has adopted different solutions to address the issue of quality education such as constructing an additional 22,000 classrooms with joint funding with the World Bank; recruiting and deploying an additional 44,000 new teachers into schools; and increasing teachers' salaries by 40% for primary school teachers and 88% for secondary school teachers.

Fieldwork findings included in this report showed teacher pedagogy includes traditional and innovative practices reflecting a competence-based approach; there are high expectations of teachers as the primary actors in implementing education reform; Rwanda's supervision and monitoring system serves the dual purpose of accountability and development; and assessment is a priority and happens at multiple levels. Fieldwork also found that the people, systems and resources most closely linked to foundational learning need a more intense and sharper focus to improve education quality and foundational learning outcomes. Specifically, key challenges remaining in teacher working conditions and teacher quality, supervision and monitoring of teaching and learning, and application and use of learning assessments are likely to hinder Rwanda's education process. While the top-level education policies are evidence based (e.g. competence-based curriculum, high-quality pedagogical practices and improved assessment systems), the implementation and execution of policies at the district, school and classroom levels warrant greater attention. This report's primary recommendation is for the government of Rwanda to develop an implementation strategy focused exclusively on the factors most closely linked to students' foundational skills – teaching and learning, teachers, supervision and monitoring, and learning assessment. Other recommendations include the following:

- Improve the quality, quantity and frequency of teacher training, particularly in competence-based curriculum and related pedagogical strategies.
- Expand efforts to offer teachers financial incentives explicitly tied to foundational learning outcomes as a tool to address teacher working conditions and quality.
- Focus supervision and monitoring systems on supporting teachers in mastering pedagogical practices aligned with the competence-based curriculum.
- Strengthen the classroom-based, formative assessment system by creating tools and guidance; building the capacity of and providing incentives to supervisors, head teachers and teachers; and encouraging demand for better quality education among parents and caregivers.

2. Introduction

2.1. PURPOSE OF THE STUDY

The Spotlight series has two goals:

- Synthesize, analyse and clearly present comparative knowledge on challenges and solutions to achieving universal basic education (UBE) completion and foundational learning as a basis for support to regional peer learning mechanisms and national, regional and global accountability mechanisms.
- Support national and regional coalitions in the use of this comparative knowledge to move national education systems, plans, policies and budgets – but also international support mechanisms – in the direction of achieving UBE completion and foundational learning.

2.2. RESEARCH QUESTIONS

The study aimed to stimulate an informed and strategic country-led policy dialogue with stakeholders and development partners which would, in turn, lead to tangible actions to address identified issues. It also assessed progress towards reaching targets. This Spotlight report will be a key input into an annual continental Spotlight report that will serve as a basis for continental peer dialogue on issues related to UBE completion and foundational learning. Four research questions guided the Spotlight study:

- What is the current state of Rwanda's education system in terms of the seven factors identified for the report's analytical framework?
- What progress has the country made in achieving UBE completion and foundational learning skills?
- What challenges does the country face in achieving UBE completion? What solutions is the country pursuing to overcome them?
- What are potential ways forward to foster foundational learning outcomes given the structural characteristics of the country's system and the country's current commitments to other goals?

2.3. MAIN ACTIVITIES

This Spotlight study in Rwanda comprised a set of activities, each generating evidence and findings related to the study's four research questions:

- Literature review and stakeholder mapping (August to September 2021)
- Initial stakeholder workshop (October 2021)
- Fieldwork (October to December 2021)
- Validation workshops [May and June 2022]

3. Situation analysis

The 1994 Genocide against the Tutsi resulted in more than one million people being killed in 100 days and Rwanda became considered a failed state. Since then, Rwanda has steadily managed to move from an emergency phase into a development phase. Rwanda's education system has undergone significant change during the country's national Vision 2020 (Republic of Rwanda, 2012). In 2015, the government drafted Vision 2050 (Republic of Rwanda, 2015), which sets out a long-term strategic vision for the nation. Vision 2050 states that Rwanda's education system will be market driven and competence based, matching Rwandans to innovative jobs created in information and communication technology (ICT), tourism, training, aeronautical engineering, computer programming and venture capital (Republic of Rwanda, 2015). This implies that both national and local education goals should align with the principles outlined in Vision 2050.

3.1. GOVERNANCE OF PRIMARY, SECONDARY AND TECHNICAL EDUCATION

Education in Rwanda is overseen centrally by the Ministry of Education (MINEDUC) in Kigali and guided by the Education Sector Policy and the priorities set out in the 2018/19–2023/24 Education Sector Strategic Plan (ESSP). The government placed a strong focus on progressive decentralization over the past 20 years and, as a result, the education system also depends heavily on the Ministry of Local Government (MINALOC) and its 30 districts (Republic of Rwanda, 2021a). Districts are responsible for recruiting teachers and appointing head teachers. They have a high degree of autonomy in setting their own education goals, but it is expected that these goals should align with the priorities set out in the ESSP (MINEDUC, 2017).

MINEDUC functions primarily through seven agencies (**Figure 1**). With respect to foundational learning, the two key agencies are the Rwanda Basic Education Board (REB) and the National Examination and School Inspection Authority (NESA). Recently, REB expanded its responsibilities to establish and monitor the basic education e-learning programme, promote the use of ICT and oversee the country's 16 Teacher Training Colleges (TTCs). REB coordinates directly with districts, particularly with district directors of education, district education officers (DEOs) and sector education officers (SEOs). While districts are technically overseen by district mayors who establish priorities linked to the national goals, the DEOs and SEOs are ultimately in charge of the providing and supervising education at the local level. Each district creates its own district development plan, which determines its education priorities and allocated resources, and each school is required to develop a school improvement plan. **Table 1** outlines the key government education stakeholders and their roles.

FIGURE 1
MINEDUC organizational structure

MINISTRY OF EDUCATION – ORGANISATIONAL CHART

Office of the Minister of State in charge of ICT and TVET (3)
- Minister of State (1)
- Advisor (1)
- Administrative Assistant (1)

Office of the Minister (7)
- Minister (1)
- Chief Technical Advisor (1)
- Advisor (1)
- Administrative Assistant (1)
- Internal Auditor (3)

Office of the Minister of State in charge of Primary and Secondary Education (3)
- Minister of State (1)
- Advisor (1)
- Administrative Assistant (1)

Permanent Secretary Office (9)
- Permanent Secretary (1)
- Institutional Change and International Cooperation Specialist (1)
- Information, Education and Communication Specialist (1)
- Legal Affairs Specialist (2)
- Legal Affairs Officer (2)
- Public Relations and Communication Officer (1)
- Administrative Assistant (1)

- CNRU
- UR
- HEC
- RP
- REB
- RTB
- NESA

Directorate General of Digitalization (14)
- Chief Digital Officer (1)
- Business Analyst (1)
- Senior Developer (2)
- System Administration Specialist (2)
- Network Specialist (2)
- Developer (3)
- Database Administration Specialist (2)
- IT Help Desk Officer (1)

SPIU

Directorate General of Education Policy & Analysis (1)
- Director General (1)

Directorate General of Education Sector Planning & M&E (8)
- Director General (1)
- Planning, M&E Specialist (4)
- School GIS Specialist (1)
- EMIS and Education Statistics Specialist (1)
- Education Financing Specialist (1)

Directorate General of Corporate Services (14)
- Director General (1)
- Procurement Officer (1)
- Financial Management Specialist (1)
- Accountant (2)
- Human Resource Specialist (2)
- Human Resource Officer (2)
- Logistics Officer (1)
- Documentation and Archives Officer (1)
- Secretary to Finance (1)
- Head of Central Secretariat (1)
- Secretary in Central Secretariat (1)

Education Policy and Analysis Unit (10)
- Director (1)
- High Education Specialist (1)
- Lower and Upper Secondary Specialist (1)
- Primary Education Specialist (1)
- Pre- Primary Education Specialist (1)
- TVET Specialist in charge of Polytechnics (1)
- TVET Specialist in charge of TVET Schools (1)
- Science, Technology, Innovation and Research Specialist (1)
- Adult Education Specialist (1)
- Education Infrastructure Senior Engineer (1)

School Feeding Unit (4)
- Director (1)
- School feeding Specialist (1)
- School Feeding Officer (1)
- Nutrition Officer (1)

Cross Cutting Programs Unit (5)
- Director (1)
- Special Needs Education Specialist (1)
- Girls Education Officer (1)
- Sport and Culture in Education Officer (1)
- Health and Environment Officer (1)

Notes*:* ICT – Information and communication technology, TVET – Technical and vocational education, CNRU – National Commission for UNESCO, UR – University of Rwanda, HEC – Higher Education Council, RP – Rwanda Polytechnic, REB – Rwanda Education Board, RTB – Rwanda TVET Board, NESA – National Examination & School Inspection Authority, SPIU – Single Project Implementation Unit, IT – Information technology, M&E – Monitoring and evaluation, GIS – Geographic Information System, EMIS – Education management information system.

Source*:* Republic of Rwanda (2020a, p. 404).

TABLE 1
Roles and responsibilities of various government ministries, departments and agencies

Government ministry, department or agency	Responsibilities
MINEDUC	• Lead ministry responsible for the education sector • Develops policies and introduces strategies • Responsible for regulation and monitoring of education system • Ensures education goals are aligned with national strategies and international commitments through Education Sector Strategic Plans
Ministry of Finance and Economic Planning (MINECOFIN)	• Finances the entire education sector and provides guidance for sector planning • Funds education through direct grants to districts and schools
MINALOC	• Manages schools at the district and sector levels • Coordinates school construction and provision of materials • Manages teacher recruitment and monitoring of district and lower administrative unit education • Deploys technicians to conduct monitoring and supervision of schools
REB	• Agency under MINEDUC • Develops and distributes curriculum for primary and secondary education • Coordinates teacher development • Promotes use of ICT • Oversees the TTCs • Coordinates directly with districts
NESA	• Agency under MINEDUC, created in late 2020 • Responsible for examinations (primary, secondary and technical and vocational education and training), which were previously under REB, and school inspection, which MINEDUC previously conducted
District director of education and district education officer	• Implement and supervise education at local levels • Establishes the district development plan, which determines education priorities and resource allocation • Recruits and appoints teachers and head teachers • Manages education statistics • Oversees MINECOFIN capitation grants • Provides teacher salaries and school feeding programmes • Deployed by MINALOC
Sector education officer	• Oversees basic education and technical and vocational education and training (TVET) • Provides direct supervision of schools • Coordinates with head teachers, community members and local leaders • Collects data to inform district development plans • Mobilizes local stakeholders to send children to schools • Deployed by MINALOC
University of Rwanda – College of Education	• Specialized teacher education institution with overall responsibility for teacher training • Develops curricula and offers high-level education programmes and training that prepare teachers for all school levels, as well as other education professionals • Has academic responsibility for the 16 TTCs • Awards degrees, which permit teaching at the upper secondary level; diplomas, which permit teaching at the lower secondary level; and certificates (via the 16 TTCs), which permit teaching at the primary level

Source: Authors

Teachers

The 2021 Rwanda Statistics Yearbook reported that there were 46,325 primary school staff in 2019, the most recent reporting year, and 98.7% of primary teachers were qualified (NISR, 2021). Primary school teachers are trained for three years in the TTCs, which are one stream of upper secondary education. Trainee teachers receive an A2 certificate on successful completion of their course, enabling them to be employed as a qualified teacher in a primary school. In 2019, 9,320 students were enrolled in TTCs, and 3,975 students passed the end-of-year exam. With the latter number fluctuating between 2,700 and nearly 4,000 in the past few years, the system trains around 3,000 new primary school teachers a year, on average (MINEDUC, 2019a, p. 42 and p. 51).

Teacher working conditions in Rwanda are challenging. The government believes that improved teacher management, welfare and deployment, along with well-defined career paths, will attract more qualified professionals and reduce turnover. Accordingly, it announced changes to the teaching profession, including a 10% increase in teacher salaries at government and government-aided schools and clear pathways for career progression (World Bank, 2019). However, in the current sector strategy, the net pay has not increased by the planned 10% due to high levels of annual inflation. A pay increase continues to be a key priority, according to recent Joint Education Sector Review documents. The government has also announced incentives for becoming a teacher, such as university scholarships or subsidies for TTC students (MINEDUC, 2017).

