THE MIDDLE TIER AND IMPROVING FOUNDATIONAL LITERACY OUTCOMES:

New Evidence from Best-Practice Districts in Rwanda

Christine Beggs and Sheena Bell

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ABOUT THIS REPORT

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Acknowledgments

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Acronyms

DDE	district director of education
DEO	district education officer
ECD	early childhood development
LEGRA	Local Early Grade Reading Assessment
MINEDUC	Ministry of Education
NESA	National Examination and School Inspection Authority
PTA	parent-teacher association
REB	Rwanda Education Board
SBM	school-based mentor
SEI	sector education inspector
SES	sector executive secretary

Executive Summary

Executive Summary

Background

Current evidence about improving literacy outcomes indicates that many elements are required, including effective instruction, quality curricula supported by appropriate teaching and learning materials, sufficient instructional time, and effective school leadership and parental engagement. Additionally, research indicates that effective leadership and support from the middle tier[1] within education systems is essential to create and sustain positive change in learning outcomes. Countries such as Rwanda, along with development partners, are making major investments in building the strength of the districts within education systems by updating policies and job descriptions, expanding roles and capacities, and shifting expectations and priorities from administrative functions to more active support of and engagement with schools to improve learning outcomes.

Recognizing that there is much to learn from these efforts, this study explores the capacities, behaviors, and norms demonstrated by districts in Rwanda that are exhibiting strong leadership to improve foundational literacy outcomes. It aims to enhance the already significant investments that are being made in Rwanda to deepen the focus on foundational literacy and improve the delivery of instructional leadership and coaching to schools, as guided by the Rwandan Ministry of Education's Foundational Learning Strategy (2022/23–2027/28).

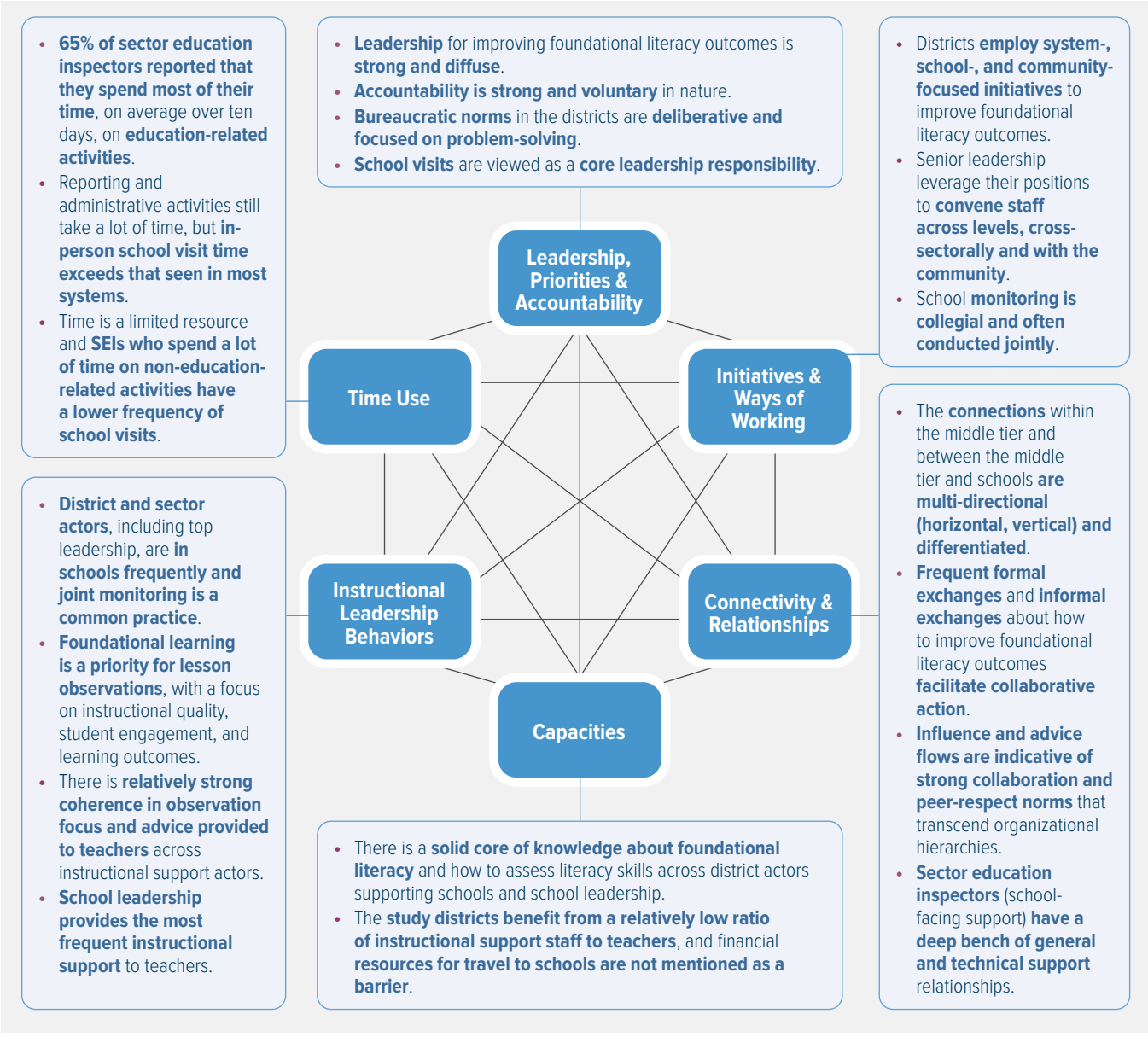
This mixed-method study examined two districts exhibiting strong leadership for foundational learning and measured an expansive set of domains across 17 different respondent types at the district, sector, and school level. In keeping with a positive deviance approach, the study design was exploratory, rather than evaluative, in nature. To complement the exploratory stance, the study also measured domains commonly identified as relevant to improving the functioning of the middle tier, including leadership and management, responsibilities and norms, accountability and incentives, influence and decision-making, data engagement, knowledge and skills, and resources and time use. The study also pioneered new measures, including an adapted social network analysis tailored to middle-tier instructional leadership and a time-tracking survey for school-facing middle-tier actors.

Findings

The findings of this study, in some cases, align with prevailing hypotheses about effective education systems, such as collaborative problem-solving, voluntary accountability norms, and strong relationships and peer-to-peer support. Also supporting the prevailing hypotheses about effective middle tiers of education systems, we found good alignment across actors in terms of orientation toward and knowledge of foundational literacy, providing a reasonable level of coherence in the signals sent to school leadership and teachers about what is important in the classroom and how to focus efforts. We also found evidence that having a clear and consistent policy framework with well-articulated objectives and associated outcome tracking provides an important foundation and inspiration for districts' work.

1 We define the middle tier as subnational actors in charge of education delivery at the regional, provincial, state, district, municipality, city, or circuit and cluster layers within education systems. The middle tier includes all actors and positions within these layers, whether elected or appointed, or political or technical. In the specific case of Rwanda, the middle tier constitutes the districts and sectors, including the actors within those levels of the education system.

The study findings are less aligned with prevailing hypotheses about the centrality of the middle tier in directly providing instructional coaching to teachers. While we found that district actors prioritize school visits and that all actors—from top political leadership to staff at the sector level—recognize and act on the importance of visiting schools, observing lessons, and engaging with teachers, we also found that the school leadership team, represented by the principal, school-based mentor, and subject advisor in this study, are the most consistent and frequent providers of instructional coaching to teachers. Even in a context such as Rwanda, with favorable district/sector-staff-to-school/teacher ratios, the middle tier is not the primary provider of instructional support to teachers. This stands in contrast to many of the current policies and technical assistance projects that place middle-tier actors squarely in the role of instructional coaches. Rather, we found that districts' role is focused more on amplifying national policies and priorities and working within their structures to effectively implement policies and track progress toward objectives. Additionally, district actors establish strong norms around the importance of the classroom, quality instructional delivery, and student learning, and reinforce this with consistent presence in schools and classrooms. The figure below summarizes the findings across all domains



Recommendations

Policy

Leadership policies, structures, and job descriptions at the district and sector level should encourage and enable frequent formal and informal connections across district and sector structures and between the districts and school leadership. Strong collaboration between the Ministry of Education and the Ministry of Local Government is of course critical for this work.

The study districts seem to be successfully managing the matrixed organizational structure between the Ministry of Education, the Rwanda Education Board, and the districts and sectors, but this structure is complex and vulnerable to inefficiencies due to competing priorities, communication challenges, and a lack of coordination, especially vis-à-vis other districts and systems. It may be **useful to further codify in policy, procedures, and job descriptions how this matrixed organizational structure can most optimally support schools and, by extension, improve education outcomes**.

The efforts that the government and its partners have made to bolster the focus of district and sector staff on instructional quality and learning outcomes is paying dividends. As education systems and the people within them evolve, **continued attention to capacity building for foundational literacy should be a priority, with attention to ensuring coherence** in foundational literacy knowledge, pedagogical practices, and instructional support approaches.

Government leadership to ensure that partners are working coherently and in a coordinated fashion has been a strength in Rwanda and should continue to be a priority. School leadership is a critical part of instructional support delivery and should be included in this capacity building.

The government should continue to **strengthen its investments in data systems** that track instructional support activities and identify schools that need additional support, particularly based on foundational literacy outcomes.

Practice

Senior leadership in districts and sectors should reinforce the importance of school visits and lesson observations and should make this a priority within their own job responsibilities. The practice of joint monitoring visits is also recommended to build mutual understanding and collaborative problem-solving.

While the amount of time that some sector education inspectors in the study districts spend visiting schools can (and should) be further increased, the overall average is higher than in most education systems.

The study found that members of the school leadership team are the most frequent providers of instructional coaching to teachers, which despite Rwanda's favorable district/sector-staff-to school/teacher ratios, represents the most feasible mechanism for instructional coaching. As a result, the **additional delineation of responsibilities between district/sector staff and school leadership vis-à-vis instructional observations and coaching is recommended to optimize the team-based instructional leadership and coaching system** in Rwanda.

The study districts have institutionalized frequent formal and informal communications about how schools are doing and what support they need. This in essence has created a continuum of communication that allows for consistency and coordination. It is unclear how the study districts find the time to do this, but the **expectations about the cadence of communication are set by the leadership, something that can be replicated across other districts and contexts**.

There are important channels through which districts, sectors, and schools engage parents and communities. These could be further optimized by using tailored influence strategies and targeted resources. The study districts employ a range of strategies to work with communities, including establishing community libraries and early childhood development centers and supporting competitions focused on literacy. Bolstering these efforts through work with partners to deliver more materials and support is recommended.

Research

We do not yet have a robust well-tested theory of change for how the middle tier can most effectively contribute to improved learning outcomes. Further research in Rwanda or in other countries on districts exhibiting strong leadership for foundational learning will help the education field understand the degree to which these findings are generalizable to other contexts outside the study districts or Rwanda more generally. In addition to including the same measurement domains, **additional studies should experiment with measuring new domains to broaden the field's understanding about what is important to measure with respect to the middle tier**.

This study represents the first adapted social network analysis conducted on the middle tier of education in sub-Saharan Africa. As the field of social network analysis becomes more integrated into research on the middle tier of education systems in developing countries, **additional studies utilizing the adapted social network analysis tool would help generate a more nuanced view of how actors within systems are interconnected and how policies, structures, and norms enable or discourage those connections**.

The time-use measures designed for this study provided important insights but were limited in scope and specificity. **Additional studies in Rwanda or other contexts are needed to build a robust understanding of how middle-tier actors (especially actors primarily responsible for instructional support to schools) use their time and how more of their time can be dedicated to school support**. These data could go hand in hand with the analysis of school support staff levels and placement strategies so that staff allocation within education systems can be optimized.

Introduction

Introduction

Current data indicate that nearly 70% of children in low- and middle-income countries are unable to read a simple text with comprehension by age 10 (World Bank, 2022). Global school disruptions and closures due to the COVID-19 pandemic, together with conflict and climate-related events, have exacerbated this learning crisis, and education systems in many countries are struggling to ensure that all children achieve foundational literacy skills in the early years of schooling. Current evidence about improving literacy outcomes indicates that many elements are required, including effective instruction, quality curricula supported by appropriate teaching and learning materials, sufficient instructional time, and effective school leadership and parental engagement. Additionally, research indicates that effective leadership and support from the middle tier[2] within education systems is essential to create and sustain positive change in learning outcomes. Recent literature has called for more research on the role that the middle tier plays in implementing policies effectively, providing instructional support to schools, and improving foundational literacy outcomes (Asim et al., 2023; Stern et al., 2023; Tournier et al., 2023).

Theories about how the middle tier of education systems should be structured and should function to improve educational outcomes are still relatively nascent, but several recent contributions to this body of evidence have helped shape our thinking about the middle tier and how an effective middle can contribute to improved educational outcomes. For example, Tournier et al. posit that there are five practices that are important: providing support for school and teaching improvement; promoting professional collaboration within and across schools; brokering knowledge to promote the use of evidence; providing local instructional direction and system alignment; and testing innovations and scaling up promising practices. This perspective aligns with research on effective district practice found in the education literature (Crouch, 2020; Honig & Rainey, 2023; Leithwood et al., 2019).

Countries such as Rwanda, along with development partners, are making major investments in building the strength of the districts within education systems by updating policies and job descriptions, expanding roles and capacities, and shifting expectations and priorities from administrative functions to more active support of and engagement with schools to improve learning outcomes. Recognizing that there is much to learn from these efforts, this study intends to build new evidence about how district- and sector-level officials within education systems enable school leaders and teachers to improve foundational learning outcomes.

This study supports the Rwandan Ministry of Education's (MINEDUC) Foundational Learning Strategy (2024/25–2028/29)[3] and the government's recent extensive investments to improve education delivery in Rwanda, which includes hiring more than 44,000 new teachers, building more than 22,000 new classrooms, and substantively increasing teachers' salaries and benefits. MINEDUC, in partnership with its implementation agency—the Rwanda Education Board—and the Ministry of Local Government, has also made significant investments at the district level to deepen the focus on foundational literacy and improve the delivery of instructional leadership and coaching to schools. This study aims to learn from these efforts by identifying the capacities, behaviors, and processes demonstrated by districts exhibiting strong leadership and support for foundational literacy and to explore how these aspects of district functioning came to be and how they can be replicated in other parts of the education system.

2 We define the middle tier as subnational actors in charge of education delivery at the regional, provincial, state, district, municipality, city, or circuit and cluster layers within education systems. The middle tier includes all actors and positions within these layers, whether elected or appointed, or political or technical. In the specific case of Rwanda, the middle tier constitutes the districts and sectors, including the actors within those levels of the education system.

3 The Foundational Learning Strategy was updated in August of 2024.

Context and System Structure

Context and System Structure

Key Policies

The Rwandan government has made improvements in education outcomes central to its National Strategy for Transformation and Vision 2050 (Ministry of Finance and Economic Planning, 2015, 2017, 2024). Vision 2050 is "premised on the ability of Rwanda's education system to produce enough and appropriately skilled workforce capable of realizing this aspiration, as well as upgrading the skills and competencies of the existing workforce" (Ministry of Finance and Economic Planning, 2015). The roadmap to achieve these objectives is articulated in MINEDUC's Education Sector Strategic Plan (2018/19–2023/24), which calls for Rwandan citizens to "have sufficient and appropriate skills, competences, knowledge and attitudes to drive the continued social and economic transformation of the country and to be competitive in the global market" (Ministry of Education, 2018).

More specific to improving foundational learning outcomes, MINEDUC, in collaboration with its ministerial and development partners, has developed a Foundational Learning Strategy (2024/25–2028/29) to articulate foundational learning as a priority and set forward a plan to achieve improvements in foundational learning outcomes (Ministry of Education, 2024). Broadly, Rwanda has seen improvements over time in foundational literacy and numeracy outcomes[4] (National Examination and School Inspection Authority, 2023a) but has still not achieved the level of competencies envisioned, especially for literacy skills in English. The two priorities within the Foundational Learning Strategy most relevant to this study are priority 1—improving instructional quality through teacher development and support—and priority 5—strengthening systemic quality assurance and performance management.

It is broadly acknowledged that Rwanda has recognized the importance of improving education outcomes, and foundational learning outcomes specifically. This is evidenced by its policy frameworks,[5] the focus of development partner investments, and leadership by government in the coordination of education sector activities. That said, it is also recognized that there is a gap in the education system's implementation capacity and funding that is hampering the government's ability to fully delivery on its foundational learning and other education goals (World Bank, 2018).

System Structure

Rwanda has a decentralized government system, and its provincial and district structures are vital to the implementation of national policies and strategies. With respect to education and the focus of this study, two national ministries are central—MINEDUC[6] and the Ministry of Local Government.[7]

There are numerous departments within MINEDUC that are deeply engaged in the delivery of education in Rwanda, but most relevant to this study is the Rwanda Education Board (REB) and the National Examination and School Inspection Authority (NESA),[8] both of which have roles that

4 According to the Learning Assessment in Rwandan Schools, the percentage of students who met national proficiency benchmarks in Kinyarwanda oral reading fluency increased by 33.2 percentage points (from 54% to 87.2%) between 2021 and 2023. For reading comprehension, the assessment found a 14.7 percentage point increase in reading comprehension scores (from 68% to 82.7%) between 2021 and 2023.

5 The government's policy and technical direction for foundational literacy has been fairly consistent, with the exception of the language of instruction policy for foundational learning, which has pivoted between English and Kinyarwanda several times over the past 10-plus years. These pivots have had impacts on the momentum and efficiency of policy intervention and technical assistance.

6 https://www.mineduc.gov.rw/

7 https://www.minaloc.gov.rw/

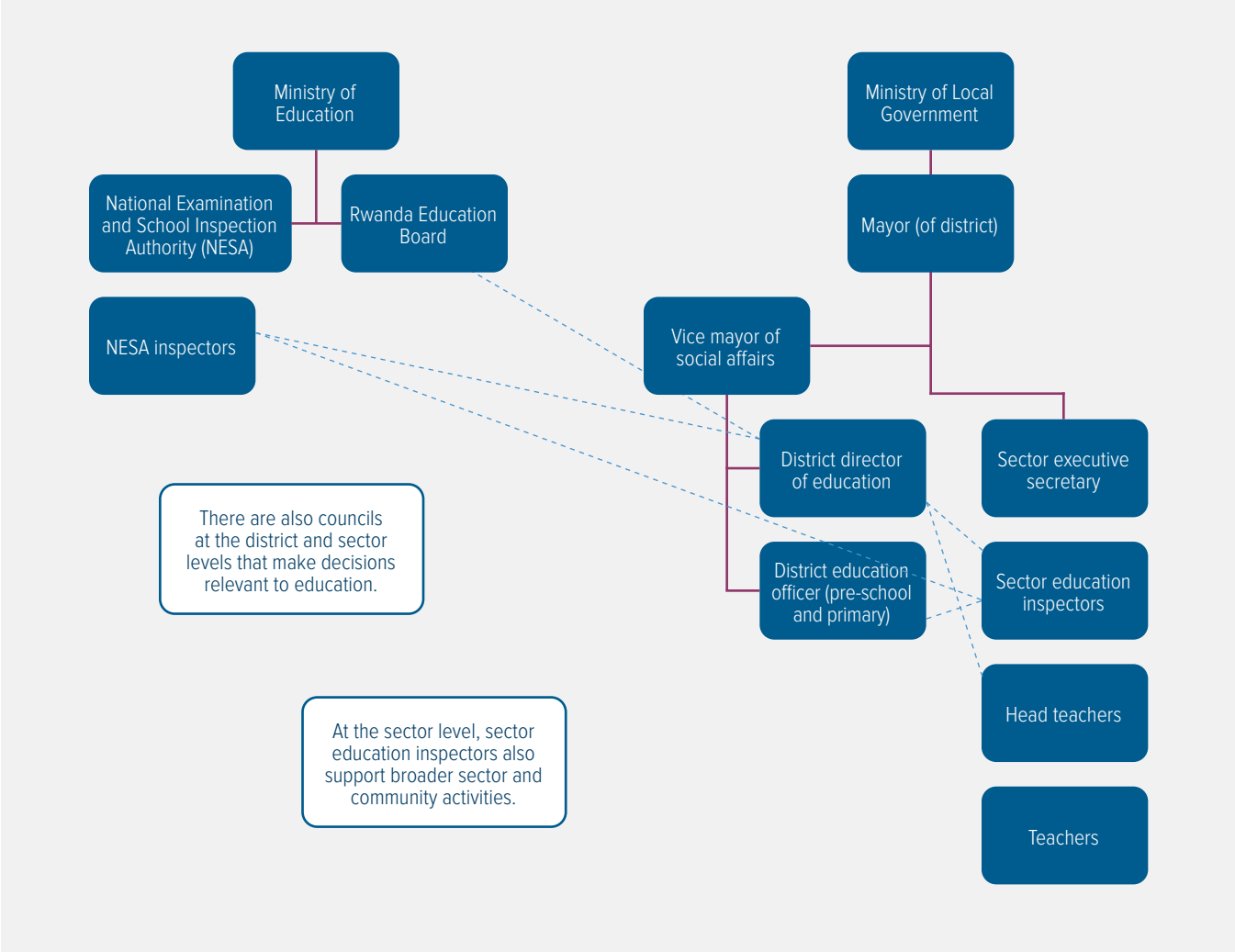
8 https://www.nesa.gov.rw/1/about-nesa

interact with the district and sector actors who are the focus of this study (Republic of Rwanda, 2020). NESA's scope includes the inspection (academic, financial, and administrative) of all public, government-aided, and private schools in Rwanda. It is also responsible for collecting and reporting on student enrollment, attendance, and performance. Meanwhile, REB is responsible for the development of curricula and pedagogical approaches, the development and distribution of teaching and learning materials, the development of school leadership and teacher capacities, supporting and monitoring education program implementation, and contributing to education policies and strategies.

Importantly, neither NESA nor REB are directly responsible for education service delivery (UNESCO, 2022). Rather, districts—organized under the Ministry of Local Government and overseen by mayors—are responsible for education service delivery for all cycles of education. Each district has an average of 14 sectors,[9] and there are both non-technical and technical leaders engaged in education delivery. While all district staff eventually report to the mayor, the district-level technical staff (district directors of education and district education officers) are situated within a separate reporting structure than the sector education inspectors, who work most directly with schools.

In this study, we define the middle tier as the levels of the system that sit between national ministries and the schools.[10] Figure 1 outlines the organizational landscape in Rwanda as it relates to this study.

Figure 1. *Middle-tier organogram (partial)*



9 There are a total of 30 districts in Rwanda, and 416 sectors within those 30 districts.

10 See Respondent Sample section for more details on respondent types in the middle tier.

It is within this policy and organizational landscape that development partners work on improving education outcomes, particularly foundational learning outcomes. USAID has been the primary development partner focused on improving foundational literacy in Rwanda over the past 15 years. The Foreign, Commonwealth and Development Office, the Global Partnership for Education, the Japanese International Cooperation Agency, the Mastercard Foundation, UNICEF, and the World Bank, among others, have also made important contributions to improving foundational learning and the systems that support the delivery of foundational learning in Rwanda. Many of these partners have either focused directly on improving foundational learning or supported the development of policy improvements and leadership capacity that have bolstered foundational learning initiatives.

Looking across the most substantive development projects focused on improving foundational learning outcomes, we see a continued focus on the fundamentals of foundational learning delivery and consistency in the conceptualization of what makes an effective literacy program (e.g., teaching, text, tongue, test, and time). We also see an evolution of the delivery approach that has progressively focused more on building the capacity of system actors to deliver and sustain the program components. This focus has increasingly engaged middle-tier actors as instrumental to the support of teachers and the improvement of instructional quality. This work has been undergirded by consistent messages from the national level about the priority and importance of improving foundational learning outcomes. See Annex F for additional details about the major foundational literacy technical assistance projects in Rwanda.

Study Design and Methodology

Study Design and Methodology

Overview of Study Design and Measures

This study design was informed by consultations with government and technical partners in Rwanda and guided by a global advisory group consisting of five education experts, including a former education official from Rwanda. Additionally, the research team included a Rwandan education researcher, and data collection was led by a Rwandan-based firm. This advisory and research team structure ensured the study's

- High-quality design and implementation
- Relevance to the government's programmatic and policy decisions
- Coordination, as appropriate, with other relevant research efforts
- Potential as a resource for future programmatic and policy decisions

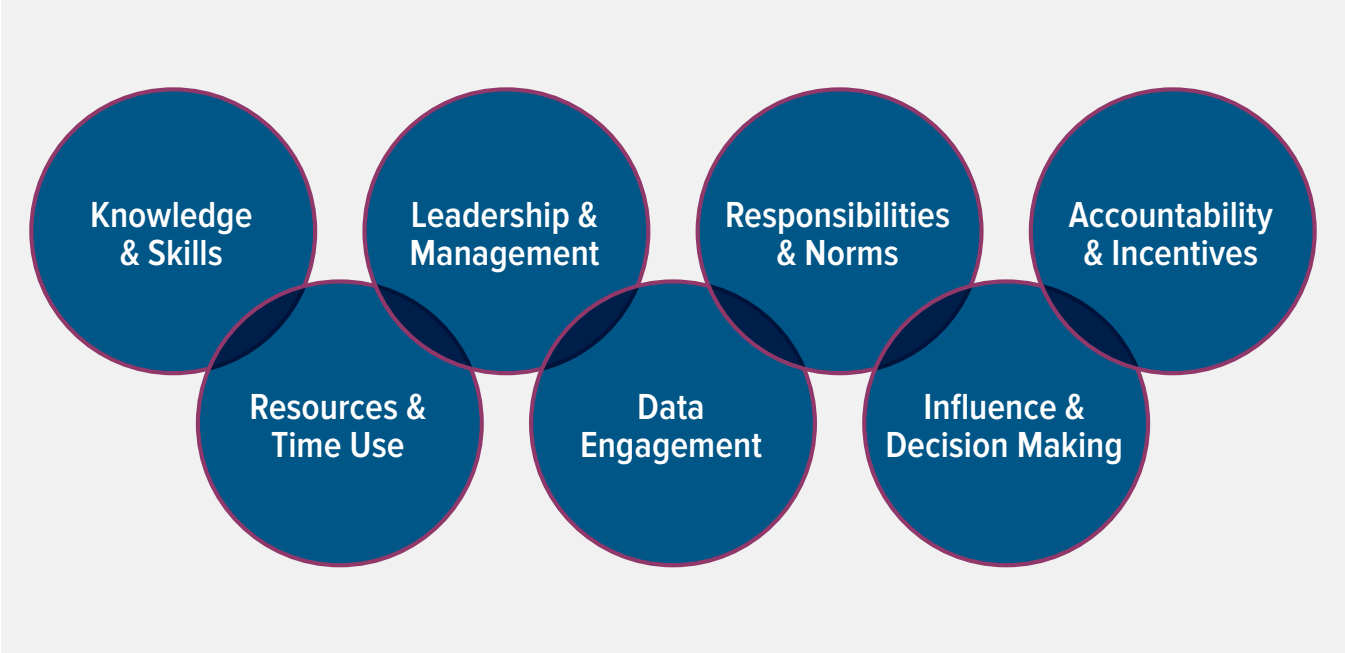
The study examined two districts that are exhibiting strong leadership for foundational literacy and that are effectively supporting schools in improving instruction and literacy outcomes, despite constrained resources.

This mixed-method study utilized a positive deviance research approach, which focuses on the identification of organizations, groups of individuals, or individuals with intentional behaviors and practices that fall outside of the norm and produce more positive outcomes than their peer groups with equivalent levels of resources. The positive deviance concept originated in the health sector to identify social and behavioral change strategies that were well-grounded in local contexts. Positive deviance studies begin with the careful selection of case studies meeting the criteria of a positive deviant and typically utilize exploratory and appreciative inquiry research methods (Bradley et al., 2009; Bright, 2014).

In keeping with a positive deviance approach, the measurements included in this study were broad and exploratory in nature and utilized a combination of qualitative appreciative inquiry and quantitative data collection methods. The study was designed to allow for capture of phenomena not previously identified in prevalent theories of change about strengthening the middle tier of education systems. To complement the exploratory stance, the study design also measured domains commonly identified as relevant to improving the functioning of the middle tier (Figure 2) and was informed by the COM-B framework.[11] Several measures focusing on foundational literacy knowledge, self-efficacy, and instructional support behaviors (Beggs & Ogando Portela, 2019) previously used in Rwanda were adapted for this study. The study also pioneered two new measures, including an adapted social network analysis tailored to middle-tier instructional leadership and a time-tracking survey for school-facing middle-tier actors.

11 The COM-B model of behavior change focuses on understanding how capability, opportunity, and motivation lead to behavior change.

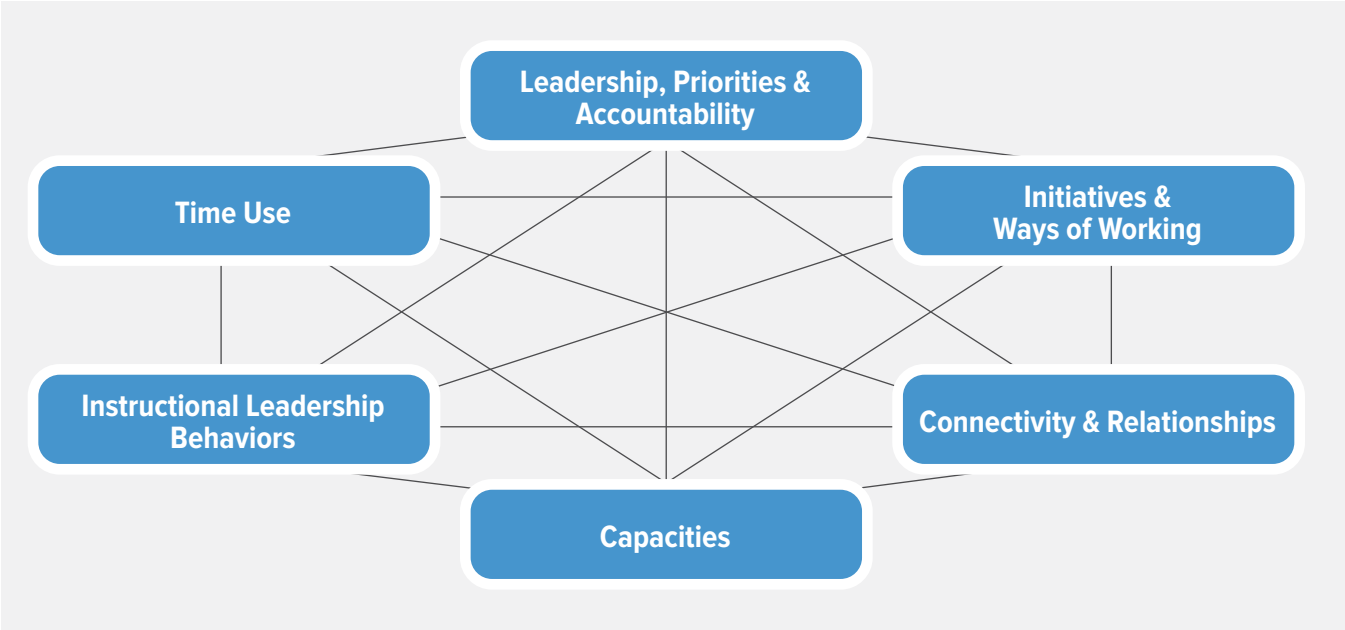
Figure 2. *Original measurement domains*



In total, the study employed nine unique interview guides and eight unique surveys engaging 15 different respondent types, with considerable triangulation of domains and items across respondents.

These measurement domains were subsequently organized into six categories given the natural affinity across several measurement domains and to facilitate a clearer discussion of the findings and recommendations. The findings are organized into the following categories: leadership, priorities, and accountability; initiatives and ways of working; connectivity and relationships; capacities; instructional leadership behaviors; and time use (Figure 3).

Figure 3. *Findings domains*



Respondent Sample

The sample was census-based for district-level respondents (a total of eight respondent types). At the sector level, the sector education inspector (SEI) sample was nearly census-based (12 out of 14 for Ngoma and 12 out of 17 for Rulindo), but the sector executive secretary (SES) sample (1 per district) is not representative. We included four schools for each of the two districts, which again, was not intended to be a representative sample. Within schools, we included the head teacher, a school-based mentor (SBM), and language teachers from grade 1, grade 2, and grade 3. We also interviewed a parent-teacher association (PTA) member from each school. Table 1 shows the total sample by instrument.

Table 1. *Total sample by instrument*

Respondent type	Interview	Survey	Time-tracking + time survey[12]
District-based data collection – 2 districts			
NESA inspectors (assigned to case study districts)	2		
Mayor	2		
Vice mayor	2		
District executive secretary	2		
District director of finance	2		
District director of planning and M&E	2		
District education committee parent representative	2		
District director of education		2	
District education officer (pre-primary and primary)		2	2
Sector executive secretary	2		
Sector education inspector		24	24
School-based data collection – 8 schools, 4 per district			
Head teacher		8	
School-based mentor		8	
P1 Kinyarwanda teacher		8	
P2 Kinyarwanda teacher		8	
P3 Kinyarwanda teacher		8	
PTA member	8		

12 In addition to time tracking, we administered a post-time tracking survey to SEIs to gain additional information about how time was spent at school, their confidence in their time reporting, and their experience with the time tracking.

Case Study Selection Summary

As noted above, the value of positive deviance research rests heavily on the selection of positive case studies. The findings are based on the proposition that the evidence uncovered is reflective of the norms, behaviors, and capacities that have resulted in better outcomes. While positive deviance research is not causal in nature, there is still an expectation that one can map positive deviance cases to better outcomes. The selection of positive deviance cases can be straightforward when (1) the desired outcomes are clearly defined, (2) the outcomes are systematically, reliably, and comprehensively measured, and (3) the outcomes can be traced to the positive deviant cases through validated intermediate outcomes. In addition to these three considerations for case identification, selection requires access to data to ensure that selected cases do not have special advantages, such as higher socioeconomic status or differing population characteristics (e.g., educational attainment or linguistic composition). In our country and case study selection, we also had the additional consideration of wanting to understand the influence of policy reform and technical assistance on the study cases and wanted to choose a context with robust and identifiable policy reforms and technical assistance programs focused on the middle tier and improvements in foundational literacy outcomes.

It was with these case selection considerations in mind that we approached our case study selection. Beginning at the country level, we considered several countries where substantive policy reform and technical assistance interventions to strengthen the middle tier's contribution to improved foundational literacy outcomes had been implemented, where there were clear signals of positive deviant cases, and where there existed the possibility of government collaboration and local research support. Rwanda emerged as the top candidate. See Annex A for additional details on selection.

Moving from country selection, we began to consider selection for the two positive deviant districts to be included in the study. Referring to the three conditions for positive deviance selection noted above, in this instance, we had a very clearly defined outcome—improvements in foundational literacy outcomes. For the second consideration—that outcomes are systematically, reliably, and comprehensively measured—we had a mixed situation. Rwanda does administer a nationally representative early grade literacy assessment (in grade 3, referred to as P3 in Rwanda) and a census-based national end-of-primary exam (in P6), both of which are reported at the district level. There are also Kinyarwanda reading outcome data over time to provide insights into which districts are improving outcomes.[13] Additionally, there are classroom-based literacy assessments implemented in Rwanda, but the reporting is not consistent.

The third consideration—that outcomes can be traced to the positive deviant cases (in this case tracing district and sector actors' behaviors to improved student literacy outcomes) through validated intermediate outcomes—is much less straightforward for middle-tier research. The indicators to measure districts' leadership for foundational learning and instructional leadership[14] are not well-established or validated in the sector, and the data for provisional indicators are generally not systematically, reliably, and comprehensively measured. Take, for example, the prominent hypothesis that high-quality and frequent instructional support delivered to teachers by district staff is a prerequisite for a district to be considered a positive deviant case. Because of the dearth of systematically collected data on coaching frequency and quality by districts, and a lack of research studies to connect coaching behaviors by system actors to teacher instructional quality and ultimately to student outcomes, we were not able to use "coaching behaviors" as a criterion to identify positive

13 There have been changes to the instruments and sample over time, which may have influenced the equivalency of the results across different assessment cycles.

14 Instructional leadership is defined as the full set of activities that an actor might take to improve foundational learning outcomes. Leadership can be exhibited by all layers of the middle tier but is often the responsibility of senior staff within the middle tier. Instructional support is defined as activities associated with providing direct instructional support to teachers that aims to improve mastery of content, pedagogical skills, classroom management practices, and other activities leading to improved student foundational learning outcomes. These activities are typically performed by school-facing staff.

deviant districts. We also had to recognize that there are many intervening factors in between the middle tier and student learning outcomes, including student and household level factors that can greatly influence educational outcomes.

Because of these factors, we conducted the first phase of case study selection using qualitative information from experts working on foundational literacy and systems strengthening in Rwanda[15] and referencing a predefined identification protocol (see Annex H). From these initial interviews, we identified seven potential positive districts: Burera, Gisagara, Huye, Ngoma, Nyagatare, Ruhango, and Rulindo. Huye district was excluded because that district is participating in the Supporting Teacher Achievement in Rwandan Schools program and randomized controlled trial, which includes teacher *imihigos* (performance contracts) that include financial rewards and non-customary engagement by SEIs focused on improving learning outcomes. We determined that participation in this program presented too high a risk for biased findings. For the remaining six candidate districts, we reviewed a range of household and population variables, district development strategies, and education outcome data, including P3 Kinyarwanda Learning Achievement in Rwandan Schools and P6 Kinyarwanda leaving exam scores.[16] Based on these data, Ngoma and Rulindo were provisionally selected, and a review of additional data found that these two districts were well-matched and did not have resources beyond the national average. Within these districts, school data were reviewed, and a subset of schools was selected. See Annex A for full selection details.

In summary, identifying positive deviant districts is complex for several reasons. There is a temporal distance between district leadership for foundational literacy and students' learning outcomes. A district's decision to prioritize foundational literacy and create more robust instructional leadership will not manifest immediately in student learning outcomes—it will invariably take some time. Moreover, districts have varying degrees of control over the range of factors that lead to improved learning outcomes, and we know that factors outside of the education system, such as poverty levels and parental characteristics and engagement, have a strong effect on student learning outcomes. Other factors within the education system function independently of districts (e.g., quality of curriculum, overall resourcing, and recruitment of teachers) and yet have a material effect on student outcomes. The information referenced in the selection process has limitations in terms of identifying the specific contribution that district actors are making to their district's success, but in sum, we selected districts that have been highlighted by education system experts as being committed to improving foundational literacy outcomes and that have quantitative data showing strong improvements in P6 Kinyarwanda scores, as well as non-preferential demographic and geographic factors.

Data Collection and Analysis Summary

The study received approval from and was overseen by the National Council on Science and Technology and the Rwandan National Ethics Committee, and all data collectors were trained on research ethics. The reporting of findings is structured in a manner that protects the anonymity of respondents at the district level. Annex B offers a detailed description of the instrument piloting, data collection, and analysis. Here we offer a summary view.

This study deployed nine unique interview guides and eight unique surveys, with triangulation of domains and items as appropriate. The guides and surveys were originally developed in English by the research team and subsequently translated into Kinyarwanda and back translated into English.

15 Consultations on case study selection included discussions with FHI360, Save the Children, Innovations for Poverty Action, Education Development Trust, Rwanda Education Board, VVOB, World Vision, UNICEF, USAID, and the University of Rwanda College of Education.

16 P6 Kinyarwanda pass rates improved 6% and 7.5% between 2021 to 2022 for Ngoma and Rulindo, respectively, with a total pass rate of 99% and 97% in 2022, respectively.

Surveys were coded in SurveyCTO and piloted using cognitive debriefs to assess the relevance, comprehension, and quality of phrasing.

The training was partitioned into two phases for a total of nine training days for all enumerators. Data collection was conducted in two waves. The first wave focused on the district-level respondents and took place May 27–30, 2024 for most district-level respondents. During this time period, the SEIs were gathered in a workshop-like format for four half-days (two half-days per district) to administer the survey and train the SEIs on the time-tracking survey. The second wave of data collection focused on school-level data collection and took place June 10–12. Open-text responses in the quantitative surveys were recorded in Kinyarwanda by survey enumerators during data collection and then translated into English. Key informant interviews were recorded, transcribed, and translated from Kinyarwanda to English.

Following the conclusion of all data collection activities, the quantitative data sets were cleaned, and data were de-identified. Items with a large proportion of "other" responses were recoded. For quantitative analysis, survey responses were tabulated by district and average across districts.

For the qualitative analysis, the interview transcripts were analyzed and coded in NVivo software, using codes based on the study's conceptual framework (e.g., accountability, priorities, etc.), and questions important to the analysis (e.g., district challenges, relationships with parents, etc.). The authors reflected on the findings from the quantitative and qualitative data throughout the analysis stage and identified areas for integration, triangulation, and further investigation. The report identifies where the quantitative and qualitative data align or differ, with discussion about implications. The codes and subset codes are presented in Annex D, alongside a series of analytical memos in Annex K.

Study Limitations Summary

Study Limitations Summary

Positive deviance studies, by their very definition, are exploratory in nature and are premised on the idea that there are capacities, behaviors, and norms that have not previously been identified (either individually or operating together) that are important to achieving certain outcomes. It is within this framing that we developed the respondent sampling and measurement strategy, which included a broad set of domains and functions. And while we feel that we captured a comprehensive view of the study districts, it is possible that there are essential capacities, behaviors, and norms that are important in making these districts strong leaders for foundational learning that we did not capture. At a more granular level, it is important to note that most of our survey data are self-reported and, as such, vulnerable to social-desirability and recall biases. We made efforts to phrase questions to minimize these biases, but the influence of these biases on the findings is still a possibility. Additionally, we have summarized the development project interventions targeting improvements to foundational learning, with a focus on engagement of the middle tier, but the study did not focus on identifying the specific policies or programs that have contributed to the study districts' current behaviors. That said, we have summarized some of the key initiatives that the study districts identify as important to improved learning outcomes, and many of those are linked to technical assistance projects.

Positive deviance studies focus on learning from the outliers rather than positing that the sample is representative of the whole. In that manner, our sample of two districts supports the research objectives but is not a representation sample of the 30 districts in Rwanda; as a result, we are not able to say how the two districts in this study are similar to or different from the other districts in Rwanda. As noted in greater detail in the study design section, selection for positive deviance is fundamental to the validity of the study. The clarity of selection variables for positive deviance studies can vary a great deal depending on the evidence base about what constitutes a positive deviant, the proximity of the subject under study to the outcomes of interest, and the availability of reliable data aligned with selection variables or outcomes of interest. In our case, we feel confident that our selected districts do not enjoy any special advantage over other districts in Rwanda, which is a key requirement for positive deviant selection. The information referenced in the selection process has limitations in terms of identifying the specific contribution that district actors are making to the districts' improvements in foundational learning, but in sum, we selected districts that have been highlighted by system experts as engaging in practices that improve foundational literacy outcomes and that have quantitative data showing improvements in P3 and P6 Kinyarwanda scores, as well as non-preferential demographic and geographic factors. See Annex E for a fuller discussion of the study limitations.

Findings

Findings

What do our positive case study districts look like?

We begin our findings discussion with a holistic view of the two districts in our study, integrating qualitative and quantitative data gathered across domains and respondents.

Leadership, Priorities, and Accountability

- **Leadership** for improving foundational literacy outcomes is **strong and diffuse**.
- **Accountability is robust and voluntary** in nature.
- Districts describe themselves as "**implementing agents**" and take pride in their complex **coordination** role.
- **Bureaucratic norms** in the districts are **deliberative and focused on problem-solving**.
- **School visits** are viewed as a **core leadership responsibility**.

Initiatives and Ways of Working

- Districts employ **system-, school-, and community-focused initiatives** to improve foundational literacy outcomes.
- Senior leadership leverage their positions to **convene staff across levels, cross-sectorally, and with the community**.
- School **monitoring is collegial and often conducted jointly by political and technical staff across the middle tier**.

Connectivity and Relationships

- The **connections** within the middle tier and between the middle tier and schools **are multi-directional (horizontal and vertical) and differentiated**.
- **Frequent formal exchanges** and **informal exchanges** about how to improve foundational literacy outcomes **facilitate collaborative action**.
- **Influence and advice flows are indicative of strong collaboration and respectful peer relations** that transcend organizational hierarchies.
- **Sector education inspectors** (school-facing support) **have strong general and technical-support** relationships with a range of colleagues to support them in their work.

Capacities

- There is a **solid core of knowledge about foundational literacy** and how to assess literacy skills across district actors supporting schools and school leadership.
- The study districts benefit from a relatively low ratio of instructional support staff to teachers, and financial resources for travel to schools do not appear to be a barrier.
- Staff across the district face a need for more reading books, teaching materials, and classroom space.

Instructional Leadership Behaviors

- District and sector actors, including top leadership, are in schools frequently, and joint monitoring is a common practice.
- **Foundational learning is a priority for lesson observations**, with focus on instructional quality, student engagement, and learning outcomes.
- There is relatively strong coherence in the observation focus and advice provided to teachers across instructional support actors.
- School leadership provides the most frequent instructional support to teachers.

Time Use

- For the great majority (76%) of the time-reporting periods, SEIs reported spending most of their time on education-related activities.
- SEIs reported spending most of their time on in-person school visits for 25% of the time-reporting periods.
- Time is a limited resource, and SEIs who spend a lot of time on non-education-related activities have a lower frequency of school visits.

Leadership, Priorities, and Accountability

In this section, we present the findings associated with leadership, priorities, and accountability, in addition to several cross-cutting findings on influence and collaboration. We have clustered these finding together given the interdependence of these distinct but overlapping domains.

What does leadership, priorities and accountability look like in the study districts?

Leadership for improving foundational literacy outcomes is **strong and diffuse** in the study districts.

Across political and technical leadership, improving foundational literacy is a priority, and collaboration is widespread.

Districts describe themselves as "**implementing agents**" and take pride in their complex **coordination** role.

Bureaucratic norms in the districts are deliberative and focused on problem-solving.

Accountability is robust and voluntary in nature and appears to flow in multiple directions and beyond the boundaries of formal accountability.

The influence and advice flows are indicative of strong collaboration and respectful peer relations that transcend organizational hierarchies.

School visits are viewed as a **core leadership responsibility** for all district and sector staff, regardless of level.

These norms are facilitated by **clarity and consistency in national policy and priorities** to improve foundational learning outcomes.

Leadership

Respondents across the districts at every level see themselves as having a leadership role in improving foundational learning outcomes. These same respondents also identified a range of district, sector, school and community actors as leaders and advocates for foundational learning.

In the study districts, both mayors and vice mayors have prioritized education and appeared to take an active leadership role. A vice mayor described their leadership role in education in this way:

> *As a leader I need to guide [the team in charge of education]: why didn't you go to do inspection? If you went there, what did you see? What are the challenges? After they see the issues there, they inform me. However, most of the time I go there myself. And whichever issue the district leadership has to decide on, I have the responsibility to present it to them because I am a member of the leadership committee. If there is a need for advocacy, our responsibility is to relay the issues we detected to the Ministry of Education.* (vice mayor)

The mayor and vice mayor's leadership orientation is more distributed than hierarchical, with leaders in the study districts acknowledging the importance of the district technical leadership's and sector staff's expertise, as well as the contextual knowledge of school staff and parents. As one mayor put it, "Those in the education unit have the expertise—it is important to meet with them, listen to their perspective on how the education sector is doing, and advocate on their behalf or help them solve the issues that they have pointed out."

The non-technical district leadership roles (district executive secretary and the district finance and planning directors) also contribute to education but in a more traditional bureaucratic manner. For example, the district executive secretary described their leadership role as including "overseeing employee performance, ensuring timely payment of salaries, maintaining employee files, and adding them to the payroll. We must also ensure that employees, meaning the teachers, have the necessary resources and support to perform their jobs effectively." Indeed, in these districts, interviews with district staff with largely administrative and managerial functions (district executive secretaries and directors of finance and planning and M&E) revealed a strong belief in how their roles contributed to strong performance in education.

Moving to the technical leadership at the district level, district directors of education (DDEs) emphasized their leadership role on problem-solving with schools: "We solve problems in our capacity, and advocate for problems above our capacity." Meanwhile, district education officers (DEOs) reported focusing on advice and technical support to SEIs and schools, along with inspection and monitoring activities. Similarly, SEIs in both districts emphasized their hands-on actions with schools as examples of how they enact their leadership role to improve foundational literacy outcomes.

At the sector leadership level, SESs, while not a technical or exclusively education-focused role, also see themselves as hands-on leaders in the effort to improve foundational literacy outcomes. This self-report maps to the findings of the adapted social network analysis indicating that SEIs rely strongly on SESs when they have challenges with schools in general, but much less so for technical advice about how to improve foundational literacy outcomes.

District and school parent representatives also identified themselves as leaders or "school ambassadors." They liaise between the parents, community leaders, and school staff on learning outcomes, remedial lesson organization, and school attendance issues.

Figure 4 provides additional details about the leadership activities reported by respondents.

Figure 4. *Leadership activities in study districts*

Building on how respondents described their leadership role in improving foundational literacy outcomes, we also wanted to understand how district staff see their place within the education sector—that is, how organizational norms influence their strategies and ways of working. At the highest level, one mayor in our study described the district as an "implementing institution" for national education policies and resources. While this description may suggest that the district sees itself with limited autonomy, in fact, the opposite is true. Leadership in both districts viewed implementation as complex (SL2, SL4),[17] and they saw a clear role for themselves and expressed a feeling of pride and agency in their work:

> ***The country's education policy is well structured. The national program is set, what a student should learn is set, books are there, and other materials. Coordination is the most difficult part. Our role as the district leadership … is to coordinate all activities concerned with education.*** *(district leader, Ngoma)*

17 Note that there are codes throughout the qualitative findings indicating the source of the information or quote. Please see Annex D for a summary of the respondent codes.

Indeed, in both districts, staff expressed that the district did not necessarily have any advantage (e.g., more resources or favorable context) that drove its success in improving foundational learning outcomes; rather, success was driven by its own practices (NESA, SL3, SL4). For example, one leader stated:

> ***It is our job as a local government official to implement government programs. Rulindo District does not have any specialty from other districts, but how we implement the government programs is where the specialty might come in. District administration takes the lead … to follow up on how the programs are being implemented, and if there is a need for advocacy, it is done promptly so that all challenges are mitigated early enough, thus achieving our priorities.*** *(district leader, Rulindo)*

District leaders also expressed that it was their role to advocate with MINEDUC and REB for additional resources (e.g., teachers, finances, and learning materials) (SL2, SL4). The district leaders provided several examples, including arranging for the minister to visit a needy school, writing letters to MINEDUC or REB, or accompanying national staff on joint school visits to discuss resource gaps (SL2, SL3, SL4, SL1).

Priorities

Districts have some scope for decision-making about the allocation of resources in the context of the broader budget decisions made at the national level. In the study districts, budgeting priorities are derived from multiple sources, including national strategies and policies (e.g., Vision 2050 and the Education Sector Plan), district ***imihigos*** (performance contracts),[18] district staff's analysis of enrollment and outcome data, and ideas generated from citizen and education staff meetings and monitoring (SL2, SL3, SL5, SL4). For example, a vice mayor described how citizen input shapes resource allocation in the district budget:

> ***Residents have the right to voice their opinions during planning. They are asked what they need … For those concerned with education, we take them and prioritize, in which area school is needed more …, where there is the most need for a teacher or what could we do better.*** *(vice mayor)*

Turning to priorities within education, while there are multiple priorities across the two districts, the quality of education and improving learning outcomes, particularly foundational literacy and numeracy in the early primary grades (NESA, SL2, SL3, SL4, SL5), stand out. Survey data from DDEs and DEOs align with the interview findings, which indicate that the mayor and vice mayor in the two districts make improving learning outcomes a focus of their discussions and plans "very often" and that other district and sector staff prioritize improving learning outcomes in their discussions and planning either "very often" or at least "sometimes." This prioritization was also reinforced by recent visits to both districts by the minister of education, who encouraged staff to focus on early grade learning (SL2, SL3).

School readiness to support better foundational learning outcomes, through building and staffing early childhood development (ECD) centers, was also noted as a priority by many district staff and parents. As one leader shared:

> ***Literacy and numeracy need to start at an early age. This is why a lot of effort is put into ECD, where it helps the child grow up with the ability to easily understand other subjects. This means a lot of effort is directed towards nursery school and early primary school levels, and they are visited a lot to check how they are being taught.*** *(mayor)*

18 See more on imihigos in the Accountability section.

In addition to foundational learning outcomes, both districts prioritize universal access and reducing student absenteeism and dropout. Dropout identification and support practices are reflected in priorities shared by staff and parent representatives at all levels (NESA, SL2, SL5, SL1, SL6, HT, T, PTA). Achieving these goals involves actors across different levels to solve the underlying reasons for absenteeism:

> ***The first thing we prioritize is the students' attendance … Tracking the students' attendance is an important activity and we, the district, have tracked it in three levels so that a student cannot stay behind. There is a school leadership level, the local leadership level that interacts with parents and asks for the parents to do their obligations … We instead interact with a parent for any problem/ challenge a student faces.*** *(mayor)*

The school feeding program, a relatively new program with a high degree of visibility in Rwanda at the time of the study, was also described as a district priority, as it supports regular school attendance (SL4, SL5, SL1, PTA) and increases the health and well-being of students. Other district education priorities indicated by district leadership were student discipline (good values) and school classroom construction (SL2).

Interestingly, beyond educational outcomes, the quality of school leadership itself was also noted as a priority. District senior and technical leaders, as well as parents, emphasized good school leadership. Some strategies noted to improve school leadership included making school leader practices a focus of school monitoring, training school leaders, and facilitating head teacher peer learning meetings (SL3, SL1, SEI, PTA).

Accountability

Accountability relationships capture expectations between different actors as to what behaviors or outcomes each are held responsible for. There are many types of accountability (e.g., vertical, horizontal, and account-based), and research on accountability often aims to clarify principal-agent relationships to drive improvements in system efficiency (Honig & Pritchett, 2019; Silberstein & Spivack, 2023; World Bank, 2003) and seeks to identify the role that accountability has in improving learning outcomes (World Bank, 2015). Typically, institutional or individual accountability norms sit on a continuum between mandatory and voluntary (de Boer, 2023). Set in an educational context, mandatory accountability is represented by formal legal or contractual accountability, such as annual staff performance reviews. Voluntary accountability, on the other hand, is characterized by an internalized sense of duty to achieve an outcome—a willingness to offer information and explain behavior to stakeholders, without any obligation to do so.