Teachers in Rwanda have often been overworked (MINEDUC, 2017), especially since the expansion of net enrolment. The influx of new students led to an increase in the pupil/qualified teacher ratio. There were 59 pupils per qualified primary school teacher in 2017, 57 in 2018 and 58 in 2019, the most recent available year (NISR, 2021). MINEDUC has invested in hiring more teachers and expanding infrastructure to lower the pupil/qualified teacher ratio, facilitate the phasing out of double shifting and reduce the time each individual teacher spends in the classroom (MINEDUC, 2017; World Bank, 2019). If Rwanda can attract and retain more teachers and ensure that they have appropriate skills, quality-related targets such as pupil/qualified teacher ratios may be met.

Supervision and monitoring

Rwanda's efforts to supervise and monitor the education sector require coordination among actors at various levels of the education system (i.e. national, district and school). At the national level, MINEDUC is the lead for monitoring and evaluating the entire education system and produces official data on enrolment, schools, facilities and teachers (MINEDUC, 2017). NESA oversees monitoring of compliance with norms and standards through school inspections and the administration of comprehensive assessments in basic education and TVET (NESA, 2022).

At the district and sector levels, district and sector education officers supervise and monitor schools to ensure implementation of their own district development plans. SEOs are responsible for gathering, aggregating and sharing data submitted by schools and monitoring continuing professional development activities (Ndihokubwayo et al., 2021). SEOs tend to emphasize broad supervision of schools – such as collecting data on attendance, dropout and infrastructure – rather than more pedagogically focused supervision, such as attending pedagogical meetings (MINEDUC, 2019b). Research suggests that DEOs and SEOs respond to multiple demands (not just education-related) and may not be properly trained to support pedagogical tasks (Williams, 2017; Ndihokubwayo et al., 2021). Indeed, recent reports by MINEDUC showed that the frequency of school management and pedagogical involvement of DEOs and SEOs was much lower than expected (MINEDUC, 2019b). In addition, districts' measurable outputs are evaluated using performance contracts (see below), which tend to focus on measurable indicators on infrastructure, recruitment, teacher training and overall school functioning (MINEDUC, 2020a). These factors may contribute to a lack of incentive for SEOs and DEOs to focus their supervision and monitoring on pedagogical practice in the classroom.

At the school level, general assemblies, composed of head teachers, parents, teachers and students, take on supervision and monitoring responsibilities. General assemblies approve budgets, action plans and bonuses for teachers, and appoint members to executive and audit committees. Head teachers and deputy head teachers oversee the entire school and communicate with other education units, such as district units (Republic of Rwanda, 2021b). Head teachers provide regular supervision of teachers, evaluating their expected duties and performance (MINEDUC, 2020b). However, it has been noted that head teachers do not always observe the teaching practices of all their teachers or implement the pedagogical plans that are part of their expected pedagogical support (MINEDUC, 2019b). MINEDUC is working to improve head teachers' training for better oversight of teachers' continuing professional development and their supervisory roles (MINEDUC, 2017).

A key difficulty related to monitoring of the sector has to do with difficulties in reporting, particularly from schools to the central level. Information and reporting systems at the school, district and central level are not yet integrated, due to lack of proper planning and incompatible data management architecture. The government is working on developing a national and integrated education management information system (EMIS) to improve coordination and clarify roles and responsibilities at the various administrative levels. The initiative to improve

monitoring and evaluation systems also aims to improve school-level systems, including by creating a Formative Assessment Management Information System to support formative assessment of student learning using standard tests. The current EMIS plan is scheduled to be completed by 2025 (MINEDUC, 2020c).

Performance contracts, supervision and monitoring tools that aim to ensure adequate performance of mayors, DEOs and SEOs, have become more prominent since 2006 and require districts to set targets related to their development plans. At the end of every fiscal year, a team from multiple ministries conducts a thorough two-day evaluation of the districts and their results. Districts are given a score between 1 and 10 based on these evaluations; key information about district performance is then made public (World Bank, 2018a).

3.2. ENROLMENT AND COMPLETION

Rwanda's progress towards the education access targets of Sustainable Development Goal (SDG) 4 can be understood through enrolment and completion rates (**Table 2**). Primary gross enrolment rates were steady from 2017 to 2019, the most recent years for which data are publicly available (NISR, 2021). These figures indicate that enrolment of over-age children (typically a result of repetition and dropout) is likely still a challenge, compounding high pupil/teacher ratios and overcrowding. The primary net enrolment is essentially universal, at 99% in 2019. This is remarkable given the country's starting point after the 1994 Genocide against the Tutsi. Rwanda is one of few countries in sub-Saharan Africa to have achieved universal primary net enrolment.

TABLE 2
Enrolment rates in Rwanda's primary schools, 2017–19 (%)

Indicator	2017	2018	2019
Gross enrolment rate	139.10	137.50	138.80
Net enrolment rate	98.0	98.30	99.0

Source: NISR (2021).

In comparison with neighbouring countries (**Figure 2**), Rwanda's gross enrolment rates appear high, indicating that the system is likely succeeding at ensuring that all children have access to primary education.

FIGURE 2
Primary gross enrolment ratio, Rwanda and selected countries, 2010–20
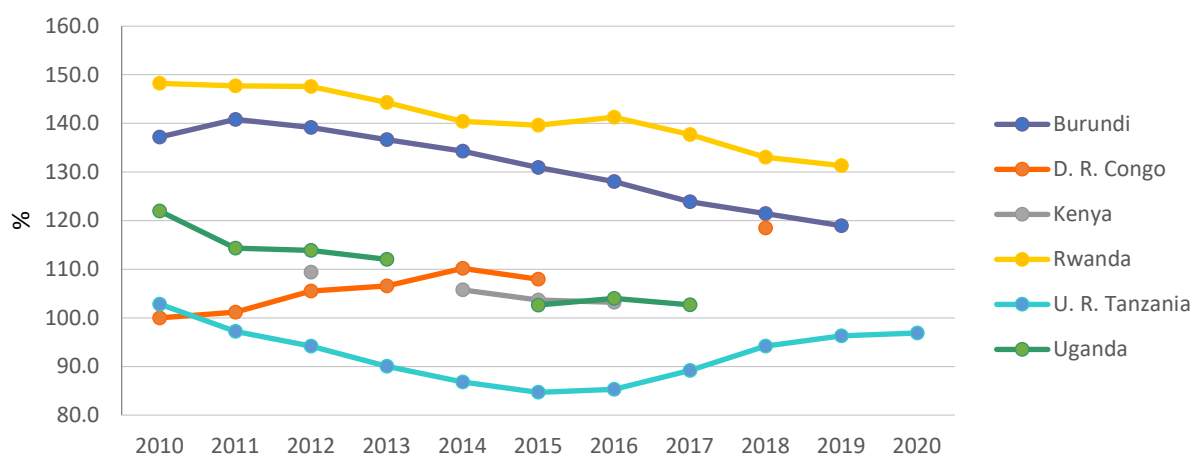
Source: UIS database (2021).

Indicators of primary school progress are also largely positive (**Table 3**). Promotion data for 2018/19 show that more than 82.2% of students were promoted from primary school, with small differences by gender. Indicators of repetition and dropout are low, with 10% of students repeating a grade and 7.8% of students dropping out.

Indicators of school progress, 2018/19

Indicators	Male	Female	Total
Primary promotion rate	80.4%	84.0%	82.2%
Primary repetition rate	10.9%	9.2%	10.0%
Primary dropout rate	8.7%	6.8%	7.8%

Source: MINEDUC (2019a).

GEM Report team estimates based on analysis of multiple survey sources indicate that the primary education completion rate increased from 19.8% in 2000 to 36.5% in 2010 and 57.4% in 2020. However, late enrolment and repetition mean that ultimately 70.7% of children manage to complete primary school (**Figure 3**).

FIGURE 3
Survey estimates of the primary completion rate
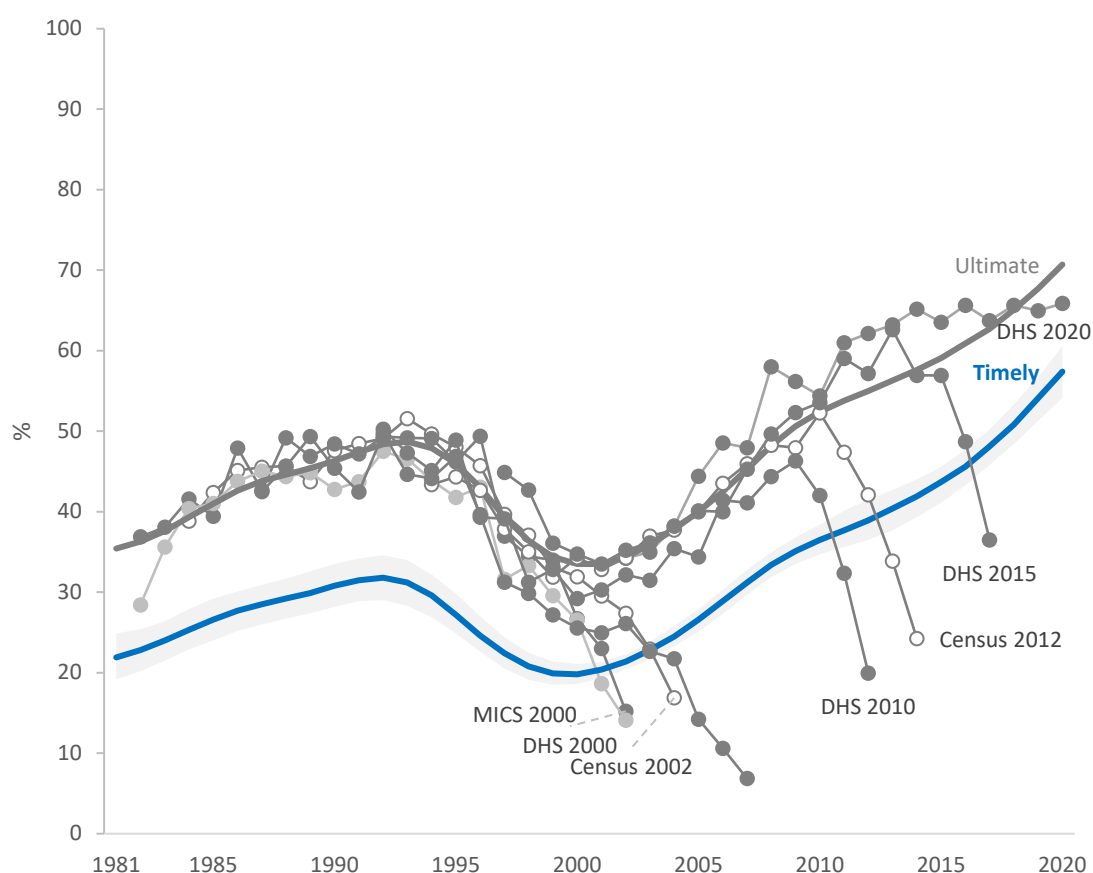
Note: DHS = Demographic and Health Survey; MICS = Multiple Indicator Cluster Survey.
Source: UNESCO country completion rate estimates, https://education-estimates.org/completion/country.

3.3. LEARNING

In 2011, Rwanda introduced Learning Achievement in Rwandan Schools (LARS), an assessment measuring learning according to the national curriculum, with a particular focus on literacy and numeracy. Each round has assessed different grades, so it is not yet possible to measure changes in learning outcomes over time with these assessments.

- LARS I – 2011, primary grade 3 (P3)
- LARS II – 2014 P2 and P5
- LARS III – 2017 P3, P6 and secondary grade 3 (S3)
- LARS IV – administered in February 2021

Literacy and numeracy: A significant share of students fail to meet grade-level competence in literacy and numeracy. LARS III, conducted in 2017/18, showed that just 55% of students in P3, 56% in P6 and 71% in S3 tested at or above the expected level (**Table 4**). Data are insufficient to compare changes in learning outcomes over time.

TABLE 4
LARS results, percentage of students scoring at or above expected levels

School grade	LARS I: 2011		LARS II: 2014		LARS III: 2017	
	Literacy	Numeracy	Literacy	Numeracy	Literacy	Numeracy
P2			45.3%	32.9%		
P3	63%	54%			54.9%	40.7%
P5			44.1%	38.3%		
P6					56.4%	59%
S3					71.3%	78.8%

Source: Universalia, R4D and itad (2019, p. 71).

Comparison with other learning assessments, such as the Early Grade Reading Assessment (EGRA) and Oral Fluency Assessment of Rwandan Schools, is challenging because of major differences in design, but all show that large shares of students did not meet expectations (Moulton, 2016). In 2018, Rwanda scored 358 on the World Bank's global assessment of learning for the Human Capital Project, on a scale from 625 (advanced attainment) to 300 (minimum attainment); Rwanda was in the bottom quarter of assessed countries (World Bank, 2019).