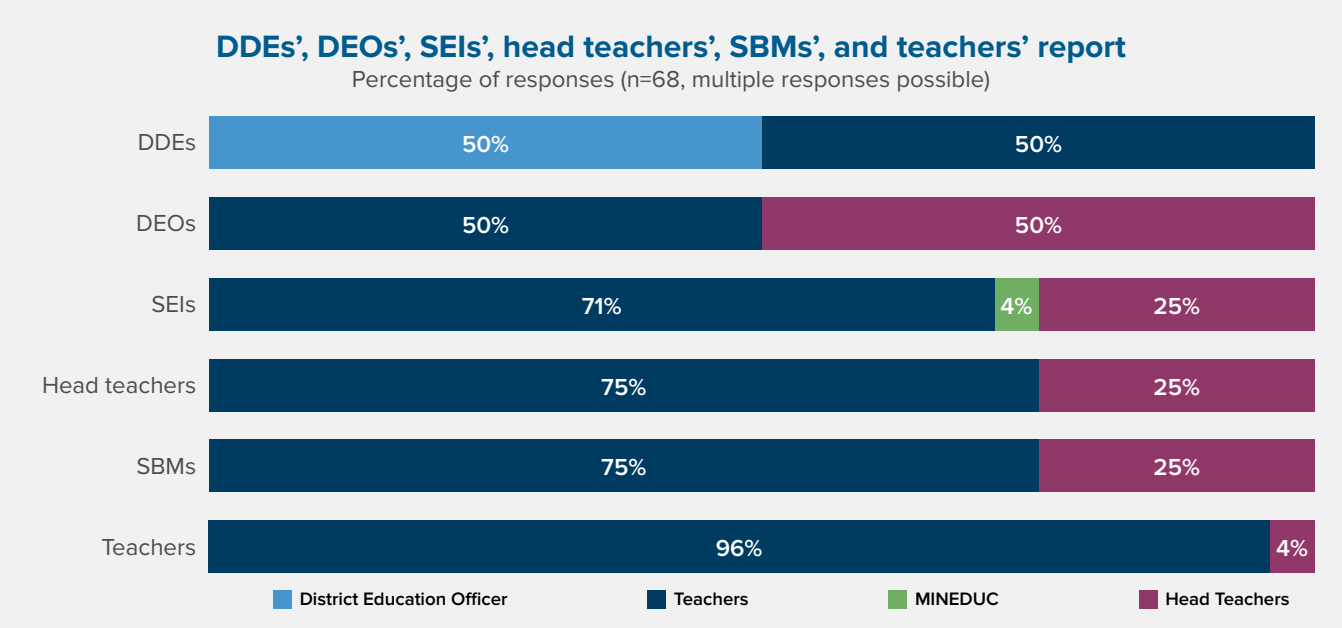
This section draws on survey, interview, and social network analysis data to explore how respondents understand accountability in relation to improving foundational literacy. This approach allows us to compare formal lines of accountability and influence (such as in an organogram) with how respondents view their most important accountability and influence relationships. We also explore who respondents view as the most accountable for learning outcomes, to whom they feel most accountable, and who they believe has the most influence over improving foundational literacy in Kinyarwanda.

First, drawing on the survey data, we found that accountability for learning outcomes is perceived as strong and shared across respondents in the study districts, with 100% of all respondents stating that they feel accountable, at least in part, for foundational learning outcomes. The overwhelming majority felt that it was "very fair"[19] that they are held accountable. We gained a slightly more nuanced view of accountability dynamics in the districts by asking our respondents who is *most accountable*

19 Other response options were "fair," "somewhat fair," and "not fair at all."

for students' early grade Kinyarwanda outcomes (Figure 5). We found several patterns in these data. The higher the position, the more likely that person was to hold their direct report or the level below them in the organization accountable. As we move closer to school-level respondents (SEIs and school-based staff), accountability sits squarely on the shoulders of the teachers, with 96% of teachers holding themselves mostly accountable for students' early grade reading outcomes.

Figure 5. *Who should be most accountable for early grade reading outcomes*



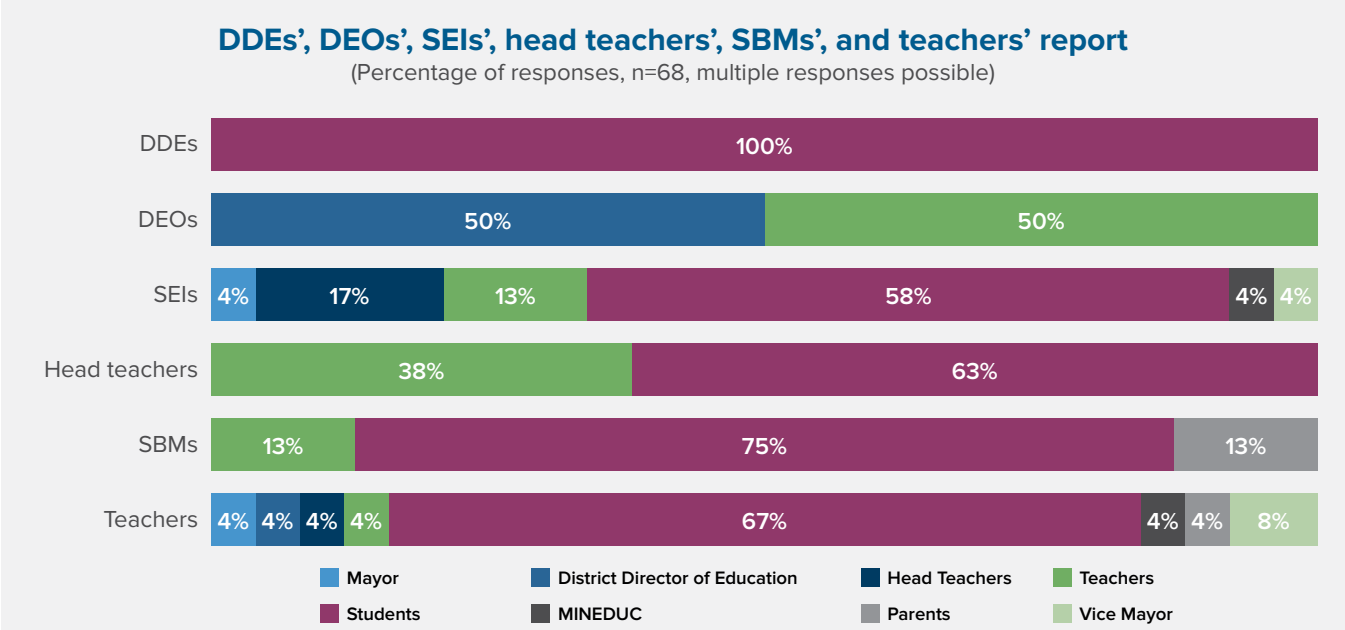
Interviews with district and sector leaders (mayor, vice mayor, DES, SES) revealed that they also hold teachers accountable for students' foundational literacy outcomes, but with the important addition that they view parents as strongly accountable as well (SL1, SL2, SL3, SL4). However, some district and sector leadership found the question of naming who is most accountable difficult. Several leaders emphasized that everyone is accountable. For example:

> *Education concerns everyone, whether it is a parent, teacher, or one who prepares the curriculum and enforces how education is run. This means that parents, like the ones we have in villages, although they might not know how to read and write, should at least make sure that their children are going to school … This is followed by the teacher, and the principal of the school. If the teacher follows well how they have been trained with the principal's supervision, and the sector officer in charge of education supervising. In short, we are all concerned about this.* (vice mayor)

Similarly, PTA representatives at schools and the district level indicated that head teachers, teachers, and parents are most accountable for improving learning outcomes (PTA).

The accountability dynamics in the study districts shift a bit when we ask to whom our respondents feel most accountable to in their jobs. In Figure 6, we do see the traditional pattern of being accountable to one's supervisor in a few respondents, but for the most part we see a reverse pattern of accountability, with the great majority of respondents feeling accountable to their subordinates or to students (63% of respondents overall reported feeling most accountable to students in their jobs).

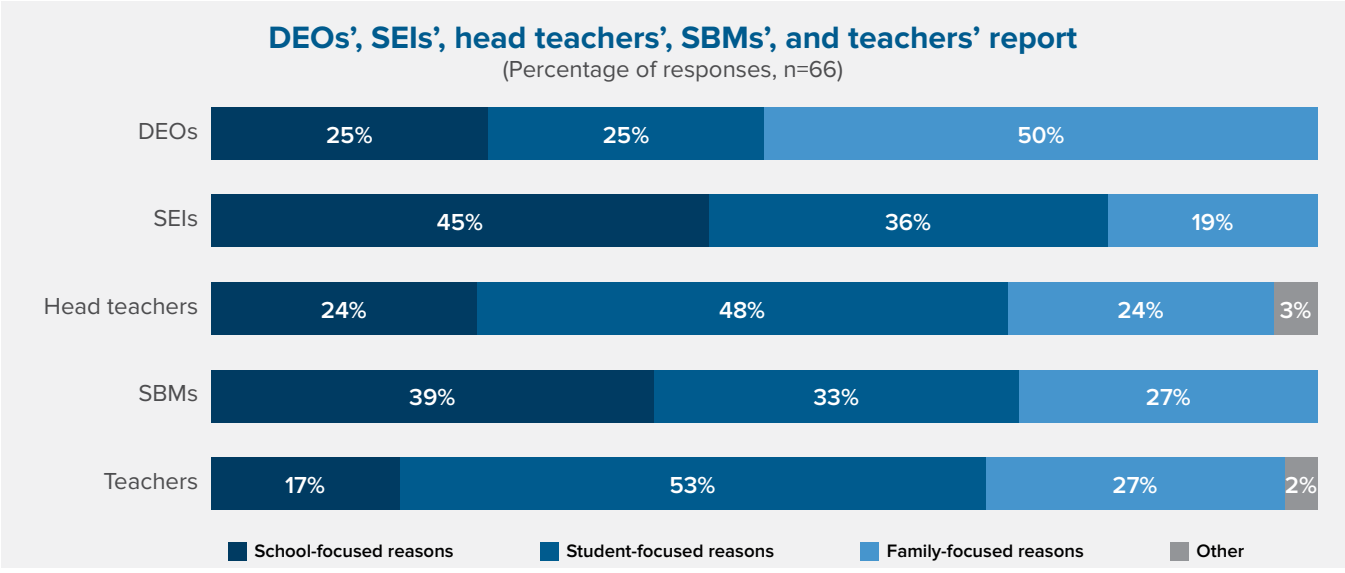
Figure 6. *Who most accountable to in job*



To complement the information that we gathered about accountability for improving foundational literacy outcomes, we wanted to understand the degree to which perceived accountability is aligned with what or whom respondents consider to be the source of challenges in improving foundational literacy outcomes and, by extension, the degree to which respondents feel accountable for challenges that they are not directly responsible for.

We surveyed district and school staff about what they believe is the reason that some students struggle to learn to read (see Figure 7). DEOs cited family-focused reasons most frequently (50% of responses), with SEIs attributing students' learning struggles to school-focused reasons (45% of responses). Head teachers and teachers both cited student-focused reasons frequently (48% and 53%, respectively), and SBMs offered a more balanced view, with school-focused reasons cited most frequently (39%) and nearly an even balance between student- and family-focused reasons (33% and 27%, respectively).

Figure 7. *Reasons why students struggle to learn to read*



These data offer insights into how district and school staff think about the origins of why students struggle to read and how that links to what we have learned about accountability norms and viewpoints in the two study districts. Given the high level of personal accountability for student learning outcomes reported by district and school staff in the context of these data from the same respondents about the origins of why students struggle to learn to read, it seems that the study respondents see a clear separation between origins of the problem and who is responsible for finding solutions—even if the origin of the problem is not centered in the system, district, or school. This may be a signal that accountability in the study districts is at least in part voluntary, with actors at all levels self-identifying as at least partially responsible for foundational learning outcomes. We also found in the qualitative data that the study districts self-identified as the critical implementing organization for the government's policies and appear to have deeply held beliefs that strong foundational literacy skills are essential for all future educational, economic, and life outcomes (SL2, SL3, SL4, SL7), further aligning with the voluntary accountability norms associated with improving foundational learning outcomes.

We explored the drivers for these accountability dynamics through qualitative interviews and surveys. We found several interesting factors that might be informing the presence of voluntary accountability norms. This is especially interesting in the context of Rwanda's historical and present use of performance contracts (*imihigos*) that have attracted much interest in terms of their effectiveness in holding public servants accountable for achieving objectives. We wanted to understand the role that district imihigos have on the more voluntary accountability dynamics that we identified through the interviews and surveys.

Both districts in our study have imihigos, and those imihigos include a range of education-related goals. SEIs specifically had a strong understanding of their districts' imihigo goals and targets. They were generally able to articulate numerical performance targets (exam pass rates) at different levels of education (primary, O level, A level, and technical and vocational education and training). They also mentioned goals around school feeding, reducing school dropouts, increasing student attendance, improving the school data management system, and school construction targets. At the school level, head teachers, SBMs, and teachers were also able to describe their district's imihigo goals, but in more general terms. They noted priorities such as improving the quality of education and learning outcomes, reducing school dropout, ensuring school safety and hygiene, and increasing the number of school buildings. In sum, study respondents were largely clear about the goals in their district imihigos but had varying levels of knowledge about the specific goals and targets.

To further understand how the imihigos are situated within the accountability landscape for the study districts, we asked our respondents about the effect of having education goals in their district's imihigo. The responses were overwhelmingly positive, with only 2% of responses (multiple responses possible) being negative in nature. Respondents cited feeling motivated and inspired by the goals and reported that the goals helped them stay focused, try harder, and be more efficient; however, imihigos did not seem to be a source of mandatory accountability norms in the study districts, as one would expect from performance-structured contracts. Rather, imihigos were only one of several influences on district priorities, alongside the Education Sector Plan, District Development Plan, MINEDUC and REB policies, analyses of district data, district technical staff expertise, and citizens' voices (SL2, SL3, SL5).

Related to accountability and to inform our understanding of how district and sector staff work together, we explored the influence that others have on the SEIs' and DEOs' priorities, as well as the influence that SEIs have on others' priorities using a social network analysis tool that was developed for this study.[20]

20 See Annex I for additional details.

In the first case, shown in Figure 8, we find the expected strong level of influence that the SES has on the SEI as their direct supervisor. Beyond this, we see a moderately strong level of influence by the DDEs and DEOs on SEIs, even though they do not report directly to either of these roles. We also see that head teachers have a moderate level of influence on SEIs, even though they are in a subordinate position to the SEIs.[21] This speaks to and aligns with the high level of collaboration and communication we found in the qualitative interviews across respondents at the district level.

Figure 8. *Level of influence others have on SEIs*

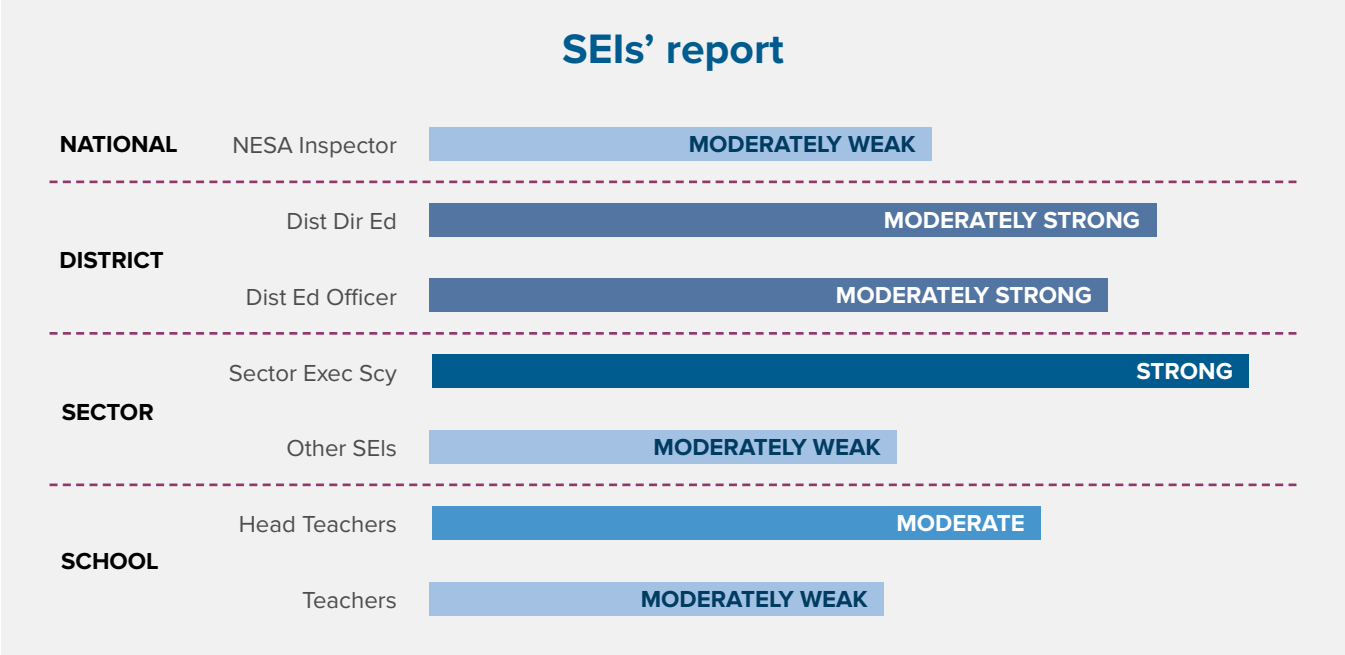
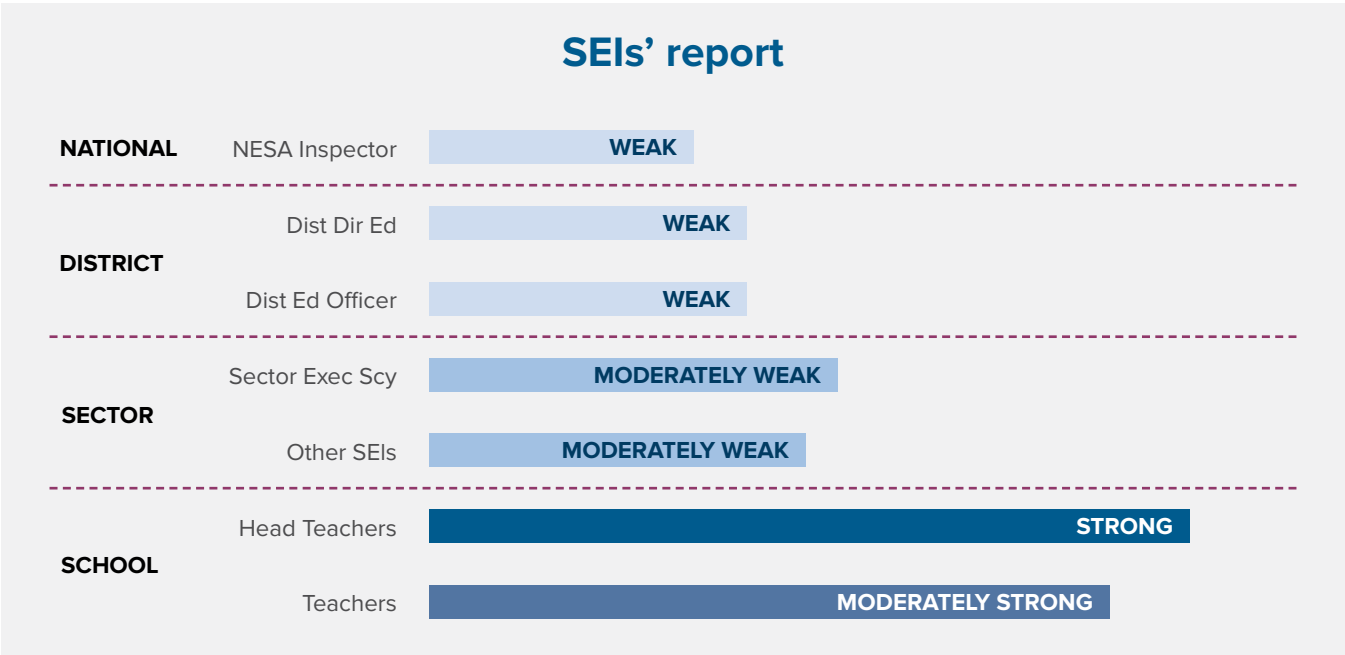


Figure 9. *Level of influence SEIs have on others*



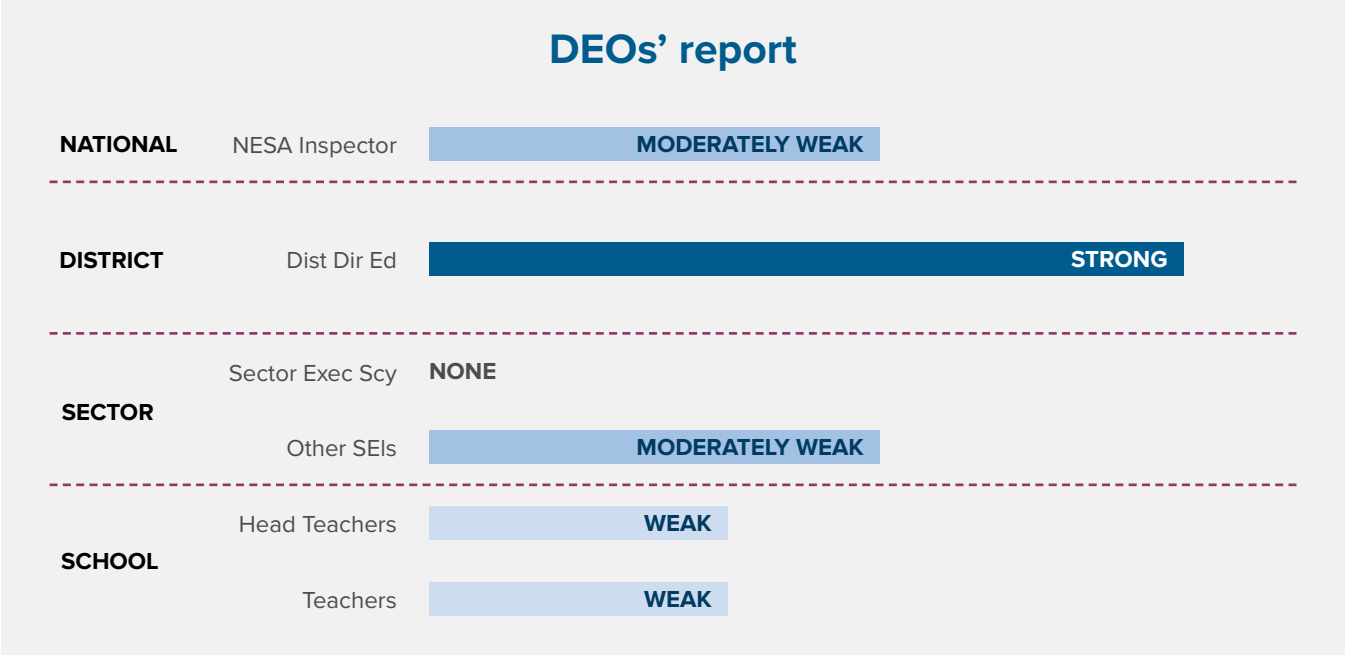
21 Out of a total possible score of 100: 90–100 is very strong, 80–89 is strong, 70–79 is moderately strong, 60–69 is moderate, 40–59 is moderately weak, and 0–39 is weak.

In terms of whom the SEIs influence, shown in Figure 9, again we see the expected strong and moderately strong level of influence on head teachers and teachers (respectively) given their subordinate position to the SEIs. We also find that SEIs have a moderately weak influence over their supervisor and SEI peers and even less influence over the district technical team and NESA inspector.

Head teachers seem to act as an intermediary, as DEOs' and SEIs' direct influence on teachers is slightly lower than their influence on head teachers (moderately weak for DEOs and moderately strong for SEIs). But the relationship is more nuanced than just the typical seniority-driven dynamics. We also found that school leadership—head teachers in particular—has a moderate level of influence on SEIs and that both DEOs and SEIs depend strongly on head teachers for advice about how to improve foundational literacy outcomes. These influence and advice flows are indicative of strong collaboration and peer-respect norms that transcend organizational hierarchies.

The qualitative evidence also reflects this two-way influence relationship between SEIs and head teachers. Head teachers, for example, often described the SEI as an advocate for the school at the local and district levels, as well as a teacher trainer and pedagogical advisor (HT, SEI).

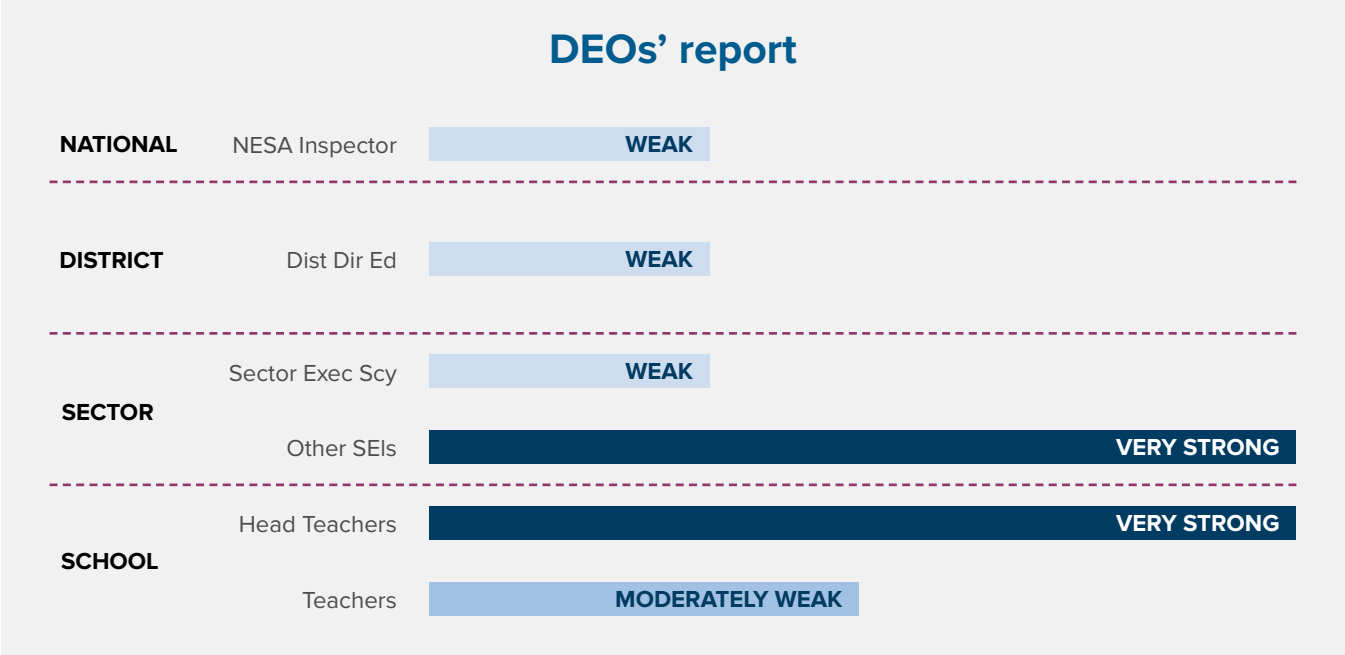
Figure 10. *Level of influence others have on DEOs*



The influence dynamics for DEOs in the study districts also follow traditional patterns of exerting more influence on their subordinates (very strong influence on SEIs and head teachers), but moderately weak to weak levels of influence on their districts' NESA inspectors, SESs, teachers, and DDEs. DEOs reported that their supervisor, the DDE, has a strong influence on their priorities. While the districts' NESA inspectors and SEIs have some influence on DEOs, it is moderately weak. DEOs reported that the other roles have only weak levels of influence on their priorities (Figure 10). Interestingly, DEOs reported having a very strong influence on SEIs and head teachers, despite neither of those positions reporting into the DEO's formal chain of command (Figure 11). This demonstrates that the matrixed organizational structure between the district technical leadership and the sector-level school support staff and school staff does hold weight and is informing how the district- and school-level staff work together and influence each other.