Disparity: The 2017 LARS III found significant disparity in learning outcomes between boys and girls and between urban and rural children. Girls outperformed boys in P3, but boys significantly outperformed girls at the P6 and S3 levels. A similar trend is found in national examination data. The various assessment tools used consistently show disparity in learning outcomes among provinces (with the highest scores in Northern province and the lowest in Southern province) as well as between children living in rural areas and those in urban areas. LARS III data also showed a strong correlation between household wealth and learning outcomes at both the P6 and S3 levels (Universalia, R4D and itad, 2019).

Repetition and over-age children: The 2017 LARS III found a strong correlation between children's age and their learning outcomes. Children who were at the correct age for their grade had significantly better results than those who were over-age. While most children enrol in P1 at the expected age, nearly 80% of P6 and S3 students reported having repeated at least one grade, meaning that, on average, they were around two years behind the correct age for their grade. This highlights the need to reduce repetition rates in order to improve the quality of learning in Rwanda (Universalia, R4D and itad, 2019).

Early childhood: According to LARS III, children in P6 are more likely to have attended pre-primary than children in S3, suggesting a trend of increasing participation. Where children have been enrolled in pre-primary,

this is linked to reduced repetition rates and improved learning outcomes in P1 and P2, suggesting that continuing to focus on increasing pre-primary enrolment is likely to have a positive impact on learning (Universalia, R4D and itad, 2019).

In addition to LARS, USAID-funded projects (Literacy, Language and Learning and Soma Umenye) have used the EGRA with various cohorts of students over the past five years. In 2019, USAID's Soma Umenye and REB joined in developing early grade reading benchmarks[1] for Kinyarwanda oral reading fluency and reading comprehension for grades 1–3. **Table 5** shows ORF benchmarks. Considering these benchmarks in relation to Rwandan student performance on EGRAs and Local Early Grade Reading Assessments (LEGRAs) (see below for clarification on the difference between EGRA and LEGRA in the Rwandan context), it is evident that reading performance among students in the early grades in Rwanda remains below expectations.

TABLE 5
Approved oral reading fluency benchmarks, grades 1–3

Grade	Does not meet expectations	Partially meets expectations	Meets expectations	Exceeds expectations	Benchmark
P1	1 to 6 CWPM	7 to 9 CWPM	10 to 20 CWPM	21+ CWPM	10 CWPM
P2	1 to 9 CWPM	10 to 24 CWPM	25 to 35 CWPM	36+ CWPM	25 CWPM
P3	1 to 17 CWPM	18 to 39 CWPM	40 to 50 CWPM	51+ CWPM	40 CWPM

Note: CWPM = correct words per minute.
Source: USAID Rwanda (2020).

Results from the Literacy, Language and Learning (L3) Initiative's baseline assessment showed that 60% of P1 students, 33% of P2 students and 21% of P3 students could not read a single word in an ORF test in Kinyarwanda. About 10% of P3 students did not solve any addition problems correctly (EDC, 2017b). Key findings from the endline assessment (EDC, 2017b) include:

Reading assessment

- After two years of L3 intervention, P1–3 learners showed significant gains in reading in Kinyarwanda, but P4 results in Kinyarwanda remained unchanged.
- P4 learners showed significant improvement in English reading after one year.
- P1–3 learners showed a significant increase in ORF and reading comprehension. On average, P1–3 learners could read between three and six additional words correctly per minute in Kinyarwanda.
- The percentage of P1 to P3 learners who were unable to read a single word decreased, from baseline to endline, by between 7% and 10%, on average.

Mathematics assessment

- P1 learner performance in mathematics increased significantly from baseline to endline. P2–4 learner performance remained unchanged.
- P1 and P3 learners showed significant decreases in zero scores from baseline to endline. On average, less than 7% of P1–4 learners could not solve a single mathematical problem at endline.

An EGRA conducted as part of the Soma Umenye baseline study (USAID, 2019) found that P1 students' reading performance in both the treatment and control groups was low on all subtests; however, students participating in the treatment performed higher than students participating in the control on two subtests – letter identification and familiar word reading – and those differences were statistically significant. Overall, students in both treatment and control groups posted ORF scores of less than five correct words per minute (4.98 and 4.27, respectively). This is

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[1] The internationally accepted way of measuring reading fluency is by setting grade- and language-appropriate targets for students based on correct words per minute (CWPM). The benchmarks cited here were developed by REB with USAID's Soma Umenye using the modified Angoff method.

well below ORF performance expectations for P1 students, as the benchmark approved by REB is at least 10. An ORF score of between 1 and 6 CWPM 'does not meet expectations' (Evans and Haba, 2019).

In 2020, Soma Umenye piloted another EGRA that tested a sample of students in P1, P2 and P3 in five districts. This Local Early Grade Reading Assessment was designed to be a quick and relatively easy to administer tool enabling teachers and school leaders to collect data on every student's reading and literacy performance. LEGRA is a Rwandan adaption of USAID's Group Administered Literacy Assessment (GALA). Like GALA, LEGRA includes a group-administered set of tests, but it also includes a one-on-one fluency and reading comprehension test. The pilot LEGRA (USAID Rwanda, 2020) showed that P2 students' ORF performance in the five districts remained low: 32% of female students and 39% of male students did not read any words correctly. However, among the students tested, a higher share of P2 students attained the benchmarks than in P1 or P3. Overall, the LEGRA pilot results showed that the majority of P1, P2 and P3 students in all five districts sampled did not meet expectations for ORF, according to the benchmarks.

3.4. FINANCING

The trends towards 20% of the national budget dedicated to education, 50% of that going to pre-primary and primary education, and the increasing decentralization of the education budget are positive and demonstrate the government's commitment to foundational learning. The projected increases may have been negatively impacted by the COVID-19 pandemic. In recent years, around 40% of the recurrent education budget was allocated to primary education, then in 2019/20 the government has met its commitment to increase the share to 46% (**Table 6**).

TABLE 6
Share of education expenditure in GDP and total government expenditure

	2015	2016	2017	2018	2019/20	2021/21	2021/22
Education as % of GDP	4.0%	3.6%	3.5%	3.6%	4.8%	5.0%	4.8%
Education as % of government expenditure (excluding debt service)	15.6%	16.3%	14.6%	13.6%	16.8%	17.4%	17.4%
Recurrent education expenditure as % of public recurrent expenditure (excluding debt service)	19.9%	22.9%	17.8%	16.4%	17.8%	17.0%	16.5%
Primary recurrent education share of education recurrent expenditure (%)	41.8%	42.8%	38.5%	40.7%	46.2%	46.4%	46.6%

Source: Republic of Rwanda (2019).

In 2017, the largest proportion of the education budget (40%) was allocated to primary education (MINEDUC, 2017). That percentage represented a shift in Rwanda's approach to allocating the education budget; UNICEF (2020) reported a tendency to allot a similar or greater share to secondary education than to primary. This report stated that the majority of education sector resources went to pre-primary and primary education, representing 47.7% of the total education sector budget, with primary education receiving the largest share.

In alignment with Rwanda's decentralized approach to supervision and monitoring, a large percentage of the education budget is distributed to subnational levels. In 2021/22, the budget for education at the local government level was RWF 262.7 billion, or 59.3% of the total education sector budget (UNICEF, 2020).

3.5. DEVELOPMENT PARTNERS

MINEDUC coordinates collaboration with donors through sector working groups co-chaired by a director general from the central government and a senior representative of development partners (MINEDUC, 2017). The main education working groups are the (i) Education Sector Working Group (ESWG), (ii) Sub-Sector Working Group (SSWG) for basic education, (iii) SSWG for TVET and (iv) SSWG for higher education. All sector stakeholders participate in the working groups, which facilitate information exchange between partners to discuss and orient technical matters related to education.

The ESWG oversees the entire education system and is co-chaired by the ministry's permanent secretary, the UK Foreign, Commonwealth & Development Office (FCDO) and UNICEF. The ESWG plays a critical role in policy development and education sector planning. It collaborates with MINEDUC, affiliated agencies, line ministries and district-level administrations to develop Education Sector Strategic Plans and oversee their implementation (Universalia, R4D and itad, 2019; MINEDUC, 2017). SSWGs meet monthly to oversee strategic aspects pertaining to their respective subsector. Within each SSWG, technical working groups oversee education delivery by area of interest (MINEDUC, 2017).

The Rwandan government has taken a proactive stance on coordinating financing from development partners. In 2005, it created the External Finance Unit, a key government entry point for external financing, which provides development partners with a centralized interface. It offers guidance and leadership on how development partners can better align their support with government priorities.[2] Rwanda has a collaborative relationship with development partners, many of which contribute to education sector financing. At the same time, Rwanda is pursuing greater self-reliance in terms of development.

The 2019/20 External Development Finance Report found that overall, most of Rwanda's financing for development came from its own resources (54%), albeit a decline from 2018/19 when it represented 61% of the total (MINECOFIN, 2020a). Thus 46% of its financing came from external resources, an increase of 7% since 2019/20. In absolute terms, Rwanda received US$1.8 billion from external development cooperation resources. For the fiscal year 2021/22, MINECOFIN announced that the total amount of resources projected was RWF 3.8 trillion, with domestic resources accounting for RWF 2.5 trillion (including RWF 1.7 trillion from tax revenue) and external resources RWF 1.3 trillion (MINECOFIN, 2021b).

Education in Rwanda benefits from international aid from bilateral, multilateral and civil society organization partners. Basing its projection on development partner survey data, the ESSP estimated indicative partner funding between 2018/19 and 2022/23 at US$229.5 million. It projected that the share allocated to primary education, which was 14% in 2018/19, would increase to 44% in 2022/23 (MINEDUC, 2019a, p. 75).

The 2019/20 External Development Finance Report showed that the education sector received 10.4% of total development partner contributions, compared with 8.7% in FY 2018/19 (MINECOFIN, 2020a, p. 11). Health, agriculture and energy were the only sectors that received a greater percentage of contributions. The report noted that development cooperation in absolute US dollar volumes targeting education increased steadily between 2015 and 2020. At the 2020 Development Partners Retreat – an annual, senior-level retreat bringing together key development partners to review priorities – it was recommended that development partners work with Rwanda's government 'to develop a long-term evidence-based roadmap to improve learning outcomes in primary schools' (Republic of Rwanda, 2020b, p. 3). Several large development partner projects have a core focus on improving learning outcomes through support to teaching and learning (**Table 7**).

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[2] www.devpartners.gov.rw

TABLE 7

Main current and recent development partner projects focused on basic education

Development partner and project	Description and achievements
FCDO – Learning for All (GBP 97.6 million, 2015–23)	The Learning for All: Technical Assistance for Quality Improvement and School Level Accountability programme in Rwanda (2015–2023) supported delivery of the ESSP, with a focus on MINEDUC, REB and decentralized agencies, including schools. Its overarching objectives were to design and implement a programme to strengthen technical skills and capacity in three foundational areas: (i) improved teaching of English and mathematics in P1 to P3; (ii) improved school leadership with a focus on instruction; and (iii) strengthened education systems addressing key gaps at district and national level. The programme included a technical assistance component (Building Learning Foundations, BLF) as well as non-budget support financial aid to pay school capitation grants, textbooks and in-service teacher training to support the introduction of a new curriculum. BLF is working to improve learning outcomes in English and numeracy in grades 1 to 5 at all government and government-aided primary schools, ensuring that Rwandan children have the foundational skills to make successful progress through the system. The original project was due to finish in 2021. A cost and time extension was granted to continue to strengthen each foundation with a specific focus on improving the English skills of both teachers and learners (FCDO, 2016).
World Bank – Quality Basic Education for Human Capital Development Project (US$200 million, 2019–24)	The focus of this US$200m project is to improve teacher competence and student retention and learning in basic education. The first component focuses on enhancing teacher effectiveness for improved student learning. The second component, improving the school environment to support student learning, addresses critical issues of overcrowding and long distances to schools through the construction of additional classrooms and new primary-level schools. The third component, developing institutional capacity to strengthen teaching and learning, supports development of institutional capacity to strengthen teaching and learning and upgrade skills and knowledge of key staff in the units managing and implementing the project (World Bank, 2018b).
Lego Foundation and UNICEF – Learning through Play (US$4 million, 2020–23)	This project supports implementation of the primary school competence-based curriculum in Rwanda. It trains teachers in child-centred, play-based instruction techniques that include both free and guided play activities.
Belgium and the ELMA Foundation – Induction System for Newly Qualified Teachers (EUR 2.15 million, 2017–24)	The Mentorship and Supervision Programme develops, tests and implements a system of mentoring of newly qualified teachers by mentor teachers. This is complemented with monitoring by trained tutors from the TTCs. The combination of mentoring and monitoring is intended to catalyze strengthening the link between pre- and in-service teacher training. Not only will new teachers be better prepared in their profession, but the TTCs will learn and engage with what happens in schools and with the challenges new teachers face in their first year in service. The TTCs can in turn improve their initial teacher training. The programme operates in four districts of Eastern province and two districts of Western province (VVOB, 2020).
USAID – Mureke Dusome (US$10.8 million, 2016–20)	This project aimed to improve literacy outcomes for Rwandan children in primary grades by strengthening school leadership capacity to improve student literacy; activities included forming school–community partnerships, increasing effective community and parental involvement to improve literacy skills, and fostering a culture of reading (USAID, n.d.a).
USAID – Soma Umenye (US$72.5 million, 2016–21)	This project supported government efforts to improve the quality of classroom reading instruction, strengthen system capacity throughout the education sector, sustain reading improvement and increase the number of grade 1–3 students able to read and understand grade-level text; activities included improving professional development and providing ongoing support to teachers, ensuring teachers and students had sufficient materials for reading instruction and practice, and helping teachers focus on students' learning outcomes (USAID, n.d.b.).

USAID – Literacy, Language and Learning (L3) Initiative (US$26.6 million, 2011–17)	This project supported MINEDUC efforts to improve students' reading and numeracy skills in primary schools. It worked in pre- and in-service training to introduce teaching strategies and involved community volunteers. It was intended to produce gains in early literacy and numeracy and English as a second language (EDC, 2011). Its impact included: • Reaching more than 25,290 teachers through pre-service, in-service and intensive coaching programmes • Reaching over 1.8 million primary students in all 2,400 Rwandan primary schools • Training over 1,140 parent–teacher committees in supporting literacy learning • Distributing over 9 million teaching and learning items to schools (EDC, 2017a).

3.6.   THE GOVERNMENT'S EDUCATION PRIORITIES

MINEDUC ensures that education goals are aligned with national strategies and international commitments through the development of ESSPs, which provide five-year strategic blueprints for the education sector. The 2018/19 to 2023/24 ESSP established three main goals: (i) promoting access to education at all levels, (ii) improving education and training quality and (iii) strengthening education and training relevance, all in alignment with labour market demands (MINEDUC, 2017). Implementation of ESSPs requires careful collaboration with multiple stakeholders across various ministries and decentralized structures, as well as with broader education stakeholders. Performance contracts, described in greater detail above, are one tool the Rwandan education system uses to hold key education stakeholders to account for adequate implementation of ESSPs, particularly in the case of supervision and monitoring.

Rwanda's current ESSP outlines nine strategic priorities, of which are relevant to foundational learning:

- Enhanced quality learning outcomes that are relevant to Rwanda's social and economic development.
- Strengthened continuous professional development and management of teachers across all levels of education.
- Enhanced use of ICT to transform teaching and learning, and to support the improvement of quality across all levels of education.
- Strengthened modern school infrastructure and facilities across all levels of education.
- Equitable opportunities for all children and young people at all levels of education.
- Strengthened governance and accountability across all levels of education.

The Rwandan education system has undergone a series of major reforms in the past two decades.

Reform 1: Providing fee-free basic education coupled with rapid expansion of school infrastructure and training of additional teachers
One of the most important reforms was the provision of free and compulsory primary education, which was written into the 2003 Constitution (Republic of Rwanda, 2003). This policy was extended from 6 years to 9 in 2009 and to 12 years in 2012. Although the policy has led to increased enrolment, particularly at the primary level, it has had other unintended consequences. The increased number of students who gained access to education or shifted to public education meant teachers had to teach in overcrowded classrooms and teach more double shifts than before. Double shifting, in turn, reduced the time students had with teachers and likely affected instruction quality (Abbott et al., 2015, cited in Williams, 2017).

To address these challenges, there has been an emphasis on better infrastructure in rural areas. The rationale is that more and better schools in rural areas will facilitate school access and mitigate acute problems such as overcrowded classrooms (MINEDUC, 2017). A key approach over the last decade has been the home-grown solution of mass mobilization of government entities, faith-based organizations and development partners, supported by local communities with labour and materials (MINEDUC, 2020d). In the 18 months between mid-2020 and end 2021, the government, with support from the World Bank-funded Human Capital Development Project, constructed 22,500 new classrooms and recruited and deployed over 44,000 new teachers into schools.

Reform 2: Changing the language of instruction

Post-independence, Kinyarwanda served as the language of instruction for the first three years of primary school and French from grade 4. In 1996, English became a third official language. For reasons of trade and regional integration into the East African Community, in 2008, English became the official language of instruction from grade 4 on, with Kinyarwanda continuing to be used for the first three grades. The fact that in 2012, only 7% of Rwandans reported being able to read and write in English (NISR, 2014), justified this policy reform.

Reform 3: Introducing a competence-based curriculum

The government has tried to transform teaching and learning in Rwandan schools from traditional, rote practices to more dynamic, learner-centred ones. Rwanda introduced a competence-based curriculum in 2016, marking a shift from a 'knowledge-based' approach to education to a 'competence-based' approach, which focuses on deeper thinking and on teaching discrete skills. The shift was also meant to promote a learner-centred approach so that learners actively participate in their learning process. The government stated: 'The full curriculum needs to be accessible to every learner, rather than having lower expectations of those with impairments and disabilities' (Rwanda Education Board, 2015, p. 23).

The 2015 curriculum framework outlines seven basic competencies and six generic competencies which promote the development of higher-order thinking skills. Literacy and numeracy are among the basic competencies, as it is recognized that they are 'basic to accessing learning in other subjects' (Rwanda Education Board, 2015, p. 7).

Formative and summative assessments are intended to check the extent to which learners are achieving the learning objectives and competencies identified in the curriculum (Rwanda Education Board, 2015).

'[T]he government of Rwanda emphasises the importance of aligning the curriculum, teaching and learning and assessment approaches in order to ensure the development of the kind of citizens the country needs and desires. What children are taught, how well they are taught and the competencies they acquire are influenced by many factors, among them the relevance of the curriculum, the necessary and sufficient pedagogical approach adopted by teachers, the assessment strategies and the necessary and sufficient instructional materials. These are all being aligned with the new curriculum' (Rwanda Education Board, 2015, p. 3).

Reform 4: Teacher training and motivation

Rwanda's government has put measures in place to revitalize pre-service teacher training by equipping the TTCs and supporting in-service training for all uncertified basic education teachers. There has also been a strong focus on continuing professional training for all teachers, which includes school-based peer-learning support for teachers through communities of practice, with special attention on literacy and numeracy in grades 1 to 3.

A new government incentive package to attract the best students to the teaching profession includes provision of free university scholarships for 300 in-service teachers every year and a 50% waiver of fees to student teachers in TTCs. To improve serving teachers' motivation, the government introduced annual salary increments of 10% and shops enabling teachers to shop for basic items at low cost. These initiatives complement the existing Umwalimu Sacco cooperative, which gives teachers access to low-interest loans.

Reform 5: Using ICT to support learning

The government has made significant investment in ICT infrastructure, devices, connectivity and online content. As a result, 57% of all government primary schools now have access to ICT devices (e.g. tablets, computers and projectors), and many schools benefit from the One Laptop per Child and One Laptop per Teacher programmes. An e-learning platform (www.elearning.reb.rw) has been developed with digitized content for basic education (books, teacher guides and continuing professional development courses for teachers) and edutainment aligned with the competence-based curriculum for pre-primary and lower primary. In all, 48 episodes were produced and are being aired on national television and REB's YouTube channel. The target is to produce 178 edutainment episodes by 2024. Over 15,000 secondary school teachers have been trained and certified on ICT in education at an advanced level and 13,000 primary school teachers have been trained and certified at the beginner and intermediate levels.

Reform 6: Improving equity, especially for children with disabilities

In recent years, Rwanda's government has implemented several policies aimed at improving equity. In the current ESSP, efforts focus on (i) better identifying students with disabilities, beyond just physical disabilities; and (ii) monitoring students with disabilities more closely by including disability as a disaggregation category. Moreover, to tackle some of the barriers to access that students with disabilities face, the government has increased its efforts to build better infrastructure to accommodate a wider range of students (MINEDUC, 2017).

Reform 7: Providing school meals
Hunger and poor nutrition can destroy a child's ability to learn and flourish. A hungry child cannot grow or learn and faces many future health risks. Schools are a natural and convenient setting to ensure children are well nourished in body and mind. The government also recognizes the contribution of school feeding programmes to multiple facets of economic development. As a result, in partnership with parents and stakeholders, the government provides school meals to the entire basic education subsector (pre-primary, primary and secondary schools). The school feeding programme is an effective mechanism for addressing child nutrition issues and increasing education enrolment, retention and performance.

Reform 8: Launching the Comprehensive Assessment System
A key element in a successful shift to inclusive competence-based instruction is improved assessment methods. In January 2019, MINEDUC adopted a resolution establishing a Comprehensive Assessment System, which provided guidelines on assessments to stakeholders at all levels of basic education. The goal of comprehensive assessment is 'to ensure that effective teaching and learning has taken place and due competences have been acquired' (MINEDUC, 2019c, p. 9). As per those guidelines, the government recognizes and promotes multiple types of assessment: classroom-level, end-of-term, end-of-year, and end-of-cycle national examinations. Classroom-level assessments are supervised and marked at the school level. The first end-of-term assessment is supervised by the SEOs and DEOs and also marked at the school level. The second end-of-term assessment is marked at the district level and supervised at the national level. NESA administers and supervises the end-of-year assessment, with logistic support from schools. It also prepares, conducts and marks the end-of-cycle national examinations. Thus multiple stakeholders are involved in each assessment, sometimes requiring high degrees of vertical coordination.

Through several initiatives, the government is trying to foster and improve formative assessment practices in Rwandan classrooms. Central to this initiative is the strengthening of teacher programmes, including a possibility of training tutors on how to support teachers' ability to use intake assessments and implement formative assessment strategies (World Bank, 2019). In addition, via in-school coaching, active teachers will be supported to continually use formative assessment in their classrooms (MINEDUC, 2017). While not included in the 2019 resolution, system-level learning assessments are also fundamental to the sector, particularly the LARS assessment, which is used to monitor student outcomes and to report progress against the SDGs. A Comprehensive Assessment Management Information System, under development, will facilitate generation of real-time assessment data to feed into decision making.

Reform 9: Establishing the National Steering Committee on Foundational Learning
The National Steering Committee on Foundational Learning was established in April 2022 to serve as an oversight body on learning in pre-primary and lower primary grades, provide high-level guidance and strategic direction to enhance learning outcomes in lower primary, and share knowledge and serve as a reference body for partners implementing interventions on foundational learning.

Simultaneous with these education reforms, the government has progressively transferred administrative, financial and political responsibility from the centre to districts under a phased decentralization process. This process can be credited for much of the progress in service delivery and poverty reduction in Rwanda, as it has brought resources and services closer to the people, introduced a results-oriented governance norm (through a locally developed process known as imihigo[3]) and enhanced coordination of locally provided state services (Chemouni, 2017).

These reforms demonstrate how Rwanda is prioritizing high-quality education and learning in alignment with SDG 4.1 and 4.5. However, the country's progress towards attaining this vision is still under way. Specifically, several challenges remain that could hinder the Rwandan education sector from achieving its goals to promote education quality and foundational learning.

Challenge 1: Despite reforms to improve teaching conditions and quality in recent years, teacher quality in Rwanda is still too low to support its ambitions.
Teacher quality encompasses a wide range of measurable indicators and qualitative characteristics, such as years of experience and level of qualifications, as well as teachers' knowledge, skills, attitudes and practices and their students' performance. On most measures, teacher quality in Rwanda falls short. At the primary school level, Rwandan education statistics show that 93.6% of teachers are trained to teach in primary schools (NISR, 2020). However, LARS data show that just 45.3% of P2 students reached expected performance levels in literacy

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[3] Imihigo, based on a pre-colonial goal-setting practice, is a tool for progress towards national development aspirations involving a performance contract between the president's office, ministries and districts.

and just 32.9% in numeracy. Thus, while teachers appear to be qualified, student learning is lagging. Likewise, the gap between what teachers are prepared to teach and what they are expected to teach is enormous. For example, teachers are expected to deliver a challenging, competence-based curriculum while teaching in English.