The DDEs—the DEOs' supervisors—also described a two-way influence exchange with district leadership. DDEs provide consistent reporting and information to the district executive committee, offer technical advice on challenges, and raise issues with leadership for their action.

Figure 11. *Level of influence DEOs have on others*



Connecting the accountability findings with the influence findings, in addition to a broad shared sense of accountability for learning outcomes, we recall that respondents overwhelmingly believe that school-level actors should be held most accountable for students' early grade reading outcomes. Adding our influence data to this, we see that DEOs report having a very strong level of influence over head teachers, and SEIs report having a strong level of influence over head teachers. This may signal that in the study districts, DEOs and SEIs perceive that they have influence over the actors who hold the highest degree of accountability for student learning outcomes. That said, we must also recall that study respondents overwhelmingly feel most accountable to students in their job, departing from the traditional hierarchical accountability norms seen in many organizations.

Initiatives and Ways of Working

Building on the study districts' leadership, priorities, and accountability characteristics, in this section we present the initiatives and ways of working that were identified as contributing to district leadership for foundational literacy.

What kinds of initiatives do study districts engage in and what are their ways of working?

Political leadership leverage their role to convene actors across sectors and levels to mobilize community support for education, implement education services, and address student absenteeism.

Districts use **collaborative problem-solving** practices to convene actors across levels to identify problems rapidly and generate tailored solutions.

Districts prioritize initiatives to improve foundational literacy at the system, school, and community levels. They organize **capacity building on Kinyarwanda instruction for school staff and inspectors** and **focus classroom observations and feedback on the early grades**.

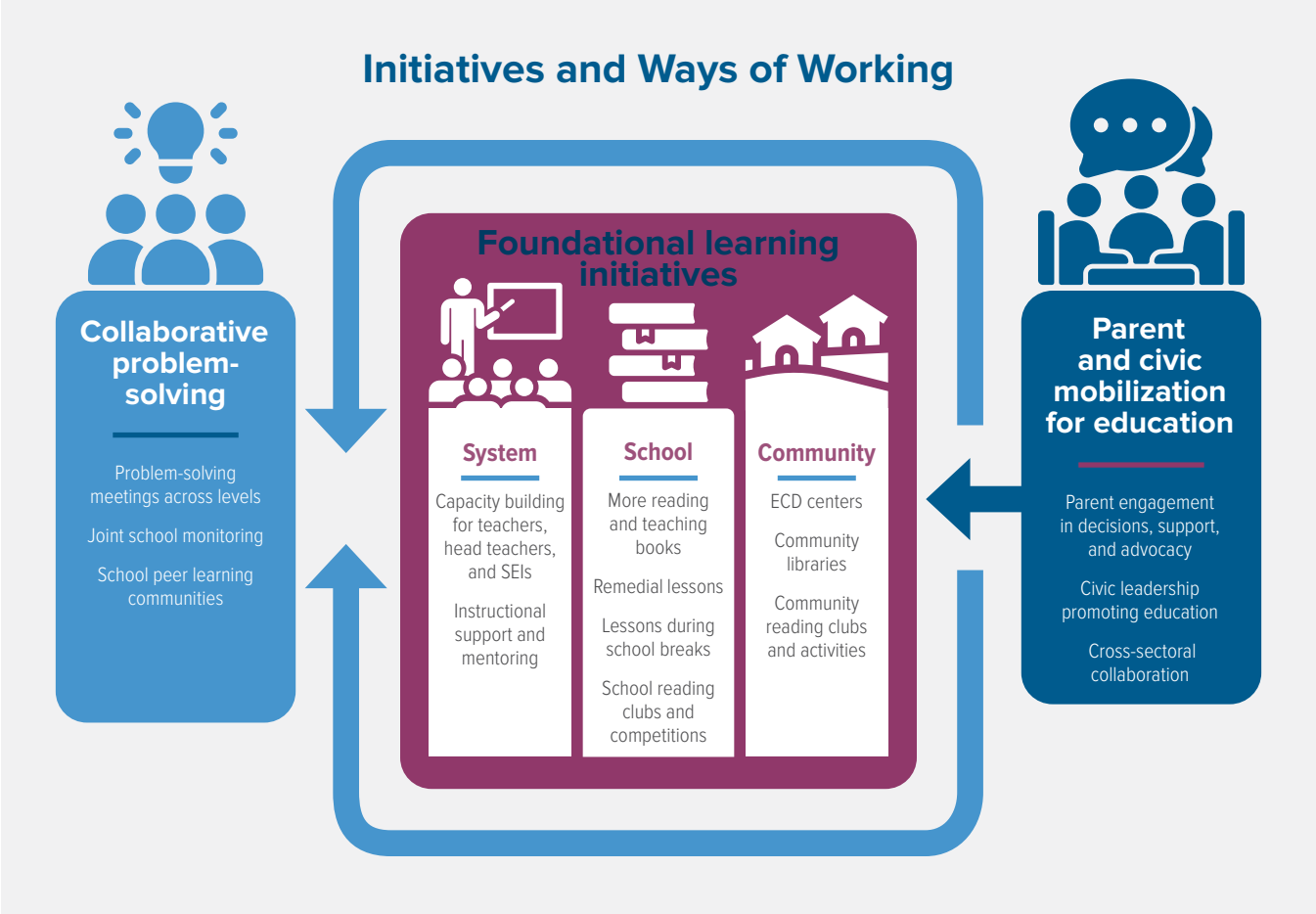
Study districts and schools **increase the availability of books and organize reading competitions, clubs, and remedial classes** for struggling students.

School **monitoring is frequent, collegial, and often conducted jointly** by political and technical staff.

Foundational Literacy Initiatives

The districts, sectors, and schools in our study pursue several initiatives specifically aimed at improving foundational literacy outcomes. These initiatives take place in schools and communities, often with partners, and are strongly supported by the middle tier. Figure 12 depicts the foundational literacy-focused initiatives undertaken by the study districts at the system, school, and community levels. It also shows two broader district ways of working that support these initiatives: collaborative problem-solving (illustrated through the arrow representing information and collaboration across levels) and parent and civic mobilization for education (shown as a crucial input to the foundational learning initiatives and the collaborative problem-solving processes).

Figure 12. *Foundational literacy initiatives in study districts*



Within the study districts, the initiatives that aimed to improve foundational Kinyarwanda literacy emerging from the qualitative data are:

- Teacher, head teacher, and SEI capacity building on Kinyarwanda instructional strategies
- Instructional support and mentorship focused on foundational literacy teachers
- Increasing access to teaching and reading materials in schools and classrooms
- Initiatives to encourage reading in school
- Providing remedial lessons and additional instruction during school breaks
- Increasing the number of ECD centers to improve school readiness
- Community libraries, reading competitions, and reading clubs

These initiatives come from different sources. As described below, some activities are part of technical assistance programs (e.g., Soma Umenye and Tunoze Gusoma), while others are spearheaded by the district or schools (e.g., joint school monitoring).

Teacher, head teacher, and SEI capacity building on Kinyarwanda instructional strategies: Improving teachers' Kinyarwanda instructional practice was mentioned by many respondents as a key driver of improved outcomes. Capacity building took place at different levels and was organized in different ways, including training delivered by MINEDUC, REB, and NESA; training organized by

districts (NESA, SL4) and in partnership with technical assistance projects, including Tunoze Gusoma ("Schools and Systems"), a foundational Kinyarwanda literacy program currently running 2021–2026;[22] and the predecessor Soma Umenye ("Read and Know"), a program that also focused on foundational learning (2016–2021).[23]

Instructional support and mentorship focused on foundational literacy teachers: Another district and sector initiative prioritized SEI and head teacher classroom observations and teacher feedback for P1–P3 Kinyarwanda teachers (SL2, SL3, survey). When asked about this priority, SEIs, SBMs, and head teachers explained that Kinyarwanda is the key to learning all other subjects and they felt it was important to express oneself in the national language. This instructional support was also complemented by school-based mentors, who shared that they saw the Kinyarwanda teacher training they conducted as part of their leadership role in improving foundational literacy.

Increasing access to teaching and reading materials in schools and classrooms: Senior leadership and school staff also stated that increasing the number of reading books used for in-class lessons, reading hours, and after-school book borrowing was a driver of learning achievement, in part supported by the Tunoze Gusoma and Soma Umenye programs (NESA, SL2). However, they noted that the demand for books outstripped availability and that reading books were one of the most common requests by staff across the districts (SL2, SL3, SL6, SEI, SBM, HT, T).

Initiatives to encourage reading in school: District leaders and parents mentioned that school reading competitions, plays, and storytelling helped build a reading culture in the school and community (SL1, SL2, SL3, PTA). SEIs and head teachers mentioned organizing activities such as school reading competitions as important contributions to improve foundational literacy. According to staff, this fostered a reading culture:

> ***The first is to find time for children to read. Be it at school, in the holidays, or at assemblies when children are in school.*** *(mayor)*

Providing remedial lessons and additional instruction during school breaks: School-level staff and parents said that when facing challenges of students struggling with Kinyarwanda literacy, they organized remedial classes and organized teachers to come on holidays or weekends to provide additional instruction (HT, T, SBM, PTA). Increasing instructional time appeared to be a school-led initiative (HT, T, PTA).

Increasing the number of ECD centers to improve school readiness: District staff also attributed the success in Kinyarwanda literacy to the increase in the number of ECD centers (SL1). Political leadership encouraged village leaders to have at least three ECD centers. There is a strong belief that ECD built the foundations for early grade literacy (SL2, SL3, SL5):

> ***Before, [ECDs were] understood as things for urban people … Parents are starting to understand education, because of the mobilizations we conduct in their farms and other places. We make sure there are ECDs in every VUP [local development plan]. That helps us so that children are prepped for education while they are still young.*** *(district executive secretary)*

Community libraries, reading competitions, and reading clubs: Several leaders and parent representatives highlighted establishing community libraries and helping community volunteers facilitate story time outside school. This work is supported by the Uburezi Iwacu ("Homes and Communities") program to improve home and community learning environments for early grade

22 https://www.usaid.gov/rwanda/fact-sheet/feb-22-2024-tunoze-gusoma-fact-sheet

23 https://www.edu-links.org/about/education-programs/soma-umenye

literacy (SL3, SL5, PTA).[24] District leaders engage with sector, cell, and village leadership to support community libraries and encourage volunteers (SL3). Furthermore, SEIs visit weekend community reading groups and conduct meetings with cell leaders to encourage students to read.

In sum, political and education staff and parents in our two study districts enact a wide range of initiatives specifically focused on improving foundational literacy in Kinyarwanda.

Ways of working

District and sector staff attributed the success of foundational literacy initiatives and the corresponding improvements in foundational literacy outcomes to the districts' broader ways of working—namely, their collaborative problem-solving and their parental and civic mobilization for education.

Collaborative problem-solving

Collaboration and teamwork were seen as a crucial aspect of successful policy implementation by study district actors. By working together across lines, these staff identify problems more quickly and find better solutions:

> ***In our district, we attribute our success to teamwork … The crucial part of it all is teamwork, for everyone to know their responsibilities … Some departments make decisions, but the problem is how they are implemented … This is the problem that you would normally find in the local government, and people should work together as a team and find solutions.*** *(senior leader, Rulindo)*

Collaborative problem-solving requires staff to be open. Leaders in districts expressed a desire to create a safe environment where sector and school staff can raise problems and receive support:

> ***The persons in charge of education, when they have an issue, they inform me directly … When a school leader has an issue, they inform me directly. From down upward we collaborate well. They might come here and tell me something I don't understand. In that case, I call the director of the education unit to my office so that we can solve that issue. They see this office as a place to get help.*** *(district leader, Ngoma)*

These feelings of district support were evident in interviews and survey open-text data collected from school staff. Head teachers expressed that the DEO visits schools and listens to the problems they face, and then advocates for their needs at higher levels (HT). Some SBMs spoke about how the DEO speaks with teachers ("he/she always has time to listen to our questions"), encourages them, and advocates for basic needs (SBM).

Three practices exemplifying districts' collaborative problem-solving emerged from the qualitative data:

- Regular formal information sharing and problem-solving meetings across levels
- Frequent joint school monitoring by technical and political staff
- Peer learning communities for school staff

24 https://www.worldvision.org/evidence/research-publications/uburezi-iwacu-homes-and-communities-project-summary/

Regular formal information sharing and problem-solving across levels: Districts organize frequent meetings between district and sector and between sector and schools oriented toward listening, learning, and problem-solving. These include routine planning meetings that occur in most districts, such as those at the beginning of the school year to make budget allocations and review school performance from the previous academic school year (SL2, SL3, SL5, SL6). However, the study districts also organize a range of meetings that serve as feedback loops across levels during the school year.

> *I make sure to have monthly meetings with the inspectors to have pictures of things in all the sectors because I cannot reach the whole district at once. But when I host these meetings, I get to know every corner of the district and what is working and what is not working.* (vice mayor)

In the other study district, the mayor hosts a district educational retreat. Overall, these meetings are used to analyze national exam performance and for sector and school staff to share their observations from over the school year and identify issues to solve (SL2, SL3). In another example, an SES meets with head teachers every month to identify emerging issues for follow-up or advocacy. While these meetings inform routine upward reporting, their primary focus is to share information widely and engage in collaborative problem-solving on a regular basis.

Frequent joint school monitoring by technical and political staff: School monitoring and follow-up was described by several leaders as a priority and as the key to the districts' success in improving foundational learning: "We attribute success to follow-up and monitoring" (SL1). Described by a leader as the "constant monitoring of schools" (SL5), this practice allows them to rapidly identify problems and solve them quickly (SL3, SL4, SL5). In-person school monitoring was often referred to by the middle-tier staff as inspections. However, the nature of these visits does not reflect the standards-compliance focus usually associated with an inspection. Rather, they reflect a more supportive and problem-solving focus. The use of the term "inspection" may be in part because school visits are most often carried out by inspectors (SEIs or NESA inspectors).

School monitoring is not just frequent but often conducted in teams. Visits are conducted by SEIs, the SES, and district technical and political leaders:

> *Monitoring of all activities: … this happens because the district doesn't take education lightly. If the [team] in charge of education in the district doesn't go to the inspection, the sector education inspector goes there, or [the SES] might go there, or the mayor can also come to do the inspection. There are planned inspections and non-planned inspections. So, all of that is aimed at improving academic performance.* (senior leader)

While sometimes district technical leaders (DDEs and DEOs) and political leaders (mayors, vice mayors, and SESs) visit schools on their own, typically their visits are conducted jointly with SEIs. During these joint visits, political leadership explained that they defer to their technical staff for their views and advice on education issues.

These joint visits serve multiple purposes. For political actors, it is a way to stay informed of school-level realities, engage in the community, and learn about education issues from their team. For technical actors, the political leadership presence on visits supports their efforts and gives their advice more weight. In one of our study districts, school monitoring by district staff is linked to incentives and awards for outstanding schools and teachers (SL1, SL3, SL4).

NESA inspectors in both districts emphasized joint school inspections with the SEI or district staff as crucial to school improvement. Given their large caseload, NESA inspectors sometimes visit schools together so that the middle-tier staff can quickly learn of the issues and resolve them.

> *There are some inspections we do together. When I am in the district, I don't do an activity when they are not aware. We work together when they are there. And when they are not there, they give me a staff such as SEI whom we work together. The purpose is that they make a follow-up of what we disclosed that needs to be improved.* (NESA inspector)

School staff characterized visits by district and sector staff as frequent and supportive (SBM, HT, T). In the study districts, sector and district school visits have a strong problem-solving orientation, rather than a fault-finding or administrative-compliance orientation. One SEI explained that this approach was part of a previous program:

> *I visit the teachers and see how they teach. When I see how they teach, I give them feedback. That is how we were trained by Soma Umenye, not only showing the negative but also appreciating it. After this, we inform the school administration on strengths and weaknesses of the teacher so that they can follow up on him, and provide the materials, support, or advice he needs.* (SEI)

This also reflects the survey findings that Kinyarwanda early grade teachers see the feedback received during classroom observation as helpful and as eliciting positive feelings. District interest and involvement in school visits was appreciated by several PTA members: "There is a district education monitoring team that visits each school. So, if others can do it the way we do it in [our] district, it could be very productive." Overall, in the study districts, school monitoring was not seen as an internal, compliance-oriented management routine for sector education inspectors. Rather, frequent, supportive school monitoring by both political and technical staff at district and sector levels inform broader conversations to improve education:

> *The results of the inspections should be shared with all the concerned parties. These include parents, teachers, and the leadership so that they can come up with strategies to better improve education that is based on the current situation on the ground.* (mayor)

Peer learning communities for school staff: Middle-tier staff, particularly those closest to schools, emphasized the sectors' support for teacher communities of practice, scheduled every Wednesday (SL1, SL4, SEI, SBM). School-based mentors and SEIs both mentioned supporting these peer learning sessions as one of the most important things they do in their role to improve Kinyarwanda foundational learning outcomes.

> *"The head teachers also meet without our presence so that they can learn from each other … They select a school to visit where they discuss and learn from one another. They address any issues they encounter, and if they observe any positive practices at the visited school, they implement them in their school. Conversely, they make changes to anything they find unsatisfactory."* (senior leader, Rulindo)

Head teachers are also part of their own active community of practice in both districts. This works across schools, where head teachers select a school to visit and meet to identify, evaluate, and problem-solve issues and learn (SL1, SL2, SL3, SL4, PTA). This head teacher peer learning practice is a part of the district's imihigo (SL2). Head teacher leadership capacity is also strengthened through district-supported school leadership training, as well as an emphasis on monitoring school leadership responsibilities during district and sector monitoring visits (SL2, SL3, SL4, SEI).

Civic and Parental Mobilization for Education

In Rwanda's decentralized middle-tier structure, mayors and vice mayors are both political and education leaders, which grants them convening power across sectors. In our study districts, political leadership encourage and leverage a civic orientation in their education efforts. District, sector, and school leaders mobilize parents and community leaders to support education. Staff at all levels, as well as parent representatives, spoke about the collective responsibility for educational success (SL2, SL3, SL4).

> ***Senior leadership in our study districts leverage their political power to convene and involve community leaders and communities at large to support education and foundational learning.***

District staff engage in parental and civic mobilization for education in three ways:

- Engaging parents in school decision-making, school support, and advocacy
- Exercising civic leadership to promote education in community forums and development
- Cross-sectoral collaboration to reduce student absenteeism

Engaging parents in school decision-making, school support, and advocacy: In the study districts, there is a strong sense that parents' committees can be a vital part of education decision-making and implementation. Parents are seen as key allies in helping children benefit from the foundational learning initiatives organized by the district and schools (SL2, SL3, SL4, SL5, PTA).

A mayor described the district's multiple parental engagement objectives:

> ***Mobilizing parents and encouraging them to care about the education of their children. The second thing is to mobilize parents and emphasize the importance of setting aside at least 15 minutes every day as reading time … Another thing is to mobilize parents and emphasize the importance of sending children to the libraries found in the community.*** *(mayor)*

Middle-tier staff, school staff, and parent representatives all see it as their role to help change mindsets about parental involvement in education (SL2, SL5, PTA). SEIs, head teachers, and teachers mentioned that creating a warm relationship with parents is one of the most important things they do to improve Kinyarwanda foundational literacy outcomes. Head teachers expressed pride in their efforts to encourage parents to support reading at home. Parent's committees were referred to as a key source of local leadership and feedback on the education system by senior leaders: "There is a partnership between district officials, government officials, schools, and parents who are represented by village leaders or local leaders" (SL1, SL4, SL6).

> ***Regarding education, leaders need to understand [improving learning outcomes] and feel that they can do it together with parents. What they can learn from us is to value parents' committees; they should not feel that they are just the elected committees that are only there doing nothing. The committees can be trained and organize [reading] competitions.*** *(senior leader, Ngoma)*

Interviews with PTA representatives indicated that these groups meet regularly and are involved in school decision-making and problem-solving. PTA representatives use these meetings to remind parents of their responsibilities to ensure on-time school attendance with the necessary supplies and fees paid (PTA). PTA representatives are also active advocates with parents in cases of student absenteeism.

Notably, in at least one sector, parents' committees are trained in classroom inspection of quality teaching methods to empower parents about their children's education (SL1, SEI, PTA). SEIs also spoke about inviting parents to visit schools and observe teaching. Other activities by PTA representatives include the cultivation of school gardens to bolster school feeding, the accompaniment of children to and from school to ensure timely attendance, and supporting reading competitions.

Exercising civic leadership to promote education in community forums and development: Beyond parental mobilization, senior leadership in our study districts leveraged their political power to convene and involve community leaders and communities at large to support education and foundational learning. District leaders saw potential in reinforcing the value of education during out-of-school time: "For children to learn how to read, the role of parents in the community is important because the children spend most of their time there" (SL3).

As part of their role, senior district and sector leaders have regular consultations with citizens to hear problems and discuss local issues (SL1, SL2, SL3, SL4). Leaders in the study districts utilize these forums to advocate for education priorities and identify issues of concern. In one district, senior leaders task school leaders to regularly attend local community meetings to share updates on school performance, solicit feedback from parents, and advocate for parental engagement (SL1, SL2). The districts also leverage their position to encourage sector, cell, and village leaders to establish community libraries and support community reading groups and activities (SL1, SL2, SEI). District political leaders ensure that education priorities are embedded into sub-district development plans (e.g., building ECD centers) (SL4). In one study district, the district collaborates with student community leaders. These groups (Isibo leaders) serve as education advocates in local communities, identifying absent students, problem-solving access issues, and organizing educational activities (SL2).

Cross-sectoral collaboration to reduce student absenteeism: Senior leaders leverage their political power for cross-sectoral collaboration to bring together different sectors and local leaders to help children attend school regularly. Both districts (particularly Ngoma) emphasize reducing student absenteeism and dropout as a priority (SL1, SL2, SL5, SL6, NESA, PTA).

Senior leaders, technical middle-tier staff, school staff, and parents all spoke about their responsibilities for identifying children at risk of dropping out and supporting their return to school. There is extensive work with community leaders, parents, and, where necessary, security personnel (police) (SL1, SL2, PTA). For example, one senior leader reported meeting with local employers to ensure that they do not hire school-age children (SL1). Moreover, the implementation of the national school feeding program was highlighted as a district priority by leaders in both districts to support school attendance (SL1, SL4, SL5) and appreciated by parents as having an appreciable positive impact on school attendance (PTA).

> ***A child who has the right age to be in school … should be in school. So, you cannot achieve this without working with the local government/grassroots authorities; we have village leaders, Isibo leaders, health advisors, and other elected categories of people.*** *(senior leader, Rulindo)*

Overall, this strategy reflects in part the unique governance system in Rwanda, with political leaders supervising political leadership at sub-district levels, as well as education technical staff. It may contribute to a stronger civic emphasis in their strategies to improve access and the quality of education. There is an emphasis on citizen input on education budget allocations and decision-making, as well as community involvement in education. Senior district and sector staff leverage their positions to bring together local leaders, employers, and education staff at different levels to identify and solve issues, such as student dropout and improving their district's reading culture.

Connectivity and Relationships

In the previous section, we discussed the study districts' overarching strategy of collaborative problem-solving, exemplified by specific practices that emphasize frequent formal and informal channels for discussions about education issues. This strategy requires and builds on strong connectivity and relationships between actors at different levels and in different roles. In this section, we explore the connections and relationships among district actors and between district and school actors to understand more about how these districts function as strong leaders for foundational literacy.

What kinds of relationships exist within study districts and how does this influence communication and connectivity?

There are strong connections between actors within districts and between districts and schools. These **connections are multi-directional (horizontal and vertical) and differentiated**.

Frequent formal exchanges (meetings, inspections, and reports) and **informal exchanges** (conversations and WhatsApp threads) about foundational literacy outcomes and how to best support schools **facilitate collaborative action** between the national, district, and sector levels.

SEIs (school-facing support) **have strong general and technical support** relationships with a range of colleagues to support them in their work.

The **education data system is starting to provide more timely information about the support needed by and provided to schools**.

To build relationships and strong connectivity, senior leadership described a wide range of regular, formal meetings to bring staff together to solve problems and make decisions collectively. These exchanges include district leadership meetings, annual planning meetings, district educational retreats, district monthly meetings with SEIs, sector meetings with head teachers, weekly community and citizen meetings at the village level, school-level parent-teacher meetings, monthly communities of practice for teachers, and head teacher communities of practice (SL1, SL2, SL3, SL4, SEI).

The vice mayors of social affairs in both districts emphasized their efforts for frequent two-way communication with SEIs and SESs. In both districts, the vice mayors host monthly meetings with the SESs and SEIs to discuss progress and problem-solve issues. These regular meetings provide continuity in problem-solving and build connectivity and trust among education stakeholders.

Beyond sharing information within districts, information sharing *from school to district* was mentioned as a key aspect of the districts' leadership and coordination strength:

> *Leaders are responsible for coordination; all the things/activities that are done … The sectors are well coordinated and there is a well-organized passing of information/command from one person to another … The information comes from the school to the sector, and from the sector to the district. Where we all find ways in which a school should operate [and] the problems that a school is facing … When there is no coordination and leadership for all levels to do their responsibilities, it cannot work out.* (senior leader, Rulindo)

In addition to the more formal communication and collaboration activities, district, sector, and school staff report frequent informal exchanges to highlight and address educational challenges. Joint monitoring visits that include both district and sector staff serve as an ad hoc, informal way to share advice and challenges while in the field. Other informal methods, such as WhatsApp threads, are used to stay abreast of the situation in schools and keep in touch about plans.