The Rwanda Vital Statistics Report of 2020 states, 'Nearly all Rwandans speak the same language, Kinyarwanda, which is the country's official first language, followed by English and French' (NISR, 2020, p. 6). A 2018 World Bank report found that only 38% of teachers in P1 to P3 met the required standard to teach subjects in English (World Bank, 2018b). The literature did not show clear examples of efforts to build such competencies in teachers. A large-scale initiative to retrain teachers in English showed poor results, as most teachers continued to demonstrate low levels of English mastery.

Teacher attitudes toward the new competence-based curriculum and its student-centred approach, another proxy for teacher quality, have also been found to be problematic. A 2019 study of 165 primary school teachers found that many teachers had a negative attitude toward learner-centred pedagogy (Otara et al., 2019). A well-trained and qualified teaching workforce, and particularly primary school teachers entrusted with ensuring foundational literacy and numeracy skills, is key to driving the government's education sector reforms and goals to improve education outcomes.

Challenge 2: Rapidly shifting language policies and a lack of phased implementation results in low learning outcomes.
In 2008, English became the official language of instruction in primary with implementation of this policy change starting in 2009. This was modified in 2011 when Kinyarwanda started to be used for the first three grades, with English remaining from P4 onwards. The policy was then reversed in 2019 so that all children are now taught in English from P1. In practice, successfully implementing such rapid shifts in language policy has been nearly impossible. This is due to a lack of planning and resources for such dramatic changes, inadequate teaching and learning materials in English and a teaching force that lacks the language skills necessary to deliver instruction and monitor student performance adequately.

Challenge 3: Five years after its launch, the competence-based curriculum remains partially implemented.
There is not yet an enabling environment to support Rwanda's 2016 shift to a competence-based curriculum emphasizing higher-order, critical thinking knowledge skills. Teachers are the primary mechanism by which the competence-based curriculum should be delivered. However, little evidence is available to show if teachers themselves have the competences they are intended to foster in their students, complicating implementation. The complexity of and weaknesses in the Rwandan teacher training system intended to prepare teachers for such fundamental shifts in their teaching practices are documented in the observation, focus group and interview data collected for this report and in the data on teacher quality mentioned under challenge 1 above. More success might result from re-examination of the human and financial resources allocated to curriculum implementation and of the curriculum dissemination and training structures that are meant to support the shift to a competence-based curriculum, particularly in literacy and numeracy in the early grades.

Challenge 4: Learning assessments are not yet systematically used to improve foundational learning.
The Rwandan education sector, under the Comprehensive Assessment System, engages in classroom-level assessments, end-of-term assessments, end-of-year assessments and end-of-cycle national examinations. It has also implemented the LARS system to monitor and report on learning at the system level. The number of assessments, the frequency of administration and the many people required at various levels of the system make its operation challenging. Teachers already face the need to deliver a sophisticated curriculum in English. It is likely to be an additional burden for them to have to administer assessments, report on results and adjust their instruction accordingly. The government is rightly interested in using assessments to understand how students are performing and to communicate their progress or setbacks to the larger society. However, without clear, systemic links between assessment results and education reforms that directly affect students' learning in the classroom, learning assessments are unlikely to make a difference.

Challenge 5: Supervision and monitoring structures are complex.
The division in supervision and monitoring – with MINEDUC responsible for overall regulation and monitoring, MINALOC responsible for monitoring districts and lower administrative units, and general assemblies having certain school-level supervision and monitoring responsibilities – hinders cohesion, but the process for ensuring this is unclear. DEOs and SEOs do not report to MINEDUC, making accountability more difficult. The complexity of coordination between various levels of supervision and monitoring, combined with the many challenges SEOs face in directly supervising schools and classrooms, as outlined in this review, is a potential impediment to achieving universal completion and foundational learning.

3.7. POLITICAL ECONOMY

Rwanda's political economy is important to consider as a framework for this report because it illuminates the potential for larger institutions to shape education progress in the country. The Rwandan Patriotic Front is the ruling political party in Rwanda and has been since the end of the 1994 Genocide against the Tutsi, lending the government a certain political stability that not all countries experience. Under the leadership of Paul Kagame, there has been a continuous prioritization of education and the institutionalization of reforms, which has resulted in significant progress that might not have been possible with changes of government and the rapid policy shifts they can bring.

The current Minister for Education, Dr Valentine Uwamariya, was appointed in February 2020. She has declared that her focus would be on improving education quality so that Rwanda could achieve the levels of education desired to support its ambition to have a knowledge-based economy (Kagire, 2020). Specific education priorities included:

- Increasing the capacity of teachers to ensure competence to deliver the desired quality of education.
- Attending to the personal welfare of teachers to allow them to focus on teaching.
- Engaging the private sector more in education to create a labour force that will meet private sector needs.

The priority on intensifying Rwanda's focus on education quality to foster a knowledge-based economy is aligned with the country's Vision 2050 national development strategy (Republic of Rwanda, 2015). It also articulates an ongoing commitment to expand Rwanda's focus on increasing access to education so that it also emphasizes education quality.

Beyond the government and its ministries, teacher unions can influence the delivery of education in Rwanda. The country's main teacher union is the Rwanda Teachers' Union, established in 1996 as a union of primary teachers and incorporated as a legal entity in 2001 (SNER, 2022). It represents public sector teachers and education personnel and currently has 53,466 members, according to its website. Among other responsibilities, it plays a role in recognizing teaching quality through its initiative to annually deliver cows and laptops to excellent teachers.

Rwanda also has unions that represent education personnel working in religious institutions, such as the National Secretariat of Catholic Education (Secrétariat National de l'Enseignement Catholique) and the National Protestant Education Bureau (Bureau National de l'Enseignement Protestant). Religious institutions' influence on education in Rwanda cannot be understated, as more than half of all schools are church-run (Scheunpflug et al., 2021). Cooperation between state- and church-run schools is influenced by the fact that the state pays teacher salaries in the latter schools. Religious Studies and Religion and Ethics are subjects taught in Rwandan schools and curricula are available for communities that are predominantly Christian (the majority religion in the country) and those that are predominantly Muslim.

Civil society also plays an influential role in education in Rwanda. Coalitions and associations, including the Rwanda Education for All Coalition and Forum for African Women Educationalists Rwanda, along with international organizations, participate in shaping Rwanda's education landscape in various ways.

3.8. SUMMARY

The situational analysis identified several achievements of the Rwanda government and MINEDUC. The government has established an ambitious national growth strategy with a clear vision for education's contribution to national growth. It has made considerable progress in universalizing access to primary education. It has launched and implemented an innovative, competence-based curriculum and Comprehensive Assessment System. It has also taken a proactive stance at coordinating cooperation and funding with development partners, which has resulted in its receiving significant funds to expand infrastructure and improve teacher quality and foundational learning, generated both through the government and with development partners. These accomplishments, while not comprehensive, are notable in their potential to generate improvement in Rwandan students' foundational learning skills. However, as the previous section detailed, challenges to Rwanda's education system persist. The remainder of this report will narrow its focus to the strengths and challenges (and their perceived causes) identified in the situational analysis, as well as examining current or new policies that might address them.
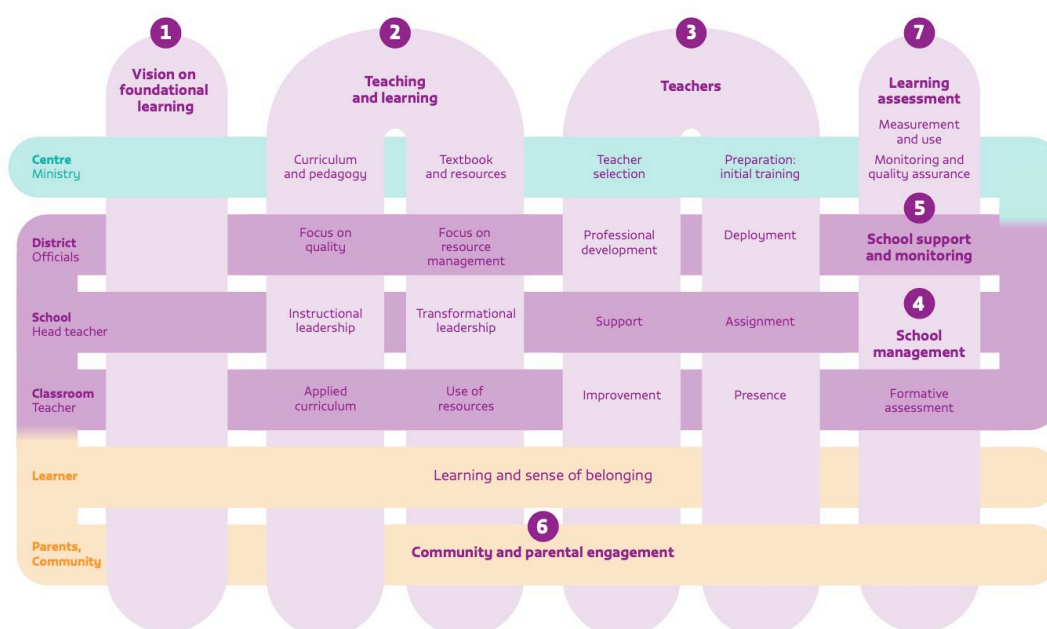
4. Analytical framework and fieldwork findings[4]

4.1. ANALYTICAL FRAMEWORK OF CRITICAL SUCCESS FACTORS

This review follows the Spotlight series conceptual framework, which outlines seven key factors that affect UBE and foundational learning (**Figure 4**).

	1 Vision on foundational learning	2 Teaching and learning		3 Teachers		7 Learning assessment
Centre Ministry		Curriculum and pedagogy	Textbook and resources	Teacher selection	Preparation: initial training	Measurement and use / Monitoring and quality assurance
District Officials		Focus on quality	Focus on resource management	Professional development	Deployment	5 School support and monitoring
School Head teacher		Instructional leadership	Transformational leadership	Support	Assignment	4 School management
Classroom Teacher		Applied curriculum	Use of resources	Improvement	Presence	Formative assessment
Learner		Learning and sense of belonging				
Parents, Community		6 Community and parental engagement				

Source: Spotlight series analytical framework and research guide.

The Spotlight series analytical framework posits that the key to achieving foundational learning is a vision of improving learning for all children that permeates all education leadership levels. This vision should be reflected and communicated in policy decisions on the curriculum, pedagogy and resourcing of teaching and learning. The vision should also be reflected in and communicated through teacher preparation and management policy decisions. The analytical framework recognizes that school-level decisions are key and that head teachers should lead on school management and be supported through supervision and monitoring by local education authorities. Community and parental engagement provide an additional piece of the structure of monitoring and quality assurance through observation or more active participation. Finally, learning assessments – including the steps taken to perform them and to use the data they generate – are recognized as necessary for the vision of equitable and inclusive education of good quality to be realized.

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[4] Tables in this section are compiled by the authors from field notes.

4.2. RESULTS OF DISCUSSIONS WITH NATIONAL STAKEHOLDERS

An initial stakeholder workshop was conducted online over Zoom in October 2021, the purpose being to validate the literature review's high-level analysis, gain consensus on priority issues and receive insights into solutions. In total, 28 stakeholders attended: They represented the public sector, civil society and multilateral and bilateral donor organizations and other funders.

At the workshop, the research team presented the literature review and situational analysis, then engaged stakeholders in voting on education challenges that affect foundational learning. Participants were presented with a list of 10 possible challenges, including the 5 that the research team had identified from the literature review and situational analysis. Stakeholders identified five issues to explore and prioritize:

- Low teacher quality
- Inadequate use of learning assessments to improve foundational learning
- Inadequate supervision and monitoring systems
- Inadequate education funding to support ambitions
- Low parent and community engagement.

Of those, three priorities identified mirror those found in the situational analysis: teacher quality, learning assessments, and supervision and monitoring (**Table 8**).

TABLE 8
Education challenges in Rwanda

Identified by situational analysis	Identified by stakeholders
Despite recent reforms to improve teaching conditions and teacher quality, the latter is still too low to support the country's ambitions	Low teacher quality
Learning assessments are not yet systematically used to improve foundational learning	Inadequate use of learning assessments to improve foundational learning
Supervision and monitoring structures are complex and need greater emphasis on teaching and learning	Inadequate supervision and monitoring systems
Rapidly shifting language policies and a lack of phased implementation result in low learning outcomes	Inadequate education funding to support ambitions
Five years after its launch, the competence-based curriculum remains partially implemented	Low parent and community engagement

Next, the participants were divided into three groups. Each discussed the top five challenges the stakeholders had identified and listed them according to level of priority (high or low) and the effort (high or low) it would likely take to address them (**Table 9**).

TABLE 9

Results of the education challenge prioritization activity among key stakeholders

High priority and low effort	High priority and high effort
<u>Group 1:</u> • Inadequate use of learning assessments (system level) • Inadequate education funding (donors) • Inadequate supervision and monitoring (Note: changes in district and sector supervision could raise the level of effort required) <u>Group 2:</u> • Low teacher quality • Teacher motivation <u>Group 3:</u> • Inadequate use of learning assessments to improve foundational learning • Inadequate supervision and monitoring systems – low to medium effort	<u>Group 1:</u> • Low teacher quality (takes time) • Inadequate use of learning assessments (classroom) • Inadequate education funding (government) <u>Group 2:</u> • Language of instruction • Low parent and community engagement <u>Group 3:</u> • Low teacher quality • Inadequate use of learning assessments to improve foundational learning (perhaps less effort than teacher quality) – medium effort, systems in place; formative assessments in class are missing, not readily utilized; frequency of formative assessments, increasing frequency is critical • Inadequate education funding to support ambitions

The prioritization activity results showed the stakeholders agreed each of the top five challenges was high priority. However, opinions differed on whether addressing those challenges would require low or high effort. For example, two groups said it would take high effort to improve teacher quality (particularly the time necessary), while the third expected it would take low effort. Stakeholders also recognized that even within a single challenge, different aspects might take different levels of effort. For example, some stakeholders expected it would take low effort to affect the use of learning assessments at the system level but high effort at the classroom level. Groups also implicitly engaged in a second round of prioritizing education challenges. For example, while the language of instruction was not identified as a top-five priority when all stakeholders voted, one group categorized it in the prioritization activity (high priority and high effort). Likewise, teacher motivation (apart from teacher quality) was added as a priority by one group of stakeholders. Lastly, just one group put low parent and community engagement in the top five priorities. Ultimately, three priorities identified as high priority and low effort mirrored those found in the situational analysis: teacher quality, learning assessments, and supervision and monitoring. Language of instruction was also raised as a challenge.

During the stakeholder workshop, participants also worked in groups to generate solutions to some of the priority challenges. When groups selected one challenge to propose solutions for, two of the three groups selected 'inadequate use of learning assessments'. The other selected 'inadequate supervision and monitoring systems'. Their recommendations were as follows:

- **Inadequate use of learning assessments**: Stakeholders recognized the current comprehensive assessment policy as a strong starting point. They recommended a shift in implementation to emphasize formative and diagnostic assessment to help students who are falling behind. They also suggested that head teachers and teachers were key actors in this change and that affecting the challenge would require training and a change in mindset from a focus on summative to formative assessment.
- **Supervision and monitoring**: Stakeholders indicated that the current policy had inadequate funding, inadequate planning for the logistics of supervising and monitoring, and a lack of clarity or definition of the supervision and monitoring role at the district and sector levels. To solve these challenges, stakeholders suggested that (i) inspectors should not inspect in their own sector, (ii) support and provision of resources should be delivered disproportionately to rural or poor schools within inspector frameworks, (iii) reporting lines need to be clarified (e.g. SEOs are under MINALOC's direction) and (iv) head teachers and deputy head teachers should play a more prominent role in supervision and monitoring.

4.3. FIELD APPROACH AND AREAS VISITED

The purpose of the fieldwork was to further explore the priority issues brought up at the stakeholder workshop. The interview and observation protocol was devised to gather data that would provide deeper understanding of these priority issues from the perspective of front-line educators. Given the rapid nature of the fieldwork and the limited size of the research team, the purpose of the fieldwork was not to develop a statistically robust evidence base. Conducted from 25 to 29 October 2021, the fieldwork took place in four districts of Rwanda. The research team selected districts based on their performance over the past three years related to their absolute performance level (measured by P6, end-of-cycle examination scores and imihigo rank) and their performance level relative to other districts in a region or their change in performance. Ultimately, two districts were deemed 'high performing' and two 'low performing' based on these measures.

A team of 10 field researchers and 1 field manager conducted key informant interviews (KIIs) and classroom observations, focusing on P2 because it is a key year for foundational learning, the focus of this study.[5] The field research team visited 12 schools in total, 3 per district, which were selected based on their academic performance and location (**Table 10**).

Spotlight study in Rwanda fieldwork summary

Tool and respondent	District				Total
	Nyaruguru	**Musanze**	**Rutsiro**	**Rwamagana**	
KII, Head teacher	3	3	3	3	12
KII, P2 teacher	3	3	3	3	12
Classroom observation, P2	3	3	3	3	12
KII, District stakeholder	1	1	0	0	2
KII, Sector stakeholder	0	0	1	1	2
KII, National stakeholder	N/A	N/A	N/A	N/A	4

A validation workshop was conducted with the MINEDUC senior management team on 19 May 2022 and then with a wider group of stakeholders on 2 June 2022. The purpose of the validation workshop was to present findings and preliminary recommendations and allow stakeholders to comment on them.

The study faced two main limitations. First, due to the COVID-19 pandemic, the research team could not travel to the field to interview and observe at first hand, so a local team was contracted to collect and report on data. This factor, combined with the fact that the research team was not made up of Rwandan nationals, limited the team's ability to integrate a local and contextualized understanding into the analysis. A related limitation involved data collected from district, sector and national stakeholders. The original sample was planned to include two district, two sector and four national stakeholders. These objectives were achieved, but it became clear that more and richer data from these stakeholders would have benefited the study, given the increasingly decentralized nature

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[5] Field researcher training took place the week prior to data collection and lasted three days, during which time field researchers practised using the tools in schools. Innovative Hub for Research in Africa's field manager led the training with support from STS's US-based staff.

of the education system and DEOs' role in key systems, such as the Comprehensive Assessment System and teacher monitoring.

4.4. FINDINGS FROM THE LESSON OBSERVATIONS

Data collected through classroom observations provided unique insight into one of the top five challenges: teacher working conditions and quality. It also provided inferred information on two other challenges: language of instruction and use of learning assessments. The classroom environment observed in the 12 schools where observation data were collected suggested education policy implementation gaps but was generally unsurprising.

- Most students were observed possessing a subject-appropriate textbook (67% of classrooms) and most teachers were observed possessing a teacher's guide (83% of classrooms).
- However, the national textbook policy states that each student should possess a textbook, and this was not observed.
- As expected, some classrooms could be characterized as overcrowded.
- The largest class size observed was 68 students, the smallest 27.
- The average class size observed was 49 students.
- Not all classrooms observed offered at least one desk or chair per student (just 67% of classrooms did), suggesting either a lack of resources, overcrowding or both.

In terms of teacher characteristics, five teachers were male and seven were female. The most years of experience reported by teachers was 42 and the least was 3. The average years of experience among teachers was 16. All teachers reported achieving an A2 level of education.[6]

Observed pedagogical practices
Field staff reported if they observed teachers and students engage in 10 pedagogical practices, 5 of which were deemed 'traditional' and 5 'innovative' (**Tables 11 and 12**). Traditional practices, while not inherently poor practices, may not be useful for delivering the competence-based curriculum. With this in mind, the research team posited that classrooms in high-performing districts might be consistently observed engaging in traditional practices less often than those in low-performing districts. Observations showed, however, that, generally speaking, all lessons demonstrated traditional pedagogical practices, such as teacher lecturing, student recitation or student copying of written text, regardless of their status as high- or low-performing. No clear patterns by status were indicated.

TABLE 11
Observations of traditional pedagogical practices (n = 12)

Traditional pedagogical practice	High performing	Low performing
Teachers lectured at the front of the classroom	100%	100%
Pupils recited texts provided by the teacher	50%	67%
Pupils copied texts provided by the teacher	66%	33%
Pupils answered questions at the board or in the front of class	100%	83%
Teachers assigned students individual classwork	83%	83%

In contrast to traditional practices, observations of innovative pedagogical practices showed more consistent differences in school performance status (**Table 12**). Classrooms in high-performing districts were observed using innovative practices more consistently than classrooms in low-performing districts. Notably, teachers in all classrooms asked questions to check student understanding, a form of classroom assessment. Lastly, few

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[6] This equates to having completed upper secondary education in either the general or the technical stream.

classrooms were observed in which pupils worked in small groups to solve a problem, a practice that is closely related to the competence-based curriculum.

TABLE 12
Observations of innovative pedagogical practices (n = 12)

Innovative pedagogical practice	High performing	Low performing
Pupils individually used tools or manipulatives (e.g. letters, flashcards, counters) at their desks or tables	67%	33%
Teacher asked questions to check on students understanding	100%	100%
Pupils worked in small groups to solve a problem	17%	0%
Teacher listened to children and responded to their questions	83%	50%

Observed language practices

Given Rwanda's efforts to pursue a language policy suited to its national and educational aspirations, the research team collected data on language practices in the observed classrooms (**Table 13**). Most teachers (83%) used Kinyarwanda as the primary language of instruction, which is not aligned with the language policy for P2. As of 2019, all children should be learning in English; however, many teachers do not speak English and the previous language of instruction policy allowed for instruction in Kinyarwanda in the early grades. Observed students overwhelmingly used Kinyarwanda to communicate in the classroom (92%). Also, 75% of the lessons observed used learning materials in Kinyarwanda (25% used materials in English). An analysis of the high- and low-performing school status results shows the same trends: Most teachers and students used Kinyarwanda as the primary language of instruction. An interesting but small difference is that classrooms in high-performing districts demonstrated slightly less use of Kinyarwanda (observers also noted the use of English, not presented in the table).

TABLE 13
Observations of language practices (n = 12)

Language practices	High performing	Low performing
Teacher used Kinyarwanda as the primary language of instruction	67%	100%
Children used Kinyarwanda as the primary language of instruction	83%	100%
Visual aids on the wall were in Kinyarwanda	17%	17%
Learning materials (e.g. textbooks, exercise books) were in Kinyarwanda	83%	67%

Foundational learning (literacy and numeracy) has been a long-standing focus of education reform in Rwanda. Thus the research team collected specific information on the literacy and numeracy practices used in classrooms. Out of 12 total observations, 8 literacy lessons were observed. Five literacy practices were selected because they are effective practices to promote literacy acquisition (**Table 14**). Overall, 'teachers and pupils read aloud' (83%) was the practice observed in most classrooms. Notably, 'pupils communicated with each other in pairs or groups to understand a text' was observed in just one classroom (8%), which is in line with the finding that few classrooms engaged students in group work. Comparing classrooms in high- and low-performing districts, more classrooms in high-performing districts were observed engaging in the practices than those in low-performing districts for two of five literacy practices.

TABLE 14
Observations of literacy pedagogical practices, (n = 8)

Literacy pedagogical practices	High performing	Low performing
Teachers engaged pupils in song, rhyming or other play-based oral activities to teach reading	67%	17%
Teachers or pupils read aloud	83%	83%
Teacher stated a clear literacy skill to be studied (e.g. phonological awareness, phonics, fluency, vocabulary, comprehension, writing)	67%	67%
Pupils communicated with each other in pairs or groups to understand a text	17%	0%
Teacher offered an opportunity for pupils to read during class (independently or in pairs/small groups)	50%	83%

Just four observations were conducted during numeracy lessons (**Table 15**). As with literacy practices, the research team collected data on numeracy practices that promote numeracy acquisition. The overall finding was that few classrooms were observed using these practices. The practice observed in most classrooms was 'teachers taught pupils more than one strategy to answer a numeracy problem' (25%). For all other practices, one classroom at most was observed using these practices. More classrooms in high-performing districts were observed engaging in these practices than in low-performing districts, although the percentage was still small.

TABLE 15
Observations of numeracy pedagogical practices (n = 4)

Numeracy pedagogical practices	High performing	Low performing
Pupils used manipulatives (e.g. counters, dice) to learn numeracy concepts	17%	0%
Pupils communicated with each other in pairs or groups to solve numeracy problems	17%	0%
Teacher stated a clear numeracy concept to be studied (e.g. number identification, shape identification, quantity discrimination, measurement)	0%	0%
Teachers taught pupils more than one strategy to answer a numeracy problem	33%	17%
Teacher taught pupils a numeracy concept using a game	0%	0%

Findings from the classroom observations aligned with the education challenges identified in the situational analysis and the prioritization exercise with key education stakeholders:

- **Low teacher quality and challenging environment:** Teachers all had achieved an A2 level of education, but the quality of that training may not be adequate to promote effective instruction. Most teachers had guides and most students had textbooks, but not all and not always in English. Teachers inconsistently applied innovative pedagogical practices or effective literacy and numeracy practices, although some teachers did apply them. In particular, few teachers seemed to use effective numeracy practices. Small group work was rarely observed. This reinforces the importance of the teacher training support being provided under the FCDO-funded Building Learning Foundations project, the World

Bank's Human Capital Development Project and the Lego Foundation/UNICEF project to support implementation of the competence-based curriculum. All these programmes are necessary and deserve significant support and resources.