Beyond the district- and sector-initiated communication and collaboration channels, the education data systems in Rwanda are beginning to support more timely information sharing. For example, a senior leader highlighted the use of technology[25] to help staff at multiple levels follow the daily activities of SEIs:

> ***Technology is good because MINEDUC immediately sees what SEIs do as well. Then, they also give a report at the end of the day with clear pictures; you cannot say that you visited a school when you don't see it.*** *(senior leader)*

The vice mayor in one study district also leverages the education data system to keep up to date on school issues and support:

> ***I am aware of schools visited by SEIs every day. They post on [IT] platforms issues they have seen. I get informed as I read the post and sometimes, I find solutions for them. For some of the issues I tell them how they can handle them instantly. We work closely together because other than the normal official communication, we have other platforms that keep us in communication so that everyone is aware of what is happening in each sector, such as knowing what has been implemented and what has to be implemented, so that the situation can be improved.*** *(vice mayor)*

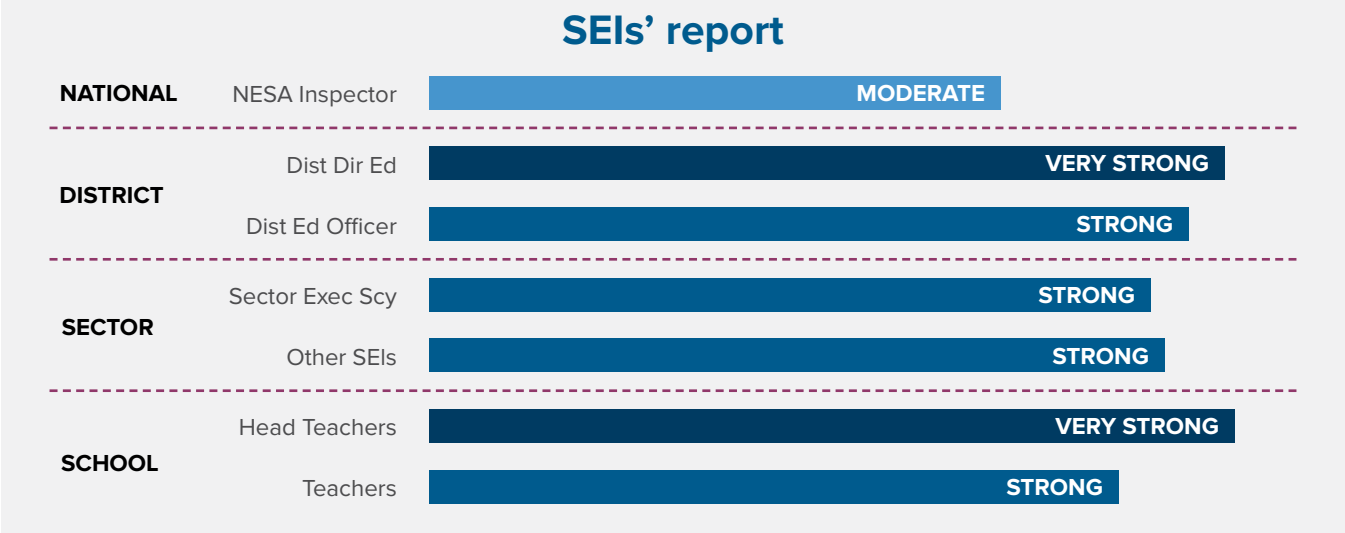
In terms of districts' relationship with MINEDUC and REB, district leadership described a responsive, clearly delineated relationship. As noted earlier, district senior political leaders view themselves as the implementing agents for national policies. But they also see themselves as advocates for their districts and as sources of information and feedback to the national level (SL2, SL3, SL4, TL). Leaders gave several examples of advocacy with MINEDUC and REB to secure additional teaching space or books for needy schools within their districts (SL2, TL). The relationships between district leadership and the national level seems to be characterized by both formal and informal communications, and joint school visits are an important opportunity to strengthen their relationship. Sector leadership, however, described their relationship with MINEDUC and REB as being mediated through district technical leaders. Requests for materials or resources are relayed through the district, and then to the national level. However, when MINEDUC or REB staff visits schools, sector staff do accompany them on their school visits, helping build connections between the sector and the national level.

In addition to the interviews that highlighted the frequent, multiple formal and informal ways that district, sector, and school staff connect and discuss education issues, we also collected information about connectivity and relationships through the adapted social network analysis tool with SEIs and DEOs. This tool, developed for this study, includes a series of questions posed to a respondent about different aspects of their relationship with people they work closely with. With respect to connectivity and relationships, we asked DEOs and SEIs about the overall strength of their relationships with colleagues, the degree to which they rely on colleagues when they have a challenge with supporting schools, and personal challenges. More specific to foundational literacy, we also wanted to understand the technical-support network that DEOs and SEIs rely on; thus, we asked about the frequency of their conversations about foundational literacy with colleagues, as well as the extent to which they

25 Rwanda is piloting dashboards that provide leadership with updated information on school visits and the status of various programs.

rely on different colleagues for foundational literacy technical advice. We organized the responses into categories to indicate the strength of the connection.[26]

Figure 13. *Overall strength of relationships*

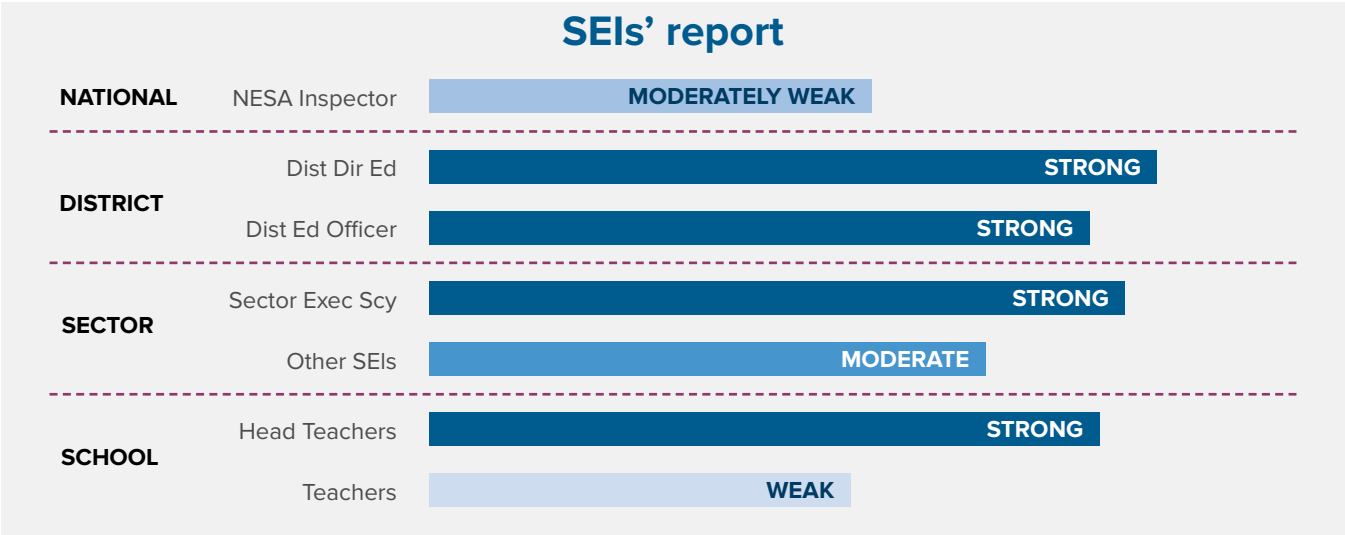


Overall, we see that SEIs have solid relationships with colleagues across many levels. SEIs report very strong relationships with head teachers and DDEs and strong relationships with SESs, other SEIs, DEOs, and teachers (Figure 13).

The strength of these relationships may reflect our study districts' practices of joint monitoring with district political and technical leaders and NESA inspectors, as well as routine problem-solving meetings at the district level. Head teachers and school-based mentors reflected similar views on the nature of the relationships with their SEI.

DEOs also reported broadly solid relationships with their peers, the strongest being with the NESA inspectors, their DDE, and the SEIs they work with (graph not included). They reported moderately strong relationships with head teachers and moderate relationships with SESs and teachers.

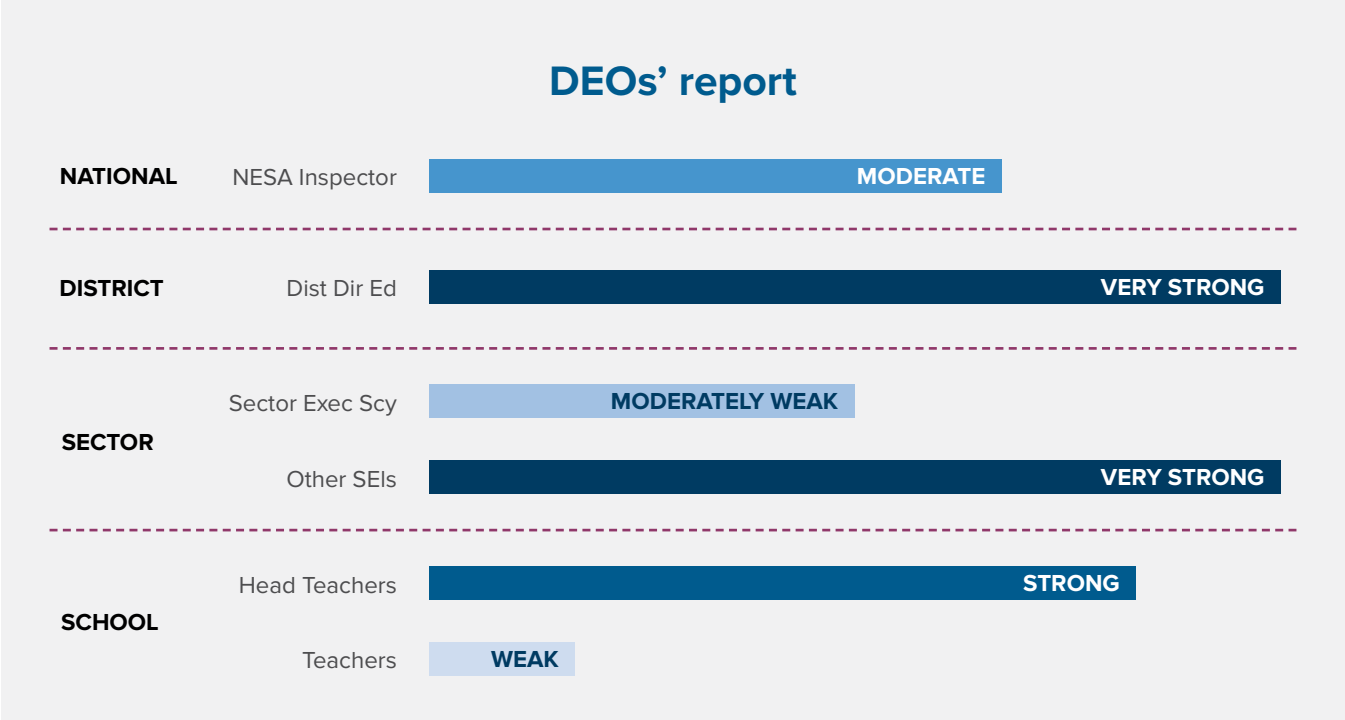
Figure 14. *Who SEIs rely on for challenges with schools or teachers*



26 Out of a total possible score of 100: 90–100 is very strong, 80–89 is strong, 70–79 is moderately strong, 60–69 is moderate, 40–59 is moderately weak, and 0–39 is weak.

Both SEIs and DEOs have multiple avenues to pursue if they have a challenge supporting a school or teacher. For SEIs, four of their colleagues (the SES, head teachers, DEOs, and DDEs) represent strong support if they have challenges. Other SEIs also fill this need, but only with moderate strength. Interestingly, the extent to which SEIs depend on the NESA inspector for their district is moderately weak, perhaps reflecting the limited interaction opportunities between NESA inspectors and SEIs. We see a more traditional hierarchical relationship between SEIs and teachers, with SEIs' reliance on teachers for advice about supporting schools being weak (Figure 14).

Figure 15. *Who DEOs rely on for challenges with schools or teachers*

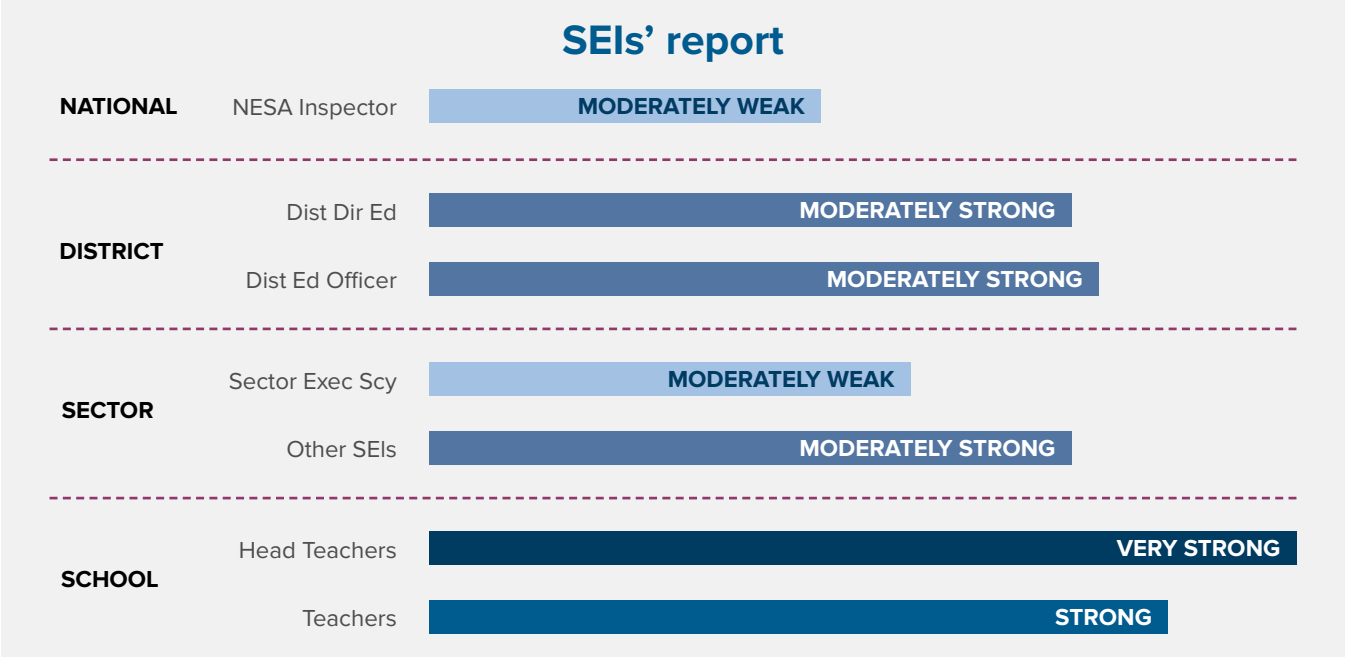


DEOs also have a set of options when they have a challenge supporting a school or teachers, relying very strongly on SEIs and the DDE. DEOs also strongly rely on head teachers and seek support at a moderate level from the NESA inspector (Figure 15).

Complementing this report from the DEOs, one SES described how sector-level challenges are often problem-solved with their district technical colleagues:

> *When there is a challenge or any opportunity, we talk to [the DDE/DEO] first before we require an administrative response. I can even call them over the phone for some advice, and ask them for instance, "We need this, what can we do to get it?" and they give me advice. We work with them closely. They are the people at the upper level we work with most, and the ones who get information before me. If there is a challenge, they might call me and say, "... do a follow-up on this and get information about so that it can be solved."* (SES)

Figure 16. *Frequency of FLN discussions for SEIs*



In addition to these relational and support aspects, we also wanted to understand the degree to which SEIs and DEOs speak with their colleagues about how to improve foundational literacy outcomes.

As shown in Figure 16, SEIs' conversations about how to improve foundational literacy outcomes are most frequent with head teachers and teachers, but also moderately frequent with their SEI peers, the DDE, and the DEO.

DEOs have an even broader set of colleagues with whom they have a very high frequency of conversations about improving foundational literacy outcomes, perhaps a reflection of their position and the scope of their job responsibilities within the district (Figure 17).

Figure 17. *Frequency of FLN discussions for DEOs*

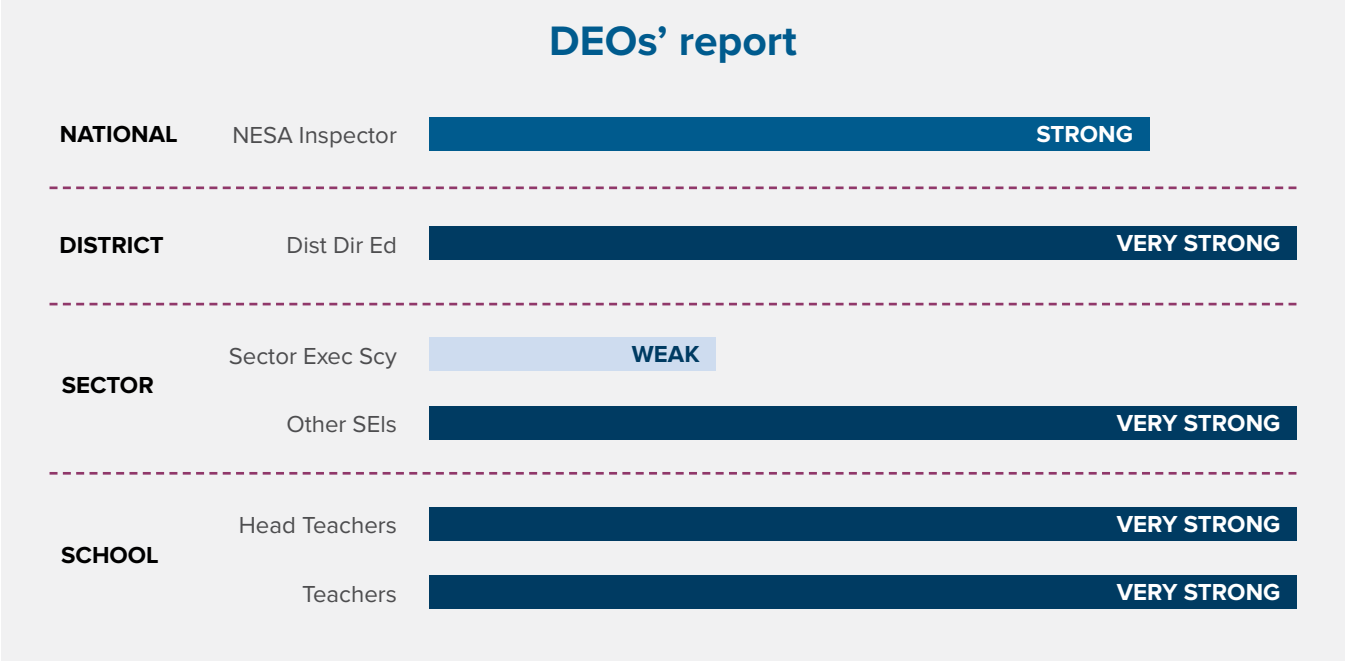
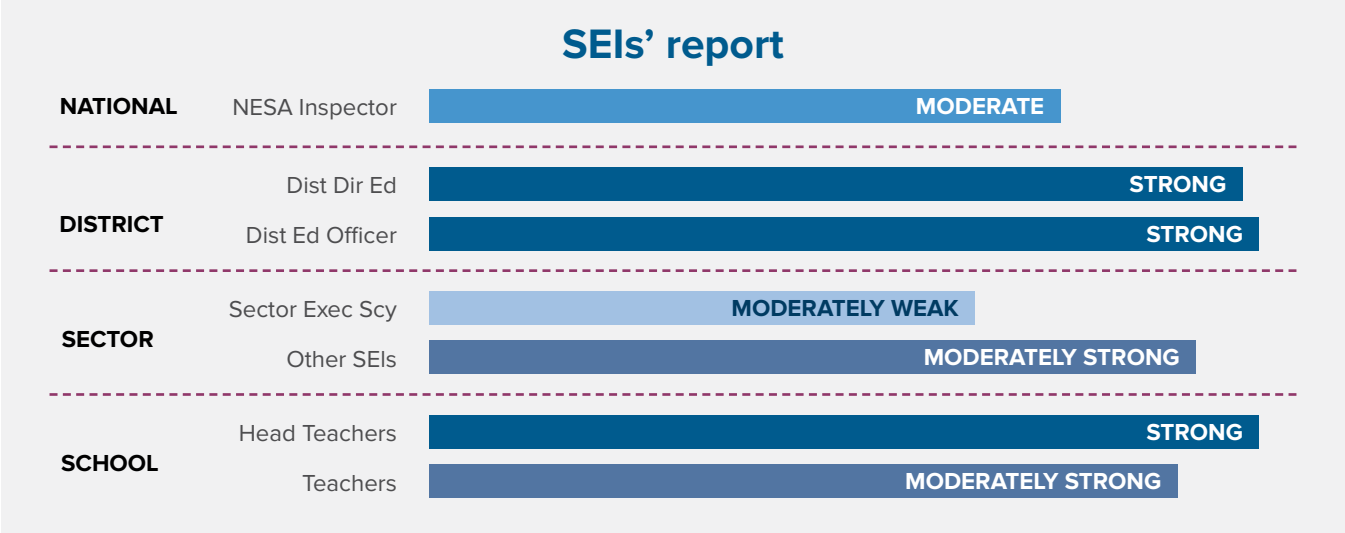
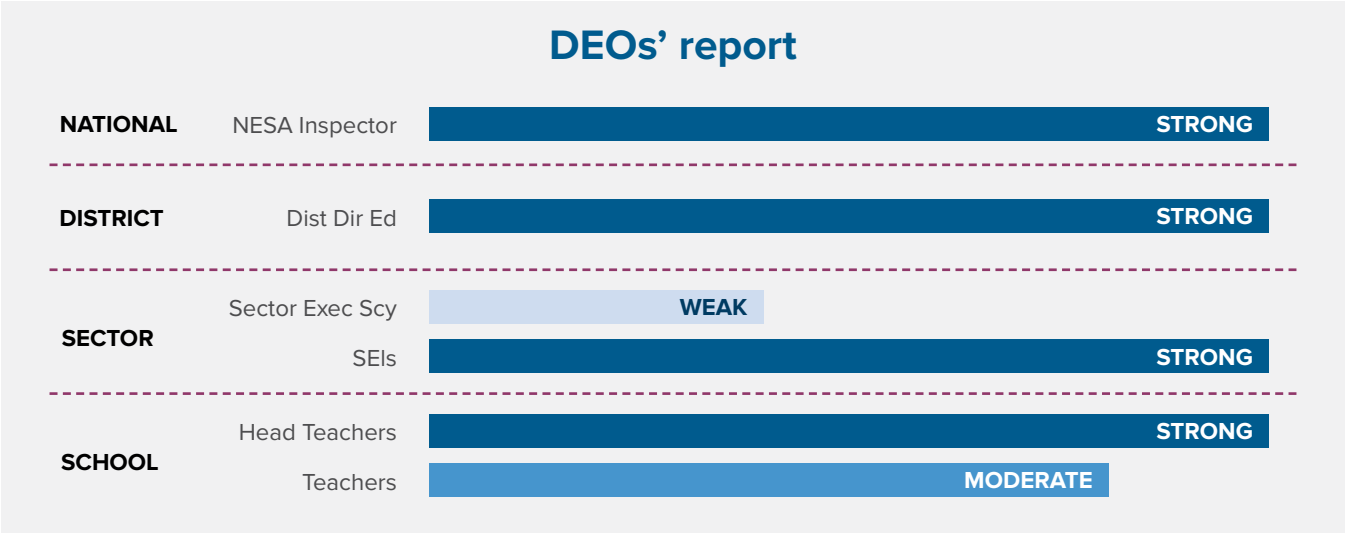


Figure 18. *Who SEIs depend on for FLN technical advice*



Moving to understanding who SEIs and DEOs turn to for technical advice about improving foundational literacy outcomes, we see that both roles have a number of colleagues whom they rely on strongly. For SEIs, their DDE, DEO, and head teachers are important sources of technical advice, followed closely by other SEIs and teachers, as shown in Figure 18. SEIs rely on the NESA inspector only moderately for technical advice, but that may be a function of access and frequency of contact, as there is only one inspector for the entire district.

Figure 19. *Who DEOs depend on for FLN technical advice*



For DEOs, the NESA inspector, SEIs, head teachers, and the DDE are all important and strong sources of technical advice (Figure 19). DEOs rely on teachers only at a moderate level for technical advice, but again, that may be a function of access and frequency of contact. Both DEOs and SEIs depend strongly on head teachers for advice about how to improve foundational literacy outcomes. These influence and advice flows are indicative of strong collaboration and peer-respect norms that transcend organizational hierarchies in the study districts.

To complement the perspective of DEOs and SEIs on collaboration, we queried a range of other respondents about their engagement with DEOs and SEIs. As one NESA inspector explained, the

relationship with the DEO is very collaborative, with an emphasis on sharing information and advice on school improvement:

> *I would say that we complete one another in terms of collaboration. Though I am responsible for inspection, and they oversee how schools perform day by day as the implementors. They also do inspections for them to know what exactly needs to be done. When they are not there, I share with them information and tell them that they need to emphasize certain identified things.* (NESA inspector)

Capacities

In addition to exploring the study districts' priorities, leadership, and connectivity, we wanted to understand the group and individual capacities, broadly defined, related to foundational literacy in the study districts and schools. More specifically, we collected data on basic knowledge of foundational literacy skills and assessment strategies, and self-efficacy in several domains associated with foundational literacy. We also sought to understand how district and school staff view their current level of resources, their own agency in terms of obtaining resources, and the resource gaps that persist with respect to improving foundational literacy outcomes.

What capacities and resources do district and school actors have that contribute to improving foundational literacy outcomes?

There is a **solid core of knowledge about foundational literacy** and how to assess literacy skills across district actors and school leadership supporting teachers.

Self-efficacy is reasonably strong for delivery of Kinyarwanda reading instruction across actors, but other self-efficacy measures vary by actor.

The study districts benefit from a relatively low ratio of instructional support staff to teachers, and financial resources for travel to schools do not appear to be a barrier.

The **depth of connectivity among staff**—in terms of discussions and advice exchanges about foundational literacy—constitutes **an important set of resources for district and sector staff** who are supporting schools.

As identified by staff across the district, there is a need for more reading books, teaching materials, and classroom space.