- **Inadequate use of learning assessments to improve foundational learning:** The classroom observations provided insight into assessment practices. All teachers in both high- and low-performing districts asked questions to check student understanding. However, what teachers did with this information or whether they used it to improve their practice or student understanding is unknown.
- **Language of instruction policy:** Most classrooms observed did not comply with the current policy to use English as the medium of instruction. Teachers and students were primarily observed using Kinyarwanda and most textbooks observed were also in Kinyarwanda.

4.5. FIELDWORK RESULTS AND RELATIONSHIP WITH CRITICAL SUCCESS FACTORS

As stated previously, the Spotlight series analytical framework posits that the key to achieving foundational learning is a vision of improving learning for all children that permeates all education leadership levels. Through Vision 2050, the government has established that Rwanda's education system will be market-driven and competence-based. The government has instituted education reforms in nearly all of the seven areas highlighted in the analytical framework. The results of this study suggest that more progress could be made in these reforms' implementation, in particular in the areas of teaching and learning, teachers, supervision and monitoring, and learning assessments. This section provides analysis on the components of the UNESCO Spotlight analytical framework that most directly overlap with the five priority challenges identified in the situational analysis and literature review and initial stakeholder workshop (see Section 3.6).

Analysis of data related to language of instruction and the competence-based curriculum is integrated throughout, as these are cross-cutting issues that touch upon more than one component.

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[Due to] the lack of initial training of what is competence-based curriculum and how they should support students to develop those competences (knowledge, skills, values), it is really hard for [teachers] to use the curriculum, the syllabus – which is very clear, well structured – but implementing it requires more than just transferring what is written to the practice, to the best practice in the classroom.' – National education stakeholder

Teaching and learning
Teaching and learning are at the centre of Rwanda's efforts to improve foundational learning outcomes. The decision to shift to a competence-based curriculum has required a fundamental change in how teachers teach and students learn. However, as the situational analysis found, the new curriculum remains only partially implemented five years after its launch. The results of the field data collection and analysis reinforced this finding: While respondents referenced the competence-based curriculum, there was little evidence that it was fully understood or applied in practice. In fact, there was evidence that traditional pedagogical practices continue to be

used in classroom instruction. The findings also suggest that the instructional materials and resources necessary to implement the competence-based curriculum fully are lacking in quantity, and perhaps quality. Lastly, the ongoing challenge of teaching in English, to meet the current language of instruction policy, likely further complicates the teaching and learning process. The confluence of all these factors suggests that a more intense, frequent and focused approach to teacher training and continuing professional development may be required to ensure the success of the competence-based curriculum and promote foundational learning.

Informants reported that teacher pedagogy includes traditional and innovative practices reflecting a competence-based approach. The classroom observations suggested that it was more common for teachers to use traditional pedagogical practices – such as teacher lecturing or copying texts – than for them to use innovative practices. A teacher described the pedagogical practices used as 'they try to read together exercises we give them on the chalkboard during class and they read one by one. We also give them textbooks for them to learn how to read and count from home.'

A lack of materials, particularly books, also likely hinders teaching and learning. The current policy requires one textbook per child. While most teachers and students had teacher guides and textbooks in classroom observations, not all did, and most were not in English. As one teacher reported, 'The support we want is to be given enough books because we have insufficient books ... . [Y]ou can find one book on the whole bench.' A head teacher made an explicit link between books and performance: 'Our students do not know to read and count very well because we do not have enough textbooks.' Teachers also reported that books came from development partners and their programmes, such as Soma Umenye. One teacher emphasized the importance of understanding and using Soma Umenye project indicators in the classroom, 'since they are the ones that provide us with books'. This highlights the important role books play in delivering the curriculum and guiding teacher practice and assessment. It also raises the question of how the various sources of textbook provision by different actors might influence equity and coherence in resources and outcomes.

Frequent changes in language policy and lack of proper implementation likely hinder teaching and learning. Teachers made an explicit link between these changes and student learning. One teacher explained, 'These continuous changes also confuse students sometimes, and it can lead to poor academic performance', while another reported, 'When you change the language of instruction for a student, it complicates things because they don't get to master the language and it hinders [them] from succeeding.' Most teachers and students in classroom observations were not seen following the policy to teach in English; rather, most teachers were observed teaching in Kinyarwanda in the early grades. Some teachers seemed unaware that they were expected to teach in English. To answer a question about areas that needed improvement, one teacher said, 'The area of improvement I see is time allocated for a Kinyarwanda lesson … . [I]n Kinyarwanda it should be done at an early stage since it is normally difficult to catch up in upper grades. The weakness is the time allocated for that lesson is less than [what is needed to cover the] content, so that's why I see it as a weakness while making the curriculum because they didn't consider the content and make it relative to the time allocated for it.'

Teachers

Expectations of teachers in Rwanda are high, which makes sense as they are the primary actors in implementing education reform and improving foundational learning. In some cases, how respondents define an effective teacher goes above and beyond what teachers do in the classroom and includes notions that teachers should be involved in more extensive social support to students. More commonly, effective teachers are defined by their teaching practices or achievement of milestones (imihigo). For instance, a head teacher reported, 'Normally every teacher has milestones. So, when that teacher achieves [their] milestones, and [they are] voted by [their] colleagues and it is obvious to everyone, that makes that teacher effective/best.' Another head teacher stated, 'In my opinion, what makes an effective teacher, I base on what [they teach] in the classroom, [their] behaviour. That's what shows an effective teacher to me.'

The high expectations of teachers may not fully reflect the challenges they face in the classroom. As already noted, teachers cite a lack of resources – mainly books – to help them deliver the competence-based curriculum and improve foundational learning. Likewise, the mandate to teach in English adds a layer of challenge for teachers, most of whom do not have English as their first language. Two other important challenges reported were overcrowding and poor remuneration.

Overcrowding in Rwandan schools is well documented. Current education reforms, funding and initiatives are intended to address it (see Section 5.1). While such initiatives are being rolled out, teachers still face the difficulty overcrowding brings to everyday teaching and learning. A teacher reported, 'There is overcrowding in classes where a teacher doesn't get the chance to take care of each student. They have added some classrooms and now there are two students on a bench.' Other teachers emphasized the need to build more classrooms, particularly given the transition to single-shift schools. One stated, 'We need to see an increase in the number of classrooms in order to facilitate students to study for the whole day.'

> *Here is a checklist for us to know an outstanding teacher: being present at work and on time; giving lessons as planned; having integrity at school, not having [issues] with either [their] fellow teachers, students, the administration or where [they] live; being creative, for instance, a teacher who creates beads from papers which help them in counting, the one who uses an old bag as a manual by writing on it different examples, drawing different examples on it, writing multiplication table for students to learn how to multiply and divide and hanging those in a classroom.' – District education officer*

The desire for better remuneration was clearly articulated, with key stakeholders often focusing on salaries. A head teacher stated, 'The biggest obstacle in education is low wages.' Another reported, 'The main challenge is that the salaries of teachers are still unfair, and what we request is to increase it.' Low salaries were linked to low teacher motivation, with a head teacher identifying the greatest challenge as 'salary or motivation provided to a teacher'. A national stakeholder emphasized the role that better remuneration could play, not only in improving current teachers' motivation, but also in the recruitment of high-quality teacher candidates: 'There is a need to increase strategies to attract bright students in this section to ensure quality teachers for literacy and numeracy in pre- and lower primary.'

Rwanda already has experience with various innovative actions to boost financial remuneration to public sector workers, including teachers, even at the local level (see Section 5.2). A school dean reported giving financial bonuses to teachers to incentivize them to conduct more frequent assessments. Several respondents reported offering financial rewards of between RWF 15,000 and 20,000 each year to outstanding teachers. In at least one case, a head teacher reported that outstanding teachers were rewarded with a cow. It is important to note that such rewards are not universal or systematic; many stakeholders reported that no rewards or incentives were provided in their schools or districts, which could contribute to inequality in outcomes by location.

Teachers said one of the most common needs was for more frequent, intense and ongoing professional development. Key stakeholders believed in the value of training and saw it as crucial to successful use of the competence-based curriculum and the new strategies it demands. One teacher said, 'I personally need to be trained in improving the language and knowing the methods of teaching as they change often with the curriculum. So, we need to be trained about new things to be able to deliver that to students.'

The gap between the competence-based curriculum and its implementation was recognized as a challenge in teacher professional development. A national stakeholder stated, 'They are lacking basic training on what is a competence-based curriculum and how to implement it subject by subject. They have been informed, really, but not train[ed].' Likewise, teachers viewed training as a strategy to better implement the English language of

instruction policy. As one teacher put it, '[W]e need English training so that we can master the language we teach. … [T]he mentors from my school, they trained me. Yes, teachers need to be trained in English language. Most of us, we learnt in [the] French system, so shifting immediately [to] English, and work[ing] in the English system, it is not easy for us. Therefore, we need a lot of English trainings.' Some teachers perceived the training through donor-financed projects, such as Soma Umenye and BLF, as particularly useful for their practice. Positive reports of training delivered by REB were also regularly reported.

Supervision and monitoring
Rwanda's supervision and monitoring system serves the dual purpose of accountability and development. A clear example of accountability was provided by a head teacher, who reported, 'When a teacher performs poorly, we write to [them] and ask for explanations, which are put in [their] file, and [they get] fired if it happens many times.' Other stakeholders reported similar applications of the supervision and monitoring system, such as 'a teacher who performs poorly gets advice and gives us an explanatory letter, and we report the case to the sector or the district if [they] continue to misbehave.'

Many key stakeholders reported that at least some supervision visits focus explicitly on developing teachers' capacity. For example, a head teacher reported, 'I cannot tell how often, but what I know is they visit us to see how we teach. After the visit, we meet with [the supervisors and teachers]. Or we meet with students, and they tell us what is not going well, and we correct it.' In another case, a head teacher reported how she provided supervision to teachers: 'I visit different classrooms and see if the teacher is providing the lessons in appropriate ways.' Despite what seems to be an increasingly common focus of supervision and monitoring on teacher development, that has not necessarily translated into better pedagogy or learning outcomes at the classroom level. Thus the current supervision and monitoring practices may not adequately help teachers adapt their instruction, which suggests that those in supervisory positions could themselves benefit from additional training and support.

Rwanda's supervision and monitoring system is complex and relies on multiple actors (SEOs, DEOs and head teachers) and levels of the education system. The actors' roles and responsibilities seem to overlap, according to stakeholder descriptions. This complexity may contribute to the inconsistency of supervision and monitoring practices across schools and stakeholders, with SEOs, DEOs and head teachers all engaging in somewhat different practices and on different schedules. Stakeholders reported a wide range of frequency of supervision visits from the district, ranging from weekly to annually. An SEO stakeholder reported, 'When there is a poor academic performance of a certain school, all channels from the head of the school, sector, up to the district are responsible for answering that problem.'

The benefit of such a system is that multiple actors can be called upon to make changes to improve schools, teachers and performance. The potential drawback is that when no single entity is responsible, no one may take responsibility. Also, some might argue – as was the case in the stakeholder workshop – that head teachers or those closest to the school are best positioned to supervise teacher development. As one SEO reported, 'The head teacher plays a key role in a school. In general, he is in charge of the life of the institution, and he also has to collaborate with others.' Some stakeholders say that SEOs and DEOs also play a role in accountability and feedback. One teacher commented, '[W]hen the SEO visits us, they tell us the challenges we face as a school as they observed. The sector education officer advises us and we give him reports about teaching in our school.'

Learning assessments
It is clear from the government's establishment of the Comprehensive Assessment System and from stakeholder reports that assessment is a priority and happens at multiple education levels. In this respect, it appears that Rwanda's comprehensive assessment policy may have helped shape a national vision of the importance of assessment. Stakeholders seem to be using assessment results specifically to improve student performance. Respondents described how assessment results were analysed or discussed. A school dean stated that analysis aimed 'to evaluate the origin of failing'. In some cases, assessment results are not only analysed and disseminated but are also used to suggest changes in teaching. One teacher reported, 'We are informed by school leaders during teachers' meetings when we hold them. Once we are informed about our level, we work [harder] than before, for improvement.' Another teacher reported a clear application of the assessment process at the classroom level;

Every time the teacher finishes providing what [they are] scheduled to teach, [they sit] and prepare an assessment and administer it to students and after [they] mark them. And [they] correct the students. So, I do this at the end of every lesson and/or chapter. The information from the evaluation helps you conclude whether the students have understood the lesson. This can help you also to repeat the lesson, or after finishing the book, [you] might see that the students did not understand unit 8, then you decide to repeat it.