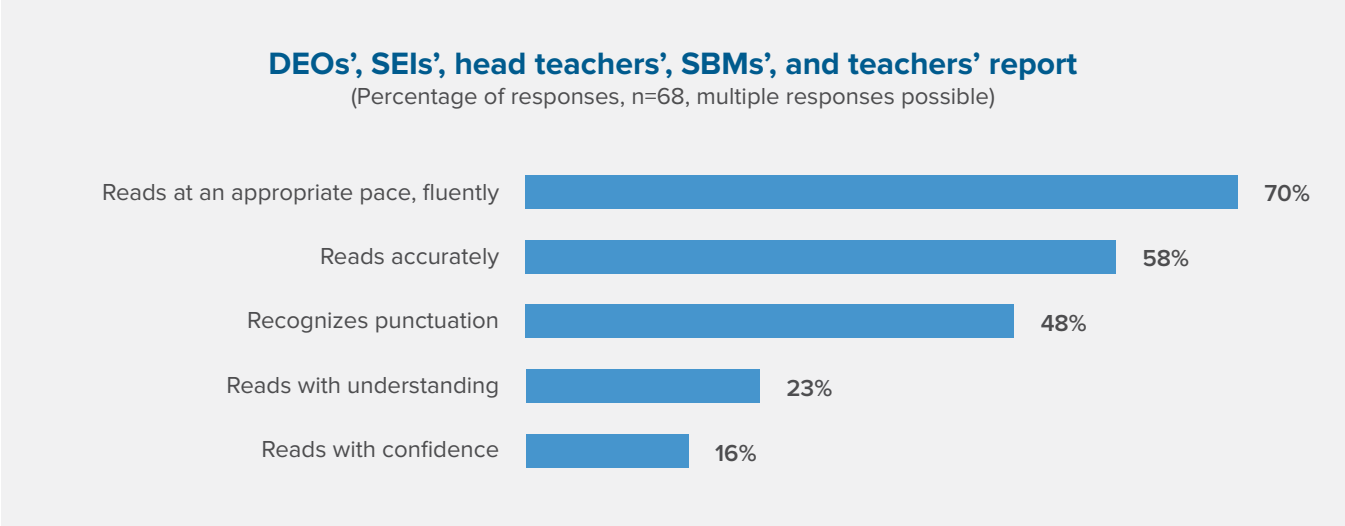
Foundational literacy knowledge

In terms of foundational literacy knowledge, we found a broad understanding of key foundational literacy principles across district and school respondents. As highlighted in Figure 20, DEOs, SEIs, head teachers, SBMs, and teachers, on average, understand the key features of a good reader, emphasizing reading fluency,[27] reading accuracy, recognizing punctuation, and comprehending text

27 The prevalence of responses citing reading fluency is likely a by-product of the fluency benchmarks.

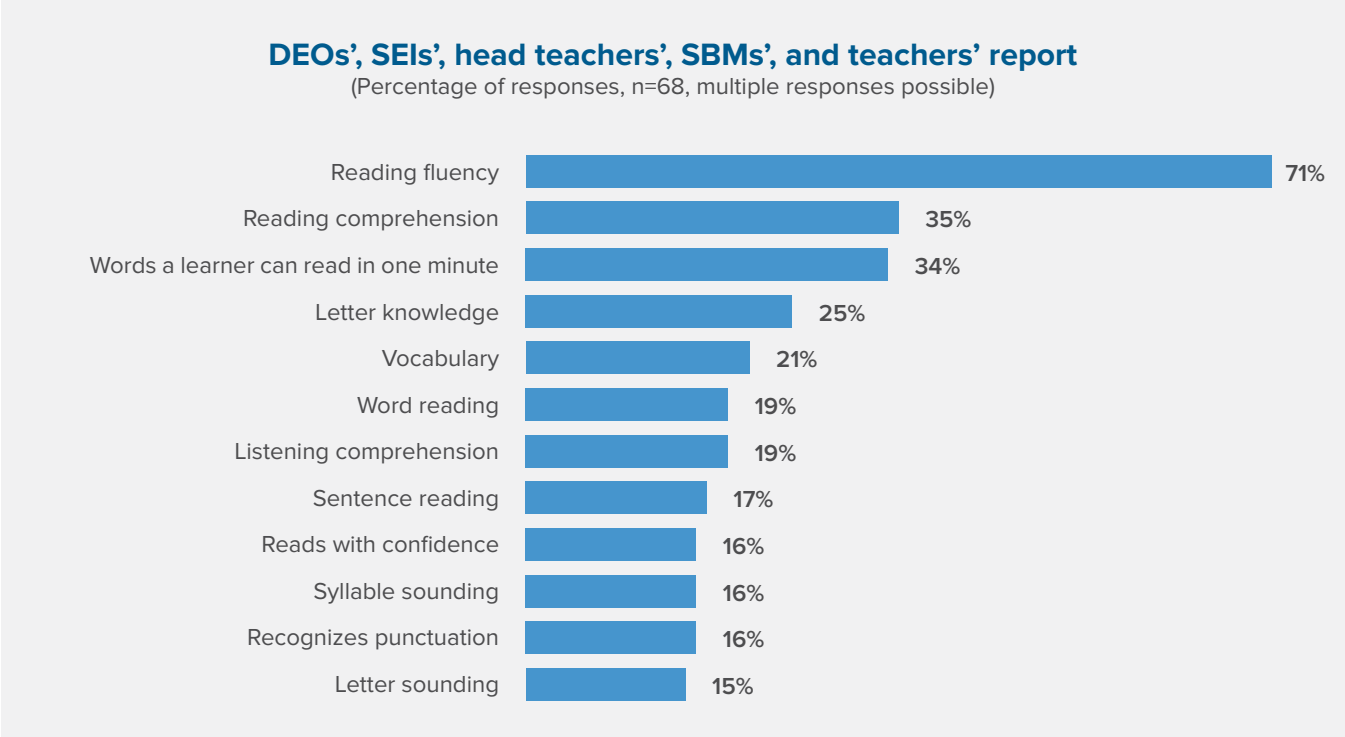
as important signals of a strong reader. There was very little variation in high-frequency responses between the two districts and between respondent types.[28]

Figure 20. *Characteristics of a good reader*



We also found that district and school officials have a strong grasp of how to assess a student's reading skills, with fluency cited by 71% of respondents (which is aligned with the prevalent performance benchmark of correct words per minute), and reading comprehension and the number of words a learner can read in one minute (another expression of fluency) most frequently mentioned (Figure 21).[29]

Figure 21. *How to determine if a student is a good reader*



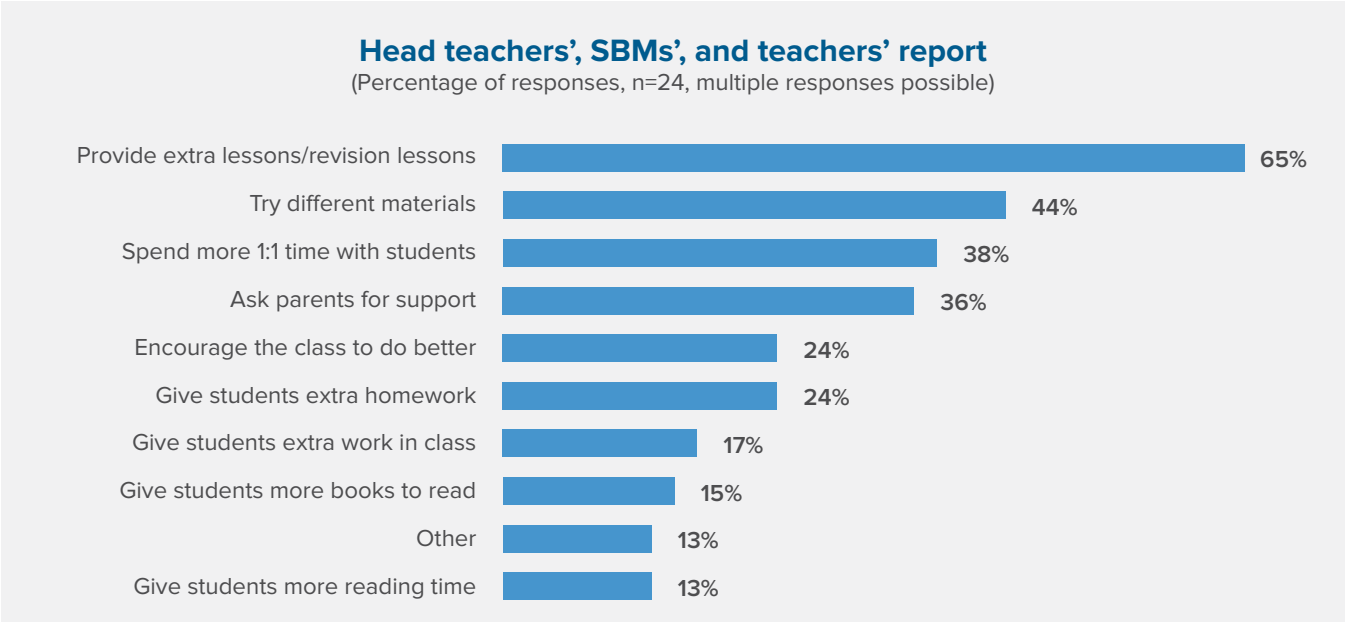
28 Response options with 15% or greater of the total responses are included in the graph.

29 Response options with 15% or greater of the total responses are included in the graph.

All respondents at the district and school level self-reported high confidence in their ability to accurately assess a lower primary student's reading skills.

School-based respondents (head teachers, SBMs, and teachers) reported a range of strategies to support students who are struggling to learn to read, the foremost being providing extra lessons or remedial lessons (65% on average across respondents and districts). Trying different materials, spending one-on-one time with struggling students, and asking parents for support were also frequently cited strategies (44%, 38%, and 36% of responses, respectively) (Figure 22).[30]

Figure 22. *Strategies to support struggling readers*



These survey data align well with the qualitative data collected, where providing extra or remedial classes was frequently mentioned by school staff as a solution to help students improve their academic achievement (HT, SBM, T). Interviews with PTA representatives also highlighted opening schools on holidays or earlier in the day to provide additional instructional time for students (PTA).

SELF-EFFICACY

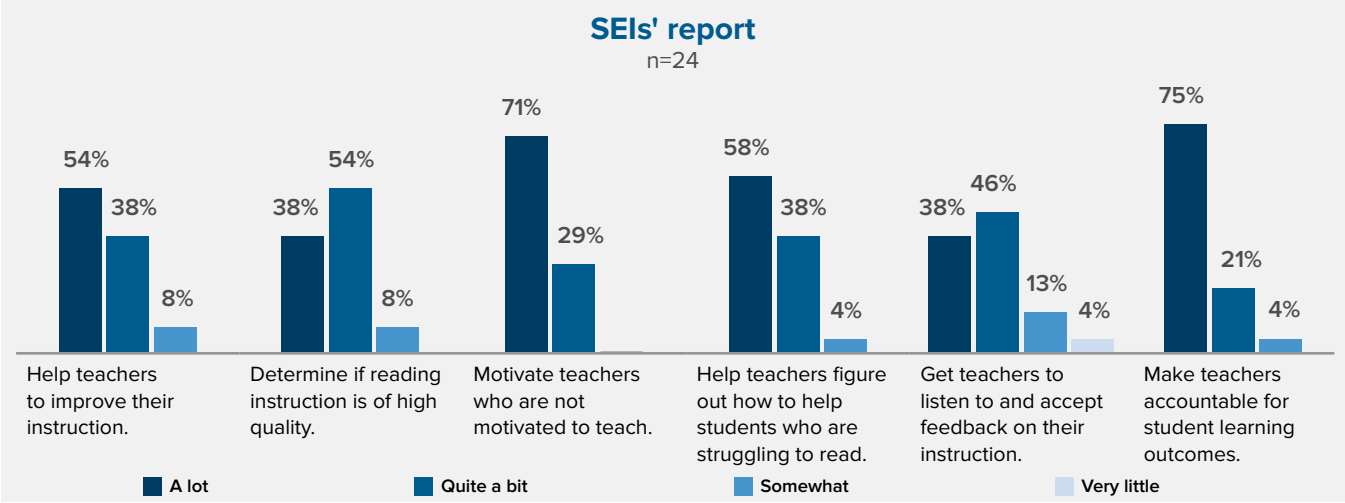
Self-efficacy is an important capacity for district and school staff working to improve instructional quality and foundational literacy outcomes. We asked DEOs, SEIs, head teachers, SBMs, and teachers a series of self-efficacy questions focused on different aspects of their work to improve foundational literacy outcomes. Across respondents, we found relatively high self-efficacy, but with several notable response patterns for each respondent group. These are discussed below, organized by respondent group.

SEIs expressed strong self-efficacy across domains and reported the strongest confidence in motivating teachers and holding teachers accountable (70%+ reporting that they can motivate and hold teachers accountable "a lot"). SEIs' self-efficacy was somewhat lower in terms of determining whether reading instruction is high quality and getting teachers to accept their feedback on instruction (38% and 38% reporting "a lot" and 54% and 46% reporting "quite a bit," respectively). The relatively lower levels of self-reported self-efficacy on the more technical aspects of reading bears some additional inquiry and may be a function of the broad demands of their position, despite the expectation that

30 Response options with 10% or greater responses are included in the graph. Responses under 10% included encouraging students, pairing strong and struggling students, asking strong readers to model reading to the class, and asking students why they are struggling, among others.

they provide instructional support to teachers on an array of topics. Additionally, the relatively lower self-reported self-efficacy scores for getting teachers to listen to and accept their feedback aligns with the findings of the adapted social network analysis indicating that SEIs' relationship with head teachers is generally stronger than their relationship with teachers (Figure 23).

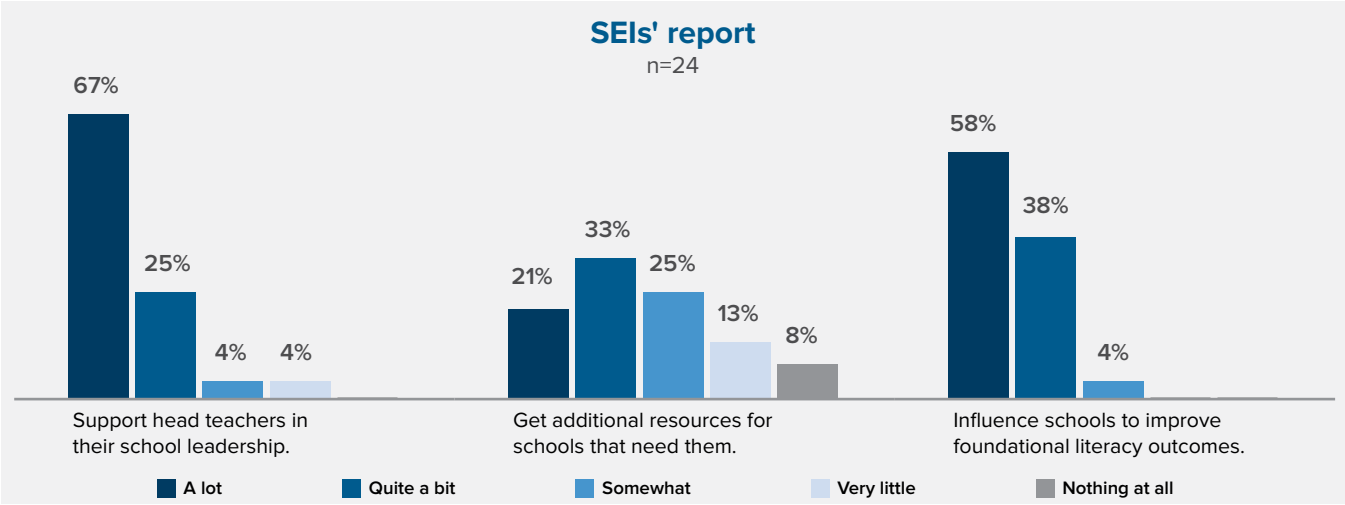
Figure 23. *SEIs' self-efficacy in the classroom and with teachers*[31]



DEOs also reported fairly high self-efficacy across these areas, with helping teachers improve their instruction, figuring out how to help struggling students, and getting teachers to listen and accept their feedback receiving the highest ratings (50% "a lot" and 50% "quite a bit").

We also asked SEIs about their self-efficacy for actions at the school level, including their confidence in supporting head teachers in their school leadership, getting additional resources for schools, and influencing schools to improve foundational literacy outcomes. Across these areas, SEIs feel most confident in their ability to support head teachers (67% reporting "a lot") and to influence schools to improve literacy outcomes (58% reporting "a lot"). Notably, their confidence in getting resources is much lower, with just 21% reporting that they have "a lot" of confidence in terms of getting resources for schools (Figure 24).

Figure 24. *SEIs' self-efficacy at the school level*



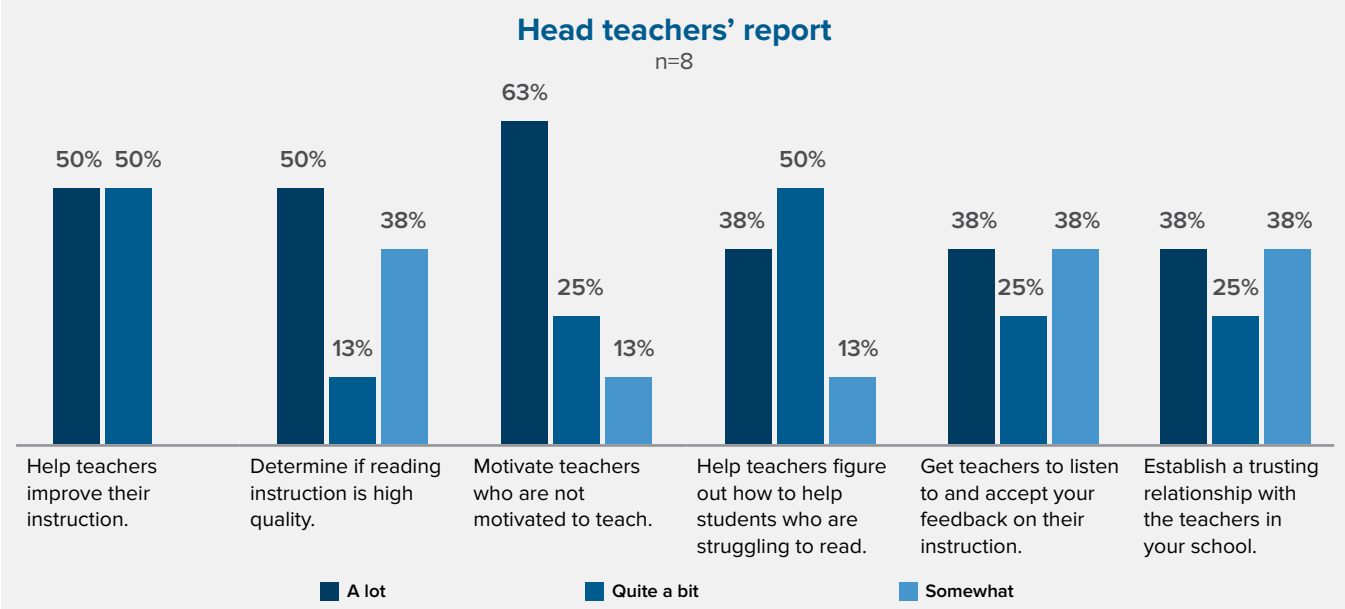
31 All self-efficacy questions included five response options (a lot, quite a bit, somewhat, very little, and nothing at all). If a particular response option is not shown in a graph, it is because there were zero responses for that option.

DEOs feel similarly confident in their ability to support head teachers in their school leadership (50% responding “a lot” and 50% “quite a bit”), and they have similar confidence levels in terms of influencing schools to improve learning outcomes. DEOs had a mixed response to the question about getting additional resources for schools that need them, with one reporting “a lot” of confidence in this and the other reporting being “somewhat” confident in this. These self-efficacy scores generally align with DEOs’ and SEIs’ reported ability to influence colleagues at the school level.

The adapted social network analysis found that DEOs and SEIs exert the strongest influence on head teachers (very strong and strong levels, respectively). Head teachers seem to act as an intermediary, as DEOs’ and SEIs’ direct influence on teachers is slightly lower than their influence on head teachers (moderately weak for DEOs and moderately strong for SEIs). But the relationship is more nuanced than just the typical seniority-driven dynamics. We also found that school leadership, particularly head teachers, have a moderate level of influence on SEIs and that both DEOs and SEIs depend strongly on head teachers for advice about how to improve foundational literacy outcomes. These influence and advice flows are indicative of strong collaboration and peer-respect norms that transcend organizational hierarchies.

In addition to SEIs and DEOs, school leadership is an important source of instructional support for teachers. As a result, we wanted to understand the self-efficacy levels of head teachers and SBMs, two of the school-based leadership roles that are strongly focused on instructional support to teachers. We found that head teachers have fairly strong self-efficacy with respect to general pedagogy support (100% responded “a lot” or “quite a bit”), motivating teachers (63% responded “a lot” and 25% “quite a bit”), and helping teachers support struggling students (38% responded “a lot” and 50% responded “quite a bit”). Head teachers’ self-efficacy with respect to their ability to determine whether reading instruction is of high quality was a bit lower but still reasonably strong (50% reported “a lot,” 13% reported “quite a bit,” and 38% reported “somewhat”). Self-efficacy scores among head teachers were lowest with respect to getting teachers to listen to and accept their feedback and the ability to establish trusting relationships with teachers (38% “a lot” for both questions) (Figure 25).

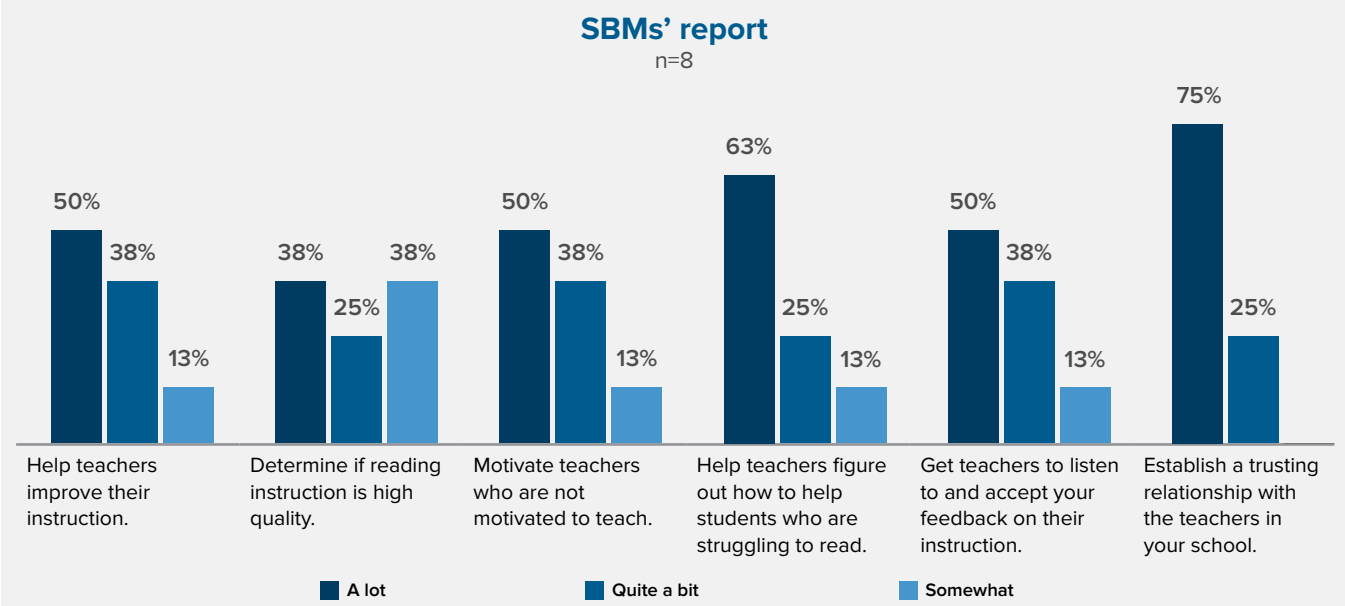
Figure 25. *Head teachers’ self-efficacy in the classroom and with teachers*



In contrast to the SEIs and head teachers, SBMs reported their highest self-efficacy with respect to establishing trusting relationships with teachers (75% reported “a lot”) and getting teachers to accept their feedback (50% reported “a lot”). This may indicate that relationships other than hierarchical

ones have stronger potential to support teachers in their instructional improvements.[32] We also see that SBMs have slightly lower confidence in their literacy-specific knowledge, with only 38% of them reporting "a lot" in terms of determining whether reading instruction is high quality (Figure 26). Given that SBMs are frequent instructional support actors at the school level and that they hold trusting relationships with teachers, further building the capacity of SBMs with respect to foundational literacy instruction might warrant consideration.

Figure 26. *SBMs' self-efficacy in the classroom and with teachers*



We wanted to understand if and how these different elements of self-efficacy added up to an overall confidence in the ability to improve foundational literacy outcomes in their school. We found that it generally does, with both head teachers and SBMs reporting high self-efficacy (100% of both head teachers and SBMs responding "a lot" or "quite a bit") in terms of improving foundational literacy outcomes in their school.

Beyond understanding district and school leaderships' self-efficacy, as well as district- and school-level staff's knowledge of foundational literacy concepts (see previous section), we wanted to gain insight into how all of this translates into the classroom in terms of teachers' self-efficacy in our two study districts. We see strong self-efficacy patterns for teachers across a number of domains.

Teachers have quite strong confidence in their instruction, with 71% stating that they can implement effective reading instructional strategies "a lot" and 79% stating they are able to teach their students to read "a lot" (Figure 27). The teachers' self-ratings are a bit lower with respect to motivating unmotivated students (63% stating "a lot"). Teachers also showed overall strong confidence in their classroom management abilities, with 75% stating that they are able to control disruptive behavior in the classroom "a lot" and 71% stating that they can get students to follow classroom rules "a lot." Helping difficult students seems to be a greater challenge for teachers, with only 50% stating that they are able to do this "a lot" (Figure 28).

32 The relationship between SBMs and teachers is not quite peer-based, but closer to peer-based in orientation than in their relationship with SEIs and head teachers. SBMs have a more technical role, and that could have an influence on how effectively they are able to influence teachers.

Figure 27. *Teachers' self-efficacy in instruction*

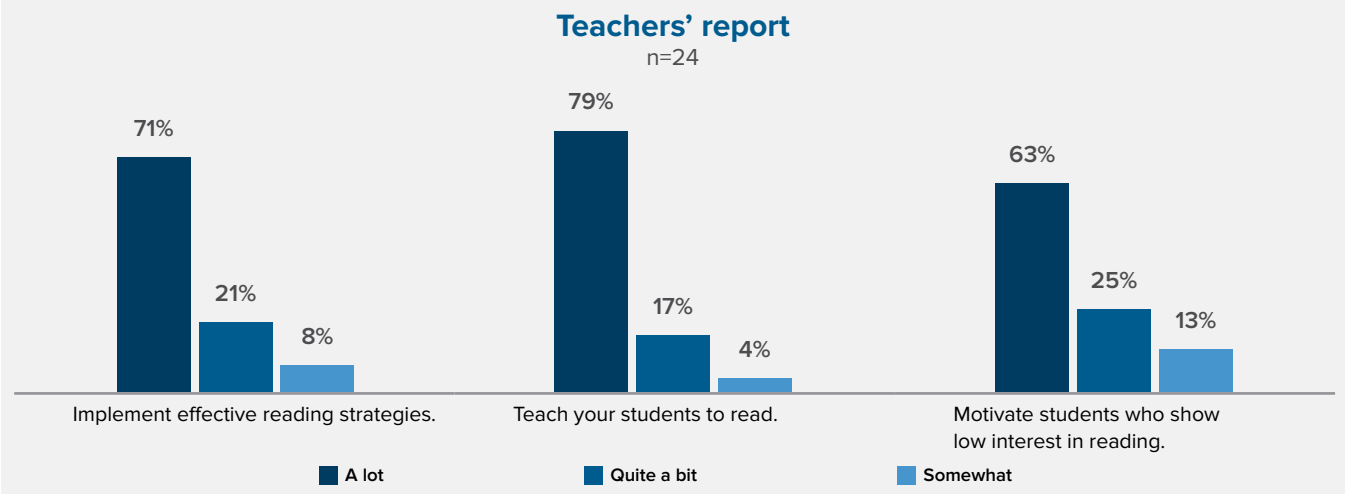


Figure 28. *Teachers' self-efficacy in classroom management*

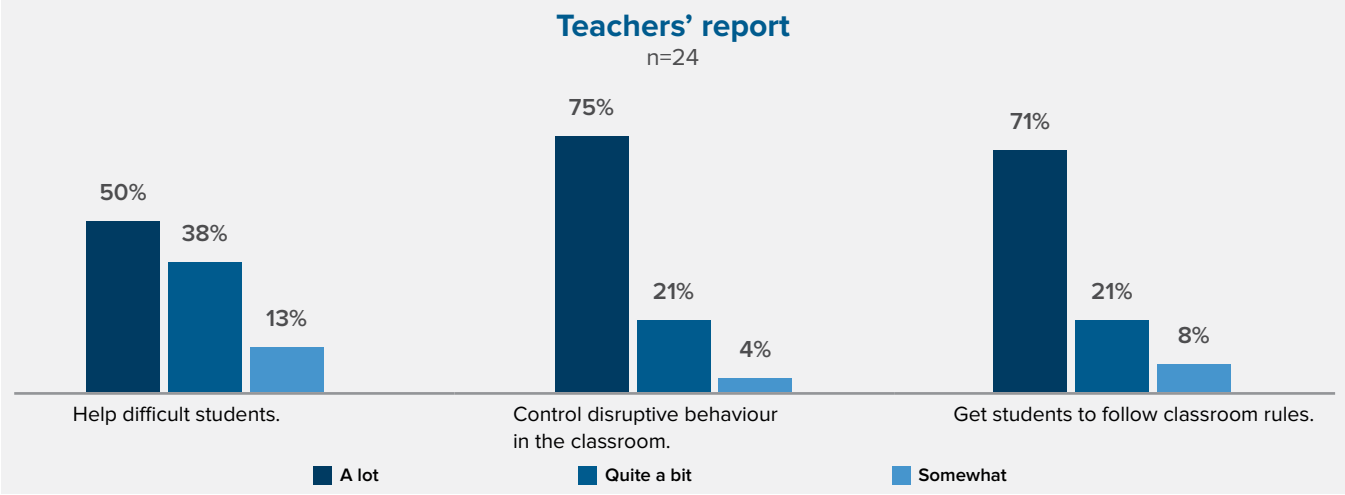
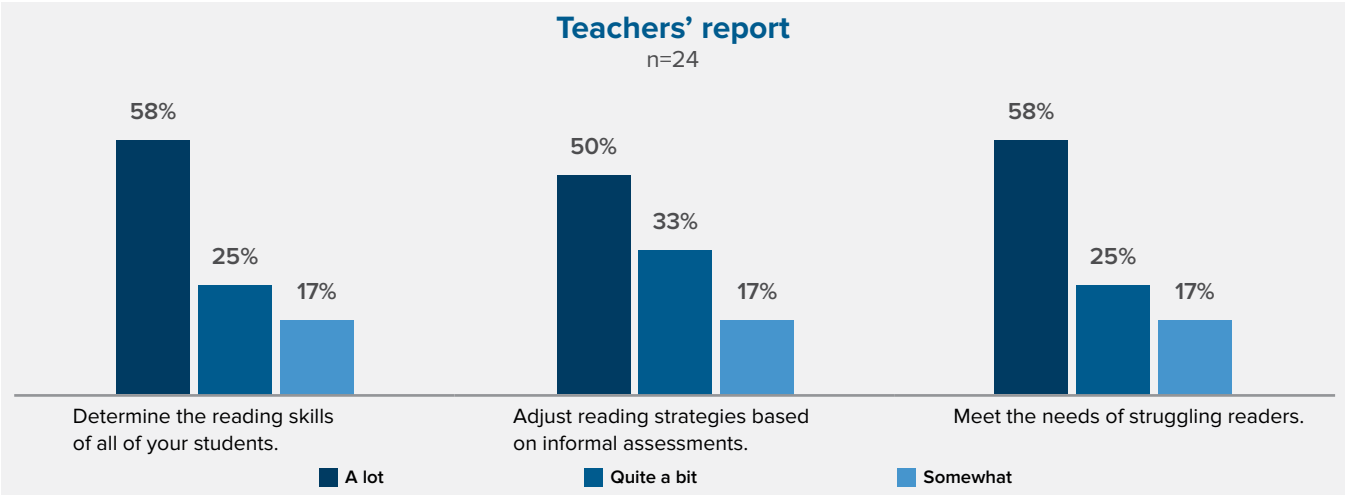


Figure 29. *Teachers' self-efficacy in assessment and adapted instruction*

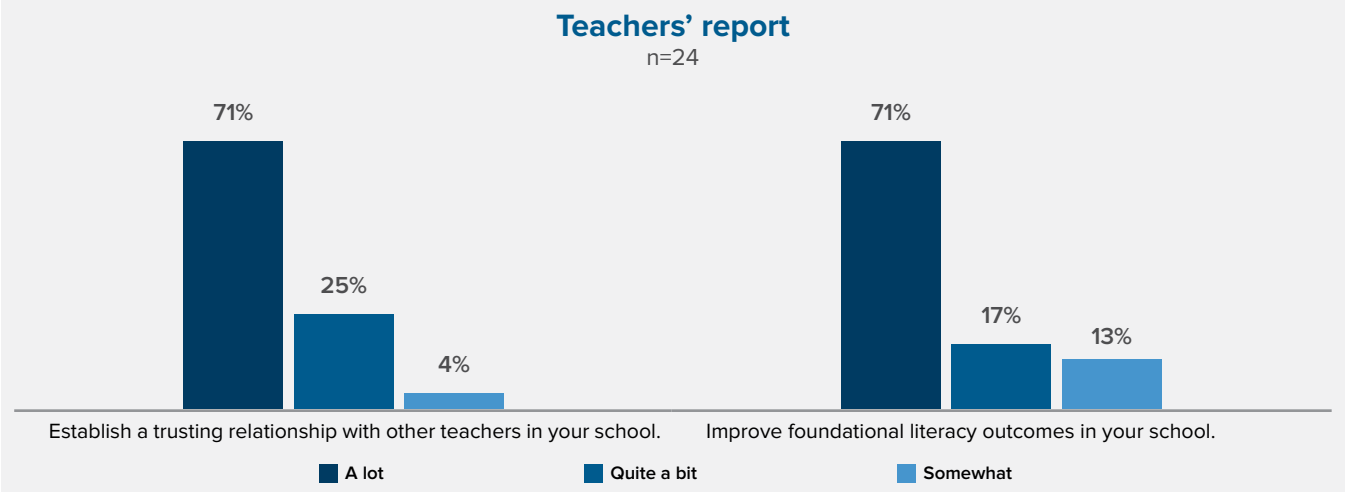


Interestingly, we see lower, albeit still relatively strong, self-efficacy scores from teachers when asking about assessing students and adapting instruction. The great majority of teachers reported

that they are able to determine the reading skills of their students (58% “a lot” and 25% “quite a bit”), adjust instructional strategies (50% “a lot” and 33% “quite a bit”), and meet the needs of struggling students (58% “lot” and 25% “quite a bit”) (Figure 29).

Surveyed teachers in our study district also reported considerably high self-efficacy in terms of creating strong peer relationships and improving foundational literacy outcomes in their schools (71% reporting “a lot” for both questions) (Figure 30).

Figure 30. *Teachers’ self-efficacy in peer relationships and improving literacy outcomes*



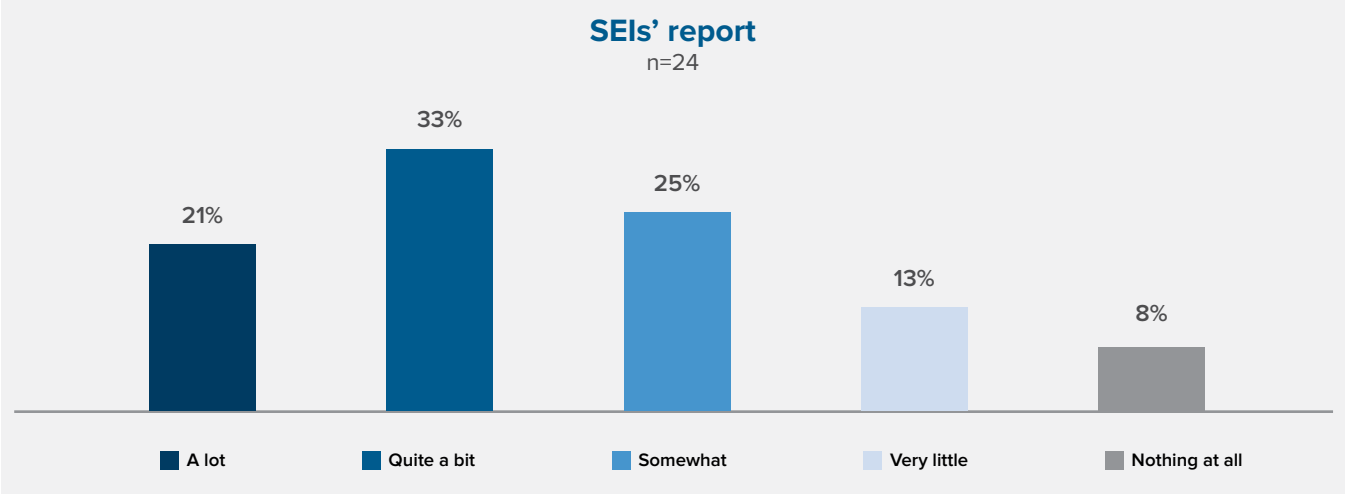
Perspectives on Resources

In this section, we touch briefly on resource decision-making as articulated by our respondents and how respondents view the state of resources most germane to providing quality instructional support to improve foundational literacy outcomes.

Senior leaders noted that MINEDUC provides the district education budget and resources for school infrastructure and that most of their districts’ education-related financial and human resources, as well as teaching and learning materials, come through MINEDUC and REB. District leaders expressed that it is their responsibility to demonstrate and advocate to the national level their resource needs:

> *In planning, we just demonstrate what we need, the urgent [things]. We are even the ones who show the number of teachers we need. What the government does is to give us the funds. Everything else comes from us: we are the one to demonstrate how many classrooms we need to build.* (vice mayor)
>
> *There are the needs that our district can fulfill and there are other things the district is unable to do which requires working with other institutions such as MINEDUC, REB, or Rwanda Polytechnic. We interact with them so we can raise the ability that the district is unable to raise. For instance, if we request money for 200 classrooms and get money for 100 classrooms, we explain to them the weight of the problem and when we fail, we hand it to our leaders and advocate as well. So, we strive to achieve all the activities we plan for the next budget.* (SL5)

Figure 31. *SEIs' confidence in getting additional resources for schools*



Engagement in decision-making and advocacy for financial and human resources seems to sit at the higher levels within the district, but the DDE and DEO seem to have a direct influence on resourcing decisions. Both DDEs indicated that they influence MINEDUC and REB to provide more resources to the districts by sharing successes and challenges, and both reported that they feel they have "a lot" of influence on what resources get allocated within education at the district level.

Compared to DDEs and DEOs, on average, SEIs' confidence in getting resources for schools is much lower, with just 21% reporting that they have "a lot" of confidence in terms of getting resources for schools (Figure 31). Overall, SEIs and DEOs in Ngoma feel more confident in their ability to get resources for schools than do SEIs and DEOs in Rulindo.

Head teachers feel quite confident about getting the resources they need for their schools, with 50% reporting "a lot" and 38% reporting "quite a bit." Head teachers specifically expressed confidence in their ability to control their school budget (which includes flexible grants) and source additional funding from the community through PTA meetings and weekly village meetings (SL2, PTA). Circling back to the SEIs and DEOs on this question, head teachers have more confidence in getting resources for schools than do SEIs and about the same level of confidence as DEOs. Across these roles, confidence in getting resources is higher than one would expect in a context with limited resources.

When asked directly if their district receives enough resources, senior leaders expressed that it is sufficient, but that of course, given more resources, they could make more improvements (SL2, SL6). District resources also come from sources other than national ministries. Senior leaders pointed to the provision of teaching and learning materials in schools and community libraries, especially reading books, through partners such as Tunoze Gusoma and Uburezi Iwacu. Schools also receive their own flexible funds from the national level, such as capitation and adaptation grants. Additionally, districts raise funds through taxation at the district level and can direct those funds toward education goals.

A key resource data point for systems of instructional support is the ratio of school-facing support personnel to schools and teachers. In most education systems, these ratios are incredibly high (Alsofrom et al., 2023; Zenex, 2019) and preclude the possibility of adequate instructional support from the middle tier to improve instructional quality. Across the two study districts, the average number of schools that SEIs support is just over eight. There is some variation in each district, ranging from 5 to 19 in Ngoma and 4 to 13 in Rulindo. While these ratios are far more advantageous than in most systems, each school has at least several dozen teachers, and those with lower and upper secondary sections have many more teachers, bringing into sharp relief the challenges that SEIs have in providing direct instructional support to teachers in every school that they are responsible

for. This is likely why we see in the other sections of this report that school leadership is an essential partner for the middle tier in terms of providing instructional support.

Crucially, financial resource constraints do not appear to limit the daily work of middle-tier staff, unlike the constraints faced in other sub-Saharan contexts (such as Tanzania and Ghana) where school-facing staff (e.g., ward education officers) frequently must pay out of pocket for fuel to conduct school visits (Asim et al., 2024; Cilliers & Oza, 2020). District and sector staff did not mention operational expenses being an impediment to enacting their strategies, including joint monitoring, teacher training, and ECD construction (SL6). For example, there are cars for district teams to do joint monitoring, with one respondent noting, "I often see people from the education unit requesting cars to go on the field for school inspections" (SL6).

Despite these generally positive responses when queried about resources, district leaders and school-level staff noted that there are gaps in resources that should be filled. These include a need for more classroom space due to a growing school-age population, for additional teaching and reading materials, and for more teacher training on Kinyarwanda (SL1, SL2, SL3, SL4, SL5, NESA, TL, HT, SBM, T, PTA). One leader spoke about the connection between improving early learning outcomes and classroom space: "Even now we still have overcrowded classrooms. So having sufficient classrooms, especially in grades 1, 2 and 3 as the says goes 'shape the tree while it's young',' so if there are 90 students in the classrooms for one teacher, there is no quality of education we talk about" (senior leader, Ngoma).

Instructional Leadership Behaviors

What does instructional support at the district, sector, and school level look like and how do teachers engage with this instructional support?

District and sector actors, including top leadership, are in schools frequently, and joint monitoring is a common practice.

96% of SEIs reported visiting 100% of their schools with the year.

Foundational learning is a priority for lesson observations, with a focus on instructional quality, student engagement, and learning outcomes.

There is **relatively strong coherence on observation focus and advice provided to teachers** across instructional support actors. Lesson feedback and advice focuses on the quality of instruction, student engagement, and students' learning progress.

School leadership (head teachers, school-based mentors, and subject leaders) provide the most frequent instructional support.

Instructional Support from the Middle Tier

In this section, we look at school visits and instructional support provided by DEOs and SEIs, recalling that SEIs have the primary responsibility for school visits and instructional support.

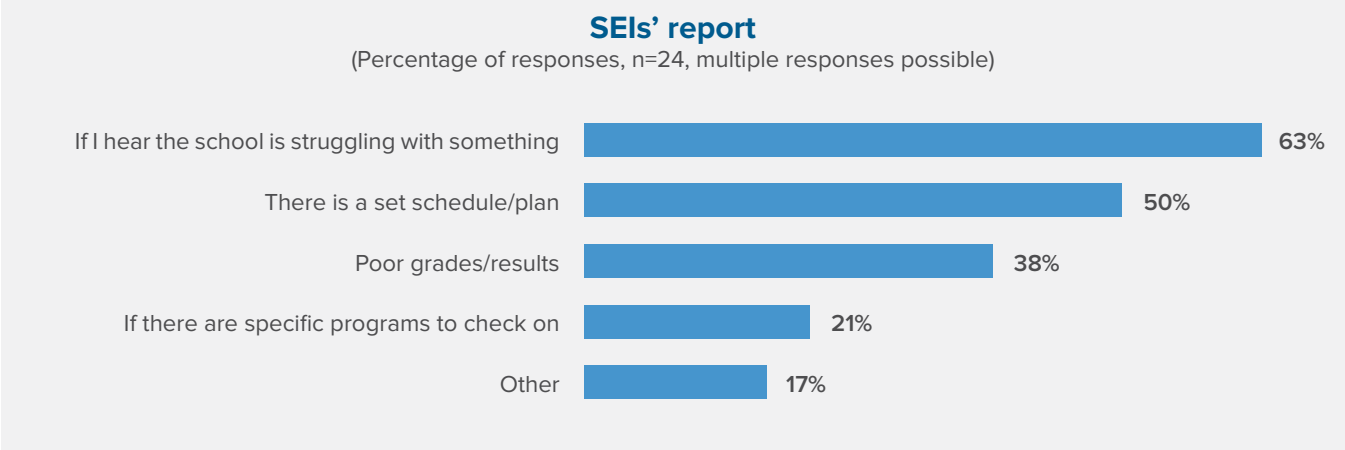
DEOs indicated that one of their leadership roles is to monitor schools to identify schools and teachers in need of training. They noted that despite having a broad array of responsibilities and not having primary responsibility for direct school support, they still prioritize school visits. One of the two DEOs estimated that they had visited 50% of the schools in their district in the past academic year (they noted that this was lower than usual), and the other DEO reported having visited 80% of schools in their district in the past academic year. DEOs decide which schools to visit based on a range of factors, including school requests and schools with struggling students. During these visits, they meet with a range of actors, including the head teacher, the director of studies, the PTA, the discipline lead, and the accountant. DEOs reported spending the most time with the head teacher. They see their technical-support role as important and as including a focus on underperforming schools and teachers. They also view serving as a consultant to SEIs and head teachers as an important aspect of their job.

Joint school visits between DEOs and SEIs are typical, with one of the DEOs in the study reporting visiting schools with SEIs "often" and the other reporting doing this "sometimes." DEOs have quite strong confidence in the SEIs they work with, reporting that 90% (Ngoma) and 75% (Rulindo) of SEIs have the skills they need to support teachers to improve instructional quality. Furthermore, DEOs believe that SEIs in their district are dedicated to improving learning outcomes, with DEOs reporting that over 90% of SEIs in their districts, on average, are highly committed to improving learning outcomes.

As noted above, SEIs have the primary responsibility of providing support to schools. In their open-text study responses, SEIs were effusive in describing their role in providing instructional support

to schools and improving foundational literacy outcomes. There was an emphasis on conducting classroom observations and monitoring teaching and learning in Kinyarwanda. SEIs also frequently mentioned monitoring head teacher leadership and advising them on the findings of school visits requiring follow-up. Some SEIs described discussing the Local Early Grade Reading Assessment[33] results on early grade learning performance with schools as well, to inform where to invest efforts for instructional support. They also support communities of practice for teachers and peer learning sessions for head teachers and help organize school and community reading competitions.

Figure 32. *How SEIs select schools to visit*



Twenty-three of twenty-four SEIs surveyed reported visiting all the schools that they support in the past academic year at least once. The one SEI who was not able to visit all their schools cited a lack of resources for transportation as the reason. SEIs use their own information and sometimes collaborate with their direct supervisor, the SES, to determine which schools to visit. The survey data indicate that, overall, SEIs across districts prioritize visits to schools that are struggling, and they also frequently work on a set rotation, which is informed by school performance data. There were also several mentions in the "other" category of focusing on schools that are geographically far or difficult to access, as those schools might not be getting support and need to be engaged to stay motivated (Figure 32).[34]

Like DEOs, SEIs meet with a variety of actors and groups (19 different actors/groups noted in the SEI survey) when they visit schools. This illustrates the broad range of activities and focus areas that SEIs must attend to when they visit schools. One hundred percent reported meeting with the head teacher, and a large majority reported meeting with the director of studies (relevant to schools with secondary cycle) and the kitchen manager (to check on the school feeding program) (75% and 67%, respectively). Over 40% of SEIs reported meeting with the PTA when visiting schools.

Focus of School Visits

In addition to understanding how DEOs and SEIs select schools to visit and the frequency of their visits, we wanted to understand what they focus on during these visits. Both DEOs indicated that they visit classrooms during their school visits. One DEO mentioned that they focus on P2, P5, and S2 classes because they are "in the middle" and outcomes can still be influenced. The other DEO

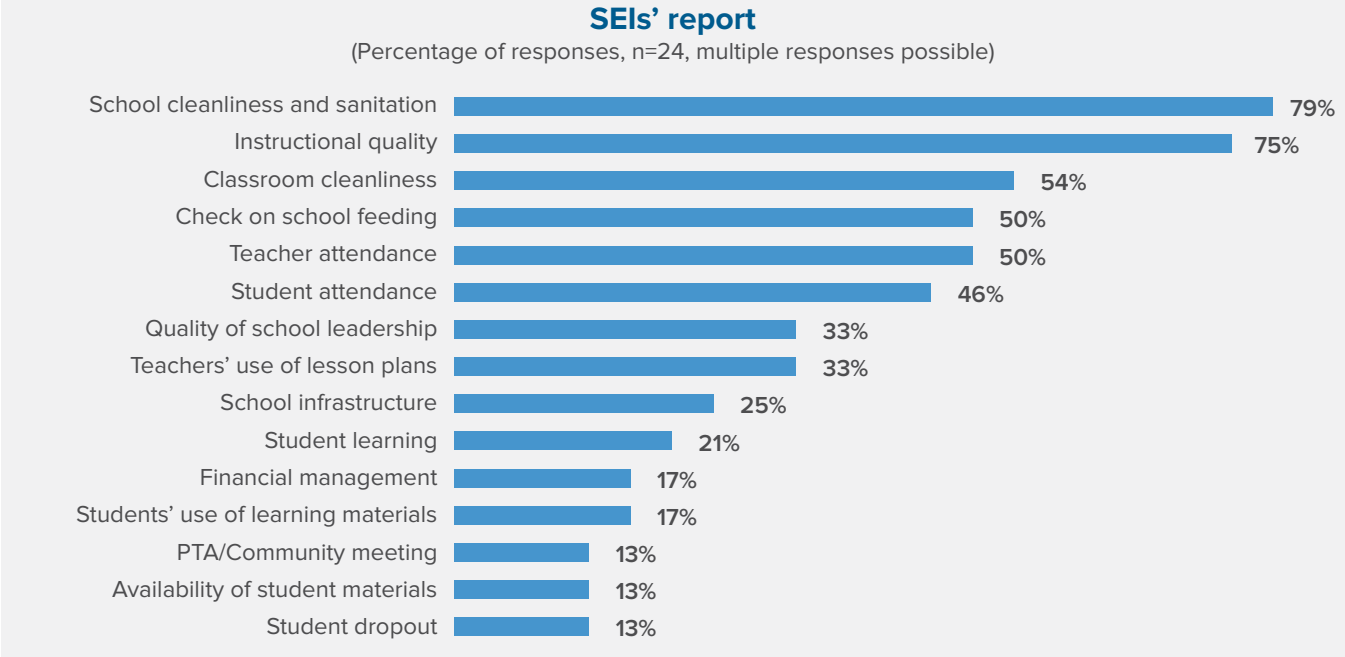
33 The Local Early Grade Reading Assessment is a formative assessment that is intended to be administered termly by teachers to all P1–P3 students.

34 Response options reported by 10% or more of respondents are included in the graph.

indicated that their choice of classrooms to visit is random but that P2 and P5 are priorities. The one DEO who does prioritize a subject for classroom visits noted that they prioritize Kinyarwanda and English lessons. This DEO stated that because language is the foundation for all learning, they prioritize their efforts accordingly.

When averaging across both districts, SEIs cited checking on school cleanliness and sanitation with the highest frequency (79% of responses), followed closely by instructional quality (75% of responses). Classroom cleanliness, school feeding, and teacher and student attendance were also frequently cited as the focus of school visits (Figure 33).[35]

Figure 33. *SEIs' focus of school visits*



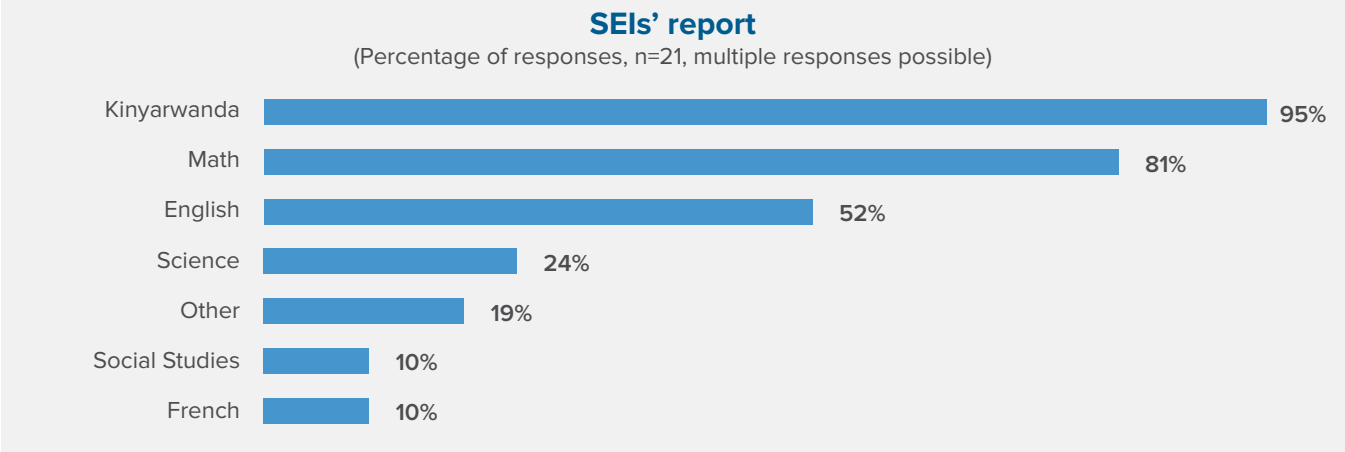
All SEIs reported visiting classrooms during their school visits. Similar to their decision-making about which schools to visit, SEIs generally focus on classrooms that are struggling or have a set schedule. There is variation within SEIs on how classrooms are selected, and the qualitative data indicate that the rotation is also informed by student performance. In Ngoma, many SEIs seek the advice of the head teacher (58% reported doing so) about where to focus their observations.

Most SEIs (92%) do prioritize certain grades for their lesson observations, with P1, P3, and P2 (in that order) cited as the most frequent priority grades, followed by P4 and post-primary. There is a particular emphasis on P1 in Ngoma. Most SEIs (88%) prioritize specific lessons. Kinyarwanda, math, and English, in that order, are the highest-priority subjects for lesson observations, with 95% of SEIs across districts indicating that they prioritize Kinyarwanda lessons[36] (Figure 34).

35 Response options with 10% of more of the total responses are included in the graph.

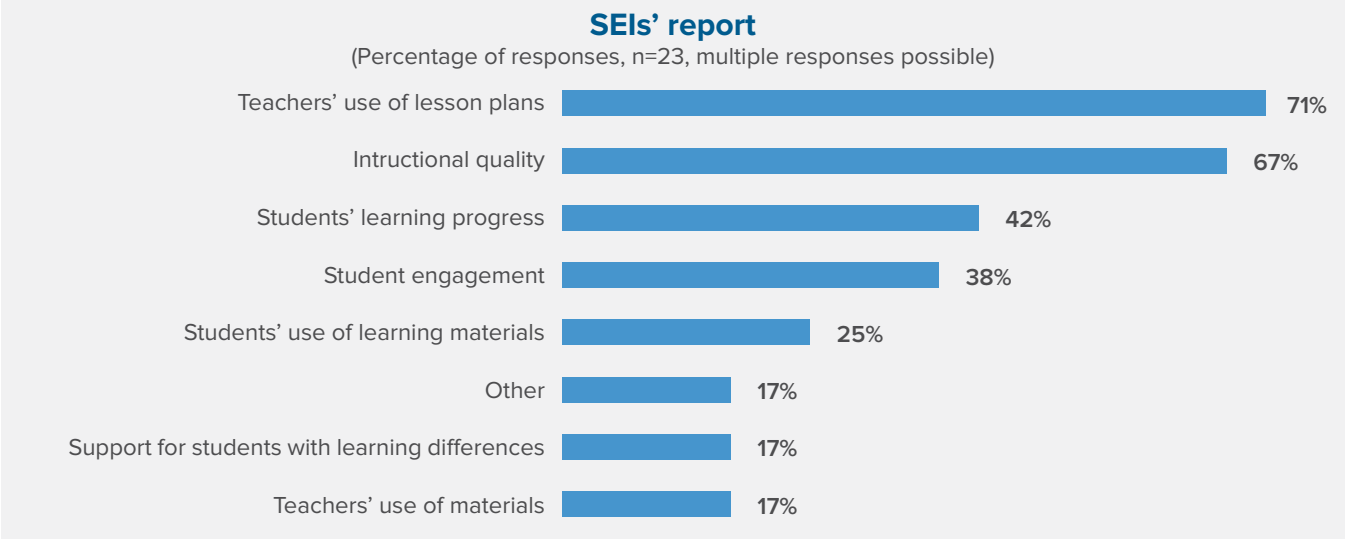
36 The survey questions were structured and sequenced to minimize desirability bias, but given this response pattern, it is possible that SEIs over-reported early grade Kinyarwanda lesson observations as a priority due to desirability bias.