Several stakeholders said assessment was regularly scheduled in their classrooms. One teacher reported, 'After a lesson or a unit, I prepare a quiz, and when my students pass it, well, that shows that they have understood it well. So, that is how I evaluate the compliance of the lesson/unit.' Another described using various types of assessment at various times: 'I assess the progress through tests that I give them. I do that after preparing a lesson plan, or I assess that in exams we set each term or else I give them a test after one or two weeks.'

Despite these positive findings on the vision and application of assessments in Rwanda, teachers and those who supervise and monitor them may not have adequate information or expertise on adapting instruction in response to assessment results. Teachers described using repetition as an appropriate pedagogical response to low assessment results. One said, 'The information you [get] from the evaluation helps you to conclude whether the students have understood the lesson. This can help you also to repeat the lesson.' Another reported having 'continue[d] to the next lesson when my students pass or repeat the same when they fail.' Yet another said, 'When the students I have taught perform well, I start a new one, but when they fail, I repeat the lesson.' Classroom assessment as teachers currently use it seems to fall short of being truly formative.

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[W]hat I can say is that teaching, learning and assessment … are like [triplets]. They are one unit. They are one reality. Teaching, learning, assessing. And remediation … [A]ssessing is getting information from what the student has acquired in terms of knowledge, skills, etc. And then, when the teacher has the information, [they] can now set, organize, do remediation for the students who have problems, low performing students, let's say. So, the government has put in place this policy in 2019 … to make sure learning is happening. To make sure learning is happening, that is assessment. Without assessment, you cannot be sure if learning is happening, at what level, to what extent.' – National education stakeholder

5. Two positive case studies

5.1. PROGRESS IN REDUCING OVERCROWDING

To ensure access to education and reduce the overcrowding that would ensue from increased enrolment, Rwanda has implemented three main strategies: (i) elimination of teacher subject area specialization to increase a school's flexibility to adapt its schedule and reduce the number of teachers required, (ii) an overall reduction of core courses and (iii) allowing schools to run in two shifts to accommodate more students. While the 57:1 pupil/teacher ratio (NISR, 2021) in Rwanda remains higher than desired (the ESSP target set to be achieved by 2012 was 52:1) (MINEDUC, 2017), the ratio would likely be even higher without these strategies.

Rwanda continues to reduce overcrowding through multiple school-construction strategies, including the innovative and long-standing Home-Grown School Construction Approach. A key feature of this approach is mobilization of volunteer community labour through umuganda or 'coming together in common purpose to achieve an outcome'. Rwanda has also begun the transition from double shifting to single shifting. The potential negative impact of this transition on already high pupil/teacher ratios is yet to be seen. It is hoped that it will be offset by school construction initiatives, including those funded jointly by the World Bank and the government which resulted in the construction of an additional 22,000 classrooms in 2020/21. MINEDUC has invested in hiring more teachers and expanding infrastructure, to facilitate the phasing out of double shifting and reducing the time each individual teacher spends in the classroom (World Bank, 2019; MINEDUC, 2017). As already mentioned (Section 3.6), during the 18 months up to the end of 2021, the government recruited and deployed over 44,000 new teachers into schools.

5.2. CREATIVE APPROACHES TO IMPROVING TEACHER COMPENSATION

As in many countries, inadequate compensation poses a challenge to recruitment, retention and quality of the teacher workforce in Rwanda. In 2019, the government instituted a 10% salary increase for primary and secondary teachers in government and government-aided schools. At the end of July 2022, a meeting of the Cabinet discussed strategies to improve the welfare of teachers and this included a decision to increase the salaries of teachers by between 40% and 88% (depending on their qualification) and also to increase salaries for head teachers and their deputies.

Rwanda has taken several creative approaches to improving teacher compensation, particularly as regards the priority of improved student performance. Under the imihigo system, teachers receive financial bonuses based on subjective performance evaluations in which student performance can be a factor. Rwanda has also experimented with hiring teachers through pay-for-performance contracts, providing a bonus of about 15% of annual salary to the top 20% of a district's upper primary teachers. After two years of the pay-for-performance contract experiment in selected districts, the results showed that teacher presence was eight percentage points higher among those with pay-for-performance contracts than among those with fixed-wage contracts (World Bank, 2021). The net effect of being recruited and then working under a pay-for-performance contract was 0.20 standard deviations of learning gain among students in the second year.

6. Recommendations

> *[I]t is not a matter of policy, because we have very good ones. But it is about the way they are implemented, that is the problem. … [T]aking these policies to practise in the classroom, that is the challenge.' – National education stakeholder*

Rwanda's forward-thinking, evidence-based education reforms and programming provide a strong springboard for improved foundational learning outcomes. The establishment of universal and free primary school access, followed by the 9-year and 12-year reforms, has built a solid enrolment structure. This structure is bolstered by creative and innovative approaches to increase the number of schools and classrooms available to accommodate all students, such as the Home-Grown School Construction Approach. Rwanda's proactive and collaborative approach to increasing national expenditure on education and monitoring the quality and target of donor financing of education also provides a clear structure and processes to address funding gaps. The competence-based curriculum is an important step towards addressing poor foundational learning outcomes, with literacy and numeracy as two of the six basic competences. This is complemented by multiple initiatives to train teachers in more innovative, student-centred instructional techniques through programmes such as Soma Umeyne, BLF, the Human Capital Development Project and Learning through Play.

In the context of persistent low foundational learning outcomes, despite the many reforms, MINEDUC, supported by the World Bank, brought together education stakeholders at the Stepping Back to Accelerate Forward workshop in November 2021 to discuss progress on the promotion of foundational skills and on factors of success and challenges in this effort, and to agree on an approach to monitor and accelerate progress on promoting basic literacy and numeracy skills. The discussions at this workshop can serve as the basis for Rwanda to develop a National Strategy for Accelerated Foundational Learning (MINEDUC, 2021).

The overarching recommendation that arises from the data collected and analysed for this Spotlight report is to implement a cohesive strategy across multiple priority areas, with a laser-like focus on the factors most closely linked with student performance in foundational learning: teachers, teaching and learning, supervision and monitoring, and learning assessment.

The situational analysis and key stakeholder workshop highlighted challenges that may hinder Rwanda's progress on achieving foundational learning:

Low teacher quality is complicated by a challenging work environment	Language policy needs full implementation	Competence-based curriculum needs full implementation	Supervision and monitoring need to focus more on teaching and learning	Learning assessments need to be used to improve foundational learning

The field data collection and analysis provided deeper insights into these challenges. A key insight is that there is tremendous confidence in existing policies. For example, most informants report confidence in the competence-based curriculum and Comprehensive Assessment System. The primary challenges relate to implementation and execution of policies and procedures in schools and classrooms. This finding drives the recommendations that follow. The main challenges reported by informants and observed during fieldwork were:

- Traditional pedagogical practices persist.
- High-performing districts more frequently use innovative practices.

- Group or pair work is uncommon.
- Most teaching and learning happens in Kinyarwanda, with language issues complicating implementation of the competence-based curriculum.
- Assessment tools need to be revised to align with recently approved policies and digitized for timely monitoring and feedback, and teachers need more support to implement classroom-level assessments to inform their teaching.
- Teachers need more frequent and ongoing supervision, monitoring and training.

Recommendation 1: Improve the quality, quantity and frequency of teacher training, particularly in competence-based curriculum and related pedagogical strategies.

- Emphasize ongoing, school-based teacher training in English to allow regular modelling of best practices and reflection on the challenges of implementing the competence-based curriculum and language policy. Bring together stakeholders involved in Soma Umeyne, BLF, Learn to Play and other initiatives to identify the most effective practices and refine teacher training initiatives to focus on areas that seem to lag (e.g. innovative and effective numeracy pedagogical practices, small group instruction).
- To meet demand from teachers and other stakeholders for more frequent teacher training, consider more use of ICT, including videos, audio, text messages and radio, to disseminate strategies and models of effective teaching regularly, and increased continuing professional development time in the school timetable (including accommodating teachers who are still working in double-shift schools).
- Sustain good practices, such as school-based mentorship and other peer-learning mechanisms, for school subject leaders and teachers.
- Ensure that all schools – but especially those that serve the most marginalized – receive a kit of teaching and learning materials, including textbooks, visual aids, manipulatives and supplementary reading materials – in English as appropriate to the level and aligned with the language policy – to support implementation of the competence-based curriculum.

Recommendation 2: Expand efforts to offer teachers financial incentives explicitly tied to foundational learning outcomes, as a tool to address teacher working conditions and quality.

- Consider expanding pay-for-performance contracts in recruiting teachers, with an explicit focus on the early childhood and lower primary education levels and teachers who speak English.
- Consider additional and systematic performance-based incentives for practising teachers, including regular bonuses linked to observed pedagogical practices by supervisors (head teachers, DEOs and SEOs).
- Consider conditional cash transfer programmes for teachers based on measures of student performance.
- Consider expanding existing subsidy programmes to recruit new teachers to alleviate overcrowding, but add conditions that are based on measures of their performance.

Recommendation 3: Focus supervision and monitoring systems on supporting teachers in mastering pedagogical practices aligned with the competence-based curriculum.

- Training should continue to emphasize the role that supervisors (e.g. SEOs, DEOs and head teachers) should play in providing specific pedagogical practices that would help teachers adapt their instruction after analysing assessment results.
- Develop comprehensive guidance – aligned with the competence-based curriculum and drawing on expertise from Soma Umenye, BLF and other programmes – on appropriate instructional adaptations for dissemination to supervisors and monitors. This should include looking at the use of ICT for learning and assessment, drawing on good practice examples that took place during COVID-19 school closures.
- Sustain practices such as sector-level professional learning communities in which school head teachers and decentralized education officers meet and share experience in promoting learning.
- Strengthen school leadership for learning at the school level and the role of learning in inspection at the sector level.

- Consider revising performance contracts to more heavily weight pedagogical support, rather than administrative duties, in rewarding supervisor performance.
- Consider expanding pay-for-performance initiatives to incentivize supervisors recognized as instructional leaders and experts in transforming teacher practice in foundational learning.
- Consider changes to supervision and monitoring structures, such as (i) preventing inspectors from working in their own sector, (ii) shifting greater support and provision of resources to rural and poor schools within inspector frameworks, (ii) clarifying reporting lines (e.g. SEOs are under MINALOC) and (iv) having head teachers and deputy head teachers play a more prominent role in supervision and monitoring.

Recommendation 4: Strengthen the classroom-based, formative assessment system by creating tools and guidance; building the capacity of supervisors, head teachers and teachers and hem with providing incentives; and encouraging demand for better quality education among parents and caregivers.

- With input from teachers and experts from Soma Umeyne, BLF and other foundational learning activities, develop a set of curriculum-aligned, easy-to-administer, formative assessments (e.g. exit cards).
- Provide teachers with a formative assessment knowledge management tool (technological or paper-based, as feasible and appropriate); digitization should be a priority to support timely reporting.
- Provide a guide with clear and feasible pedagogical practices teachers can use to address student learning challenges.
- Train all supervisors (SEOs, DEOs and head teachers) and teachers in the system on a regular basis to foster a culture of assessment.

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Abbreviations

BLF	Building Learning Foundations
CWPM	Correct words per minute
DEO	District education officer
EGRA	Early Grade Reading Assessment
EMIS	Education management information system
ESSP	Education Sector Strategic Plan
ESWG	Education Sector Working Group
FCDO	Foreign, Commonwealth & Development Office (United Kingdom)
GDP	Gross domestic product
GPE	Global Partnership for Education
ICT	Information and communication technology
LARS	Learning Achievement in Rwandan Schools
LEGRA	Local Early Grade Reading Assessment
MINALOC	Ministry of Local Government
MINECOFIN	Ministry of Finance and Economic Planning
MINEDUC	Ministry of Education
NESA	National Examination and School Inspection Authority
NISR	National Institute of Statistics of Rwanda
ORF	Oral Reading Fluency
REB	Rwanda Basic Education Board
RWF	Rwandan franc
SDG	Sustainable Development Goal
SEO	Sector education officer
SSWG	Sub-Sector Working Group
TTC	Teacher Training College
TVET	Technical and vocational education and training
UBE	Universal basic education
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development