Figure 34. *Priority subjects for SEI lesson observations*



When observing P1–P3 Kinyarwanda or English lessons, SEIs across both districts prioritize checking on teachers' use of lesson plans (71%), the level of instructional quality (67%), and student learning progress (42%) (Figure 35).[37] In Rulindo, student engagement (50% of SEIs) is a particular focus. Overall, the focus is on aspects of instructional quality, and there is a notable lack of focus on student enrollment, attendance, and classroom cleanliness, which have historically been the typical focus of classroom observations (Mitchell & Milligan, 2023; Martin & Pimhidzai, 2013).[38]

Figure 35. *Focus of SEI Kinyarwanda lesson observations*



Almost all SEIs (23 out of 24) typically speak with the Kinyarwanda teachers whose lesson they have observed. Having discussions after the lesson observation was most frequently cited (96%), while nearly half of SEIs (42%) noted that they also speak with teachers before lessons (average across districts, multiple responses possible).

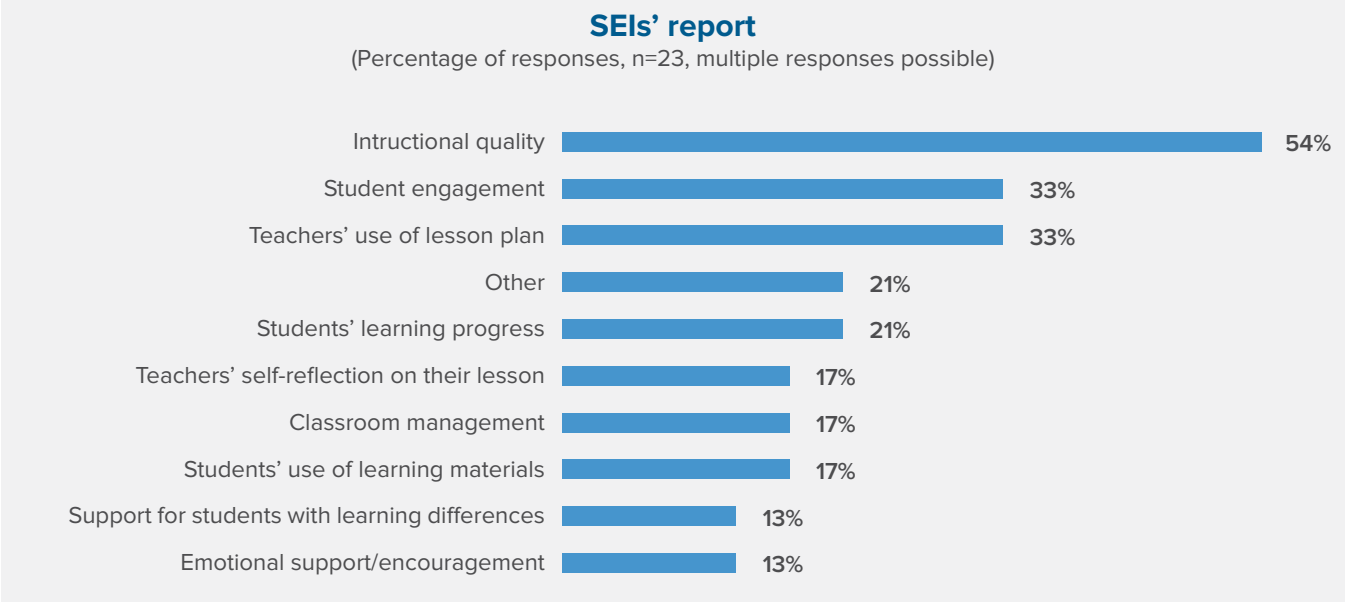
During discussions with P1–P3 Kinyarwanda and English teachers about their lesson observations, SEIs reported focusing mostly on instructional quality, and to a lesser extent on student engagement

37 Response options with 10% or more of the total responses are included in the graph.

38 The influence of several foundational literacy technical partners and the government's own strategy is reflected in the current focus on instructional quality for lesson observations in Rwanda. Additionally, both Soma Umenye and Tunoze Gusoma have integrated lesson observation tools into their capacity-building and monitoring toolkit, which they encourage SEIs and school leadership to utilize.

and teachers' use of lesson plans (Figure 36).[39] No SEIs mentioned classroom cleanliness as their focus of P1–P3 Kinyarwanda lessons, which stands in contrast to their responses about what they focus on for school visits in general. On average across the two districts, SEIs reported spending just over 10 minutes speaking with teachers after lesson observations, with a wide range from 5 to 20 minutes. The length of these feedback sessions between SEIs and teachers likely precludes in-depth coaching and follow-up on previous feedback. As discussed below, the average time for post-observation discussion is a bit longer between school leadership and head teachers, perhaps indicating more intensive coaching being delivered by school leadership.

Figure 36. *Focus of SEI discussions with teachers after observations*



DEOs also reported observing P1–P3 Kinyarwanda and English lessons. Both DEOs reported always speaking with teachers—sometimes after the lesson they have observed and sometimes at another time. The conversations are typically 10–15 minutes and focus on developing lesson plans, building a better understanding of the curricular content, engaging students, student assessments, and having a strong work ethic.

Head teachers and SBMs emphasized that the DEO and SEI play several important support roles in improving foundational Kinyarwanda literacy. For SEIs, they focused on their frequent classroom observations of early grade classrooms and provision of teacher feedback and encouragement. One head teacher described this as "collegial inspection focusing on the lower grades." For DEOs, head teachers and SBMs said that DEOs played an important role in providing needed teaching and learning materials, advocating for school needs, encouraging teachers to participate in teacher trainings, and emphasizing the importance of Kinyarwanda literacy in the early grades.

School Leadership's Instructional Support

The school leadership team also conducts regular lesson observations and provides coaching to teachers. We surveyed the head teachers and SBMs about their instructional support work to get a fuller picture of the support and guidance that teachers receive.

All head teachers in our sample reported observing lessons in their school, using their own plan that is guided by their impression of which teachers need additional support. P1 and P2 are the

39 Response options with 10% or more of the total responses are included in the graph.

highest-priority grades to visit for lesson observations for head teachers in Ngoma, with Rulindo head teachers prioritizing all grades. For head teachers who prioritize early grades, they noted that it is important to observe how teachers guide children through the transition to schooling from preschool. They explained that this age is the most difficult if children are not monitored. Some head teachers mentioned observing 6th grade lessons given that it is when students take the primary leaving examination.

All SBMs conduct lesson observations, and the great majority of them select classes to observe intentionally, prioritizing teachers who are struggling, follow-up on earlier visits and/or training, or based on the advice of the head teacher about who needs support. The early grades receive the most focus from SBMs in terms of lesson observations, with 86% of SBMs indicating that they prioritize P1 visits, and 77% indicating that they prioritize P2 and P3 (multiple responses possible).

Seven out of eight head teachers reported prioritizing specific subjects for their observations, with math, English, and Kinyarwanda all equally sharing the top-priority position. Head teachers explained that Kinyarwanda is seen as important in terms of mastery of one's native language and as being necessary to learn other languages. English is a priority as the intended language of instruction of the education system, and mathematics is seen as the key to future employment and knowledge.

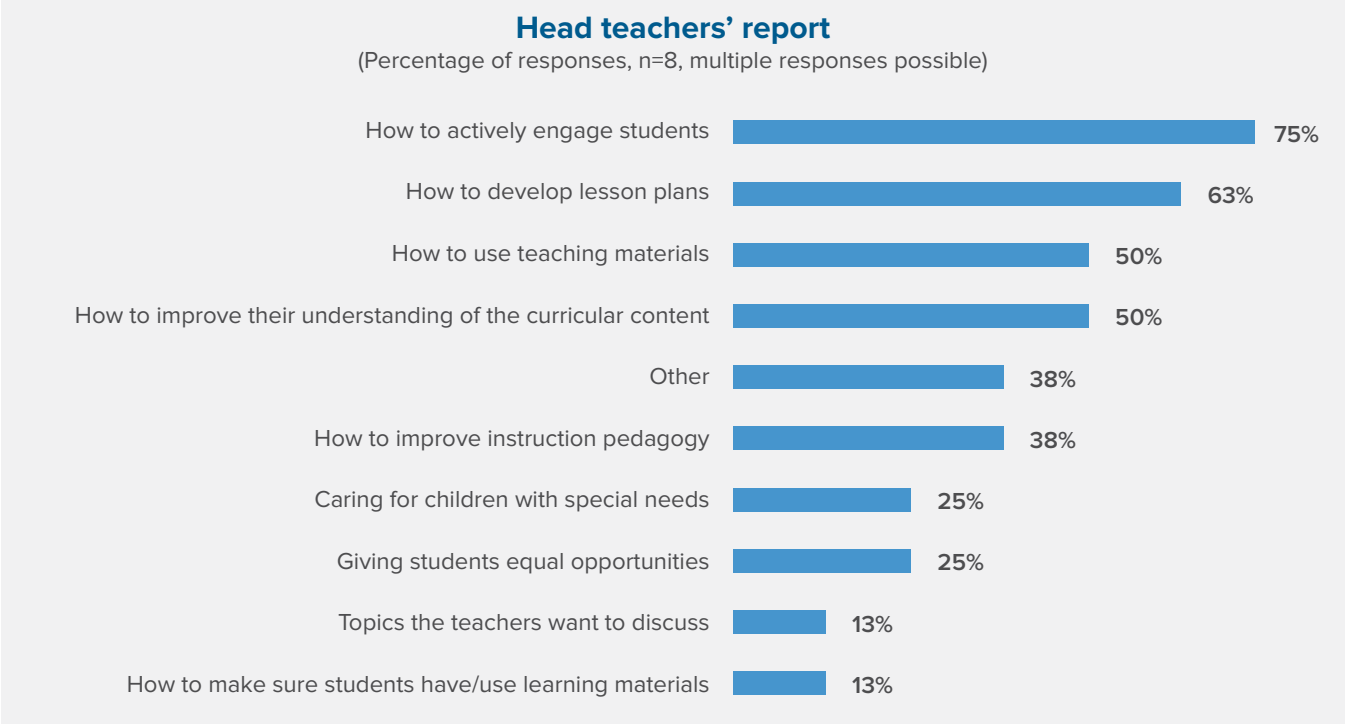
> ***I focus on Kinyarwanda so that they can learn to read and write in their native language, and then learning other languages will be easier. I focus on English to ensure that teachers teach in the language of instruction set by the government.*** *(head teacher)*

Five of the eight SBMs in our sample prioritize specific subjects in their observations and support, with Kinyarwanda noted as the highest priority (100% of SBMs in both districts). English and math are also prioritized by SBMs (an average of 80% SBMs across districts for each subject). SBMs explained that they focus on Kinyarwanda in their lessons and classroom visits because they feel that it is a basis for learning other subjects and important for students to be able to express themselves. They also focus on mathematics because it is useful for students' future and in daily life.

All head teachers observe P1–P3 Kinyarwanda lessons. We asked about their focus during these observations and found that head teachers are focused predominantly on instructional quality and on whether teachers are progressing through the curriculum. Checking on student learning progress and student engagement were cited by 50% of head teachers across districts as well. One of the eight SBMs indicated that they had not observed a P1–P3 Kinyarwanda lesson. The remaining seven—who had observed a P1–P3 Kinyarwanda lesson—strongly prioritize student engagement, with an accompanying focus on instructional quality and teachers' use of lesson plans during their observations. They also reported tracking several other aspects of lessons, including students' learning progress, interactions between teachers and students, the use of materials, and the state of the classroom.

All head teachers reported speaking with teachers after their lesson observations (for a range of 5 to 30 minutes), with instructional quality and teachers' use of lesson plans/following the curriculum as two primary topics. Head teachers also provide a range of advice, as indicated in Figure 37.

Figure 37. *Head teachers' advice to teachers*



SBMs typically speak with teachers about the lesson they observed, with a primary focus on instructional quality and whether the teacher is following the curriculum, student engagement in the lesson and use of materials, and students' learning progress. The amount of time that SBMs spend on discussion with teachers after a lesson observation ranges from 10 to 20 minutes.

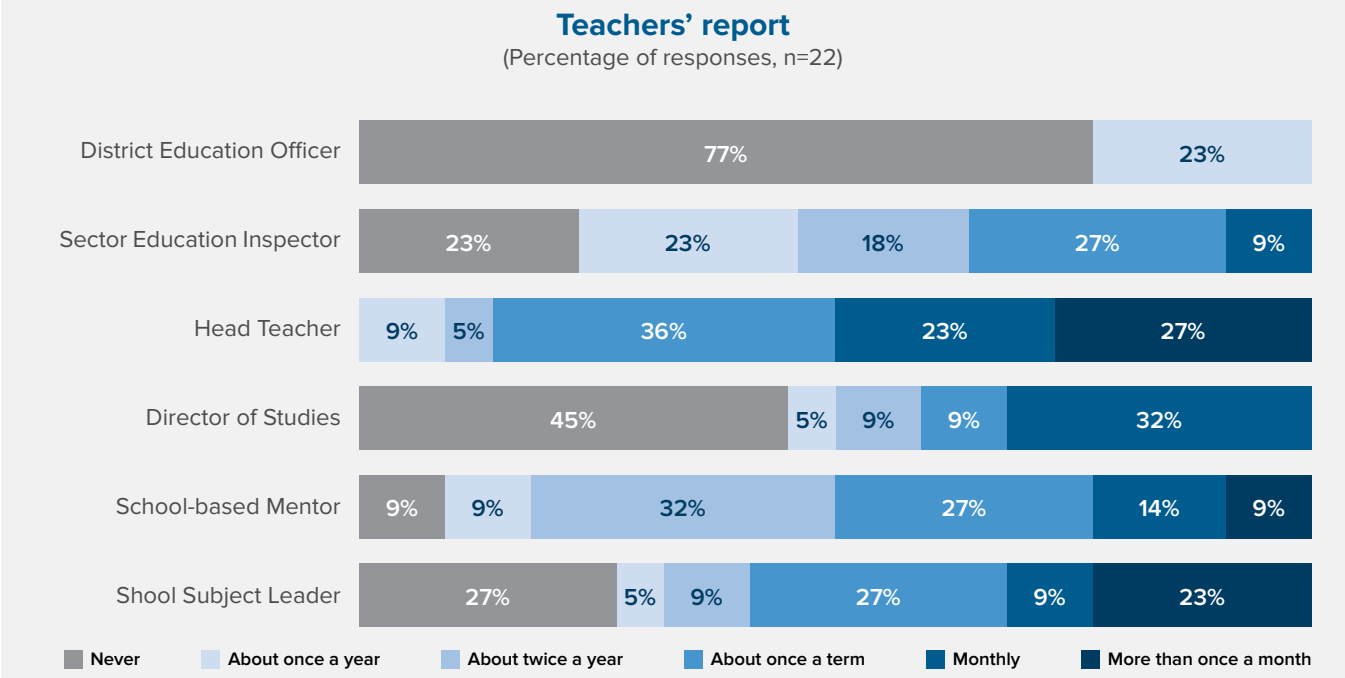
Head teachers use a range of strategies to help P1–P3 teachers gain the skills they need to teach well and improve student learning outcomes. In Ngoma, head teachers emphasize training and coaching, either providing the training and coaching themselves or encouraging teachers to participate in other training. Head teachers in Rulindo also encourage teachers to participate in training and, additionally, encourage teachers to seek the advice of their peers. In both of our study districts, middle-tier and school staff support monthly communities of practice for teachers.

Teachers' Perspectives on Instructional Support

We wanted to understand teachers' perspectives on the instructional support they receive from both the middle tier and their school leadership, in terms of both the frequency and nature of support they receive and the effect that the support has on their instruction.

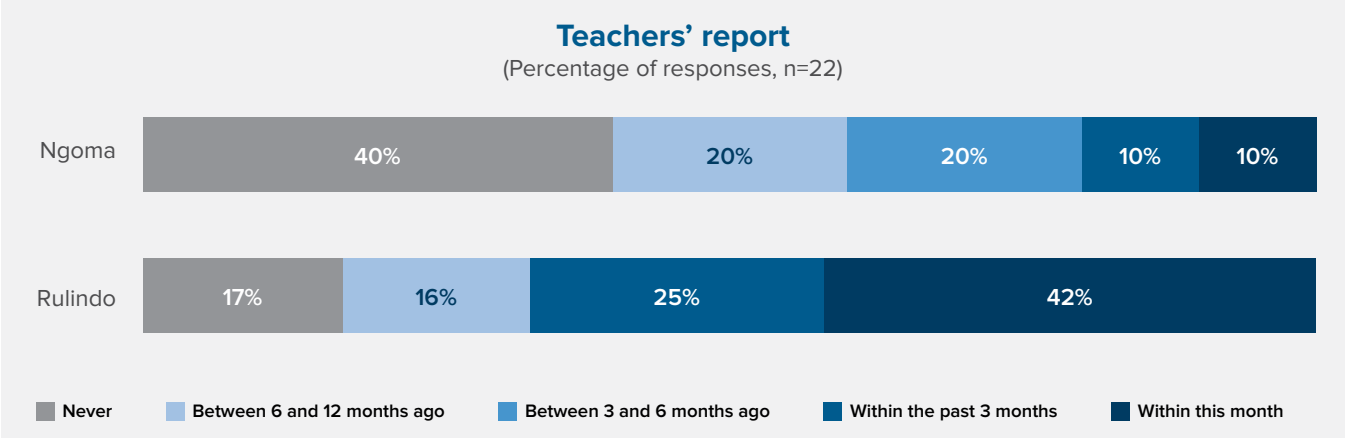
Generally aligning with the data from district and school leadership actors, 92% of the teachers included in the study reported that someone within the school system had observed their early grade Kinyarwanda lessons; and of these, 95% reported that they usually receive feedback after the observation. Teachers reported that a variety of colleagues conduct observations of their early grade Kinyarwanda lessons, with different frequency. School-based staff conduct lesson observations most frequently, with over 80% of teachers reporting that their head teacher observes their lessons once per term or more frequently (50% of teachers reported that head teachers observe monthly or more than once per month). School-subject leaders and SBMs are the second and third most frequent observers, with 59% of teachers reporting that school-subject leaders and 50% of teachers reporting that SBMs observe their Kinyarwanda lessons at least once per term (Figure 38).

Figure 38. *Colleagues' observation frequency of reading lessons*



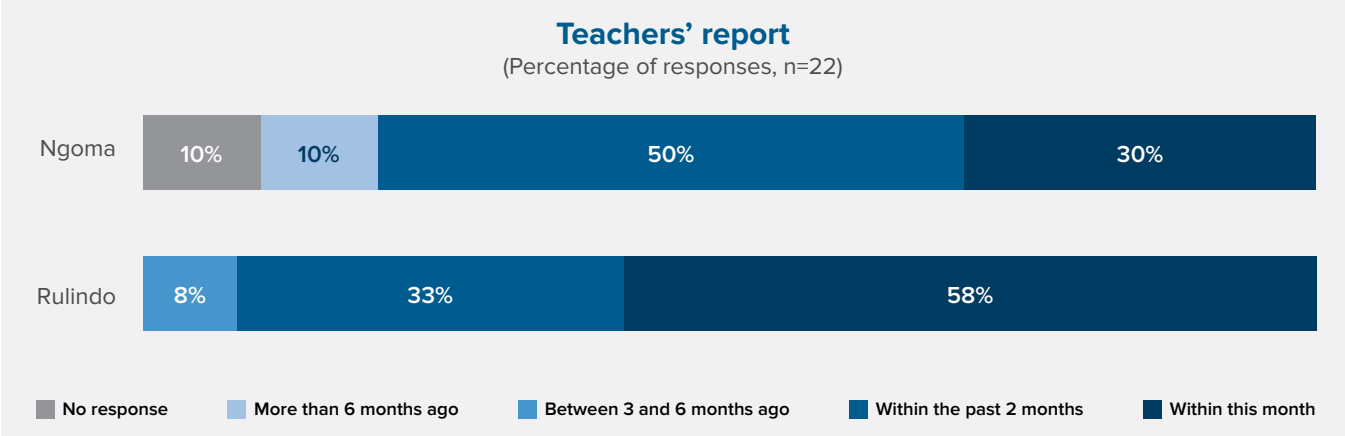
Teachers across the two districts reported varying recency of SEI observations of their early grade Kinyarwanda lessons, with 40% of teachers in Ngoma and 67% of teachers in Rulindo reporting that an SEI had observed their Kinyarwanda lesson within the past six months. Notably, 23% of teachers across districts (40% in Ngoma and 17% in Rulindo) responded that they had never had a lesson observation (or could not remember one) by an SEI (Figure 39). This stands in contrast to the finding from SEI surveys that 100% of SEIs across districts prioritize Kinyarwanda lessons for their observations. It may be that schools have multiple sections of early grade Kinyarwanda classes within grades or that either or both respondent groups were not entirely accurate in their self-reports.

Figure 39. *Recency of Kinyarwanda lesson observation by SEIs*



The findings on frequency of lesson observations (Figure 38 above) indicate that head teachers are an important source of instructional leadership for teachers. Teachers' reports on the recency of lesson observations by head teachers align with these data, with 44% of teachers on average across districts (30% in Ngoma and 58% in Rulindo) reporting that their head teachers had observed their Kinyarwanda lesson within the past month, and an additional 41% on average across districts (50% in Ngoma and 33% in Rulindo) reporting an observation within the past two months (Figure 40).

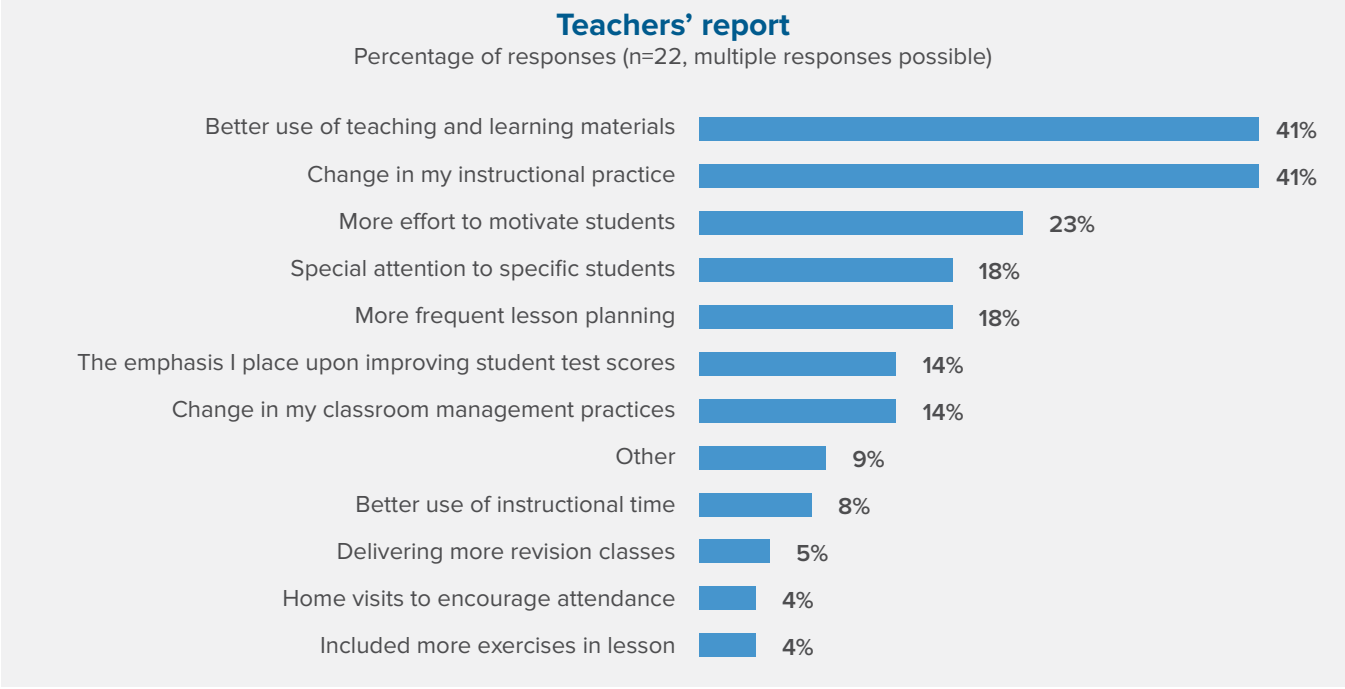
Figure 40. *Recency of Kinyarwanda lesson observation by head teachers*



What does emerge strongly from the data on lesson observations is the prominent role of school leadership for lesson observations and feedback to teachers. Teachers reported receiving feedback after lesson observations focused on students' use of learning materials (41% of teachers reported this focus), teachers' use of lesson plans and their following of the curriculum (36% of teachers reported this focus), and student engagement (32% of teachers reported this focus). Other topics—such as classroom management, increasing student exercises and activities, and instructional quality—are addressed in feedback conversations, according to teachers.

One hundred percent of teachers reported that the feedback they receive from the person who most frequently observes their lessons is helpful and that the interaction is largely positive, with 93% of the responses indicating a positive experience (e.g., happy, motivated, confident, supported). All teachers who had received feedback about their early grade Kinyarwanda lesson reported taking action as a result of the feedback. Improving the use of teaching and learning materials and changing instructional practices were mentioned most frequently as the actions taken (41% of teachers reported these actions) (Figure 41).

Figure 41. *Teachers' reported actions based on observation feedback*



Coherence in instructional support

Coherence in the classroom—across curricula, materials, and teacher capacities—has been identified as a critical success factor for education programming (Kaffenberger & Spivack, 2022). Coherence in priorities and the focus of instructional feedback that teachers receive through lesson observations and coaching has also been identified as important for improving educational outcomes. Through both quantitative and qualitative data, we found signals of reasonably strong coherence in instructional support in the study districts.

When we look at the instructional support provided by the three primary instructional support actors in the study districts—the SEI, head teacher, and SBM—we see all three actors focused on some aspect of instruction in their feedback to teachers and good alignment in the feedback that they prioritize. SEIs prioritize instructional quality, teachers' use of lesson plan/following the curriculum, and student engagement (in that order). Head teachers also prioritize instructional quality and teachers' use of lesson plan/following the curriculum and, to a lesser degree, student engagement and students' use of materials. SBMs have a slightly more distributed set of priorities, with instructional quality, teachers' use of lesson plan/following the curriculum, student engagement, and students' learning progress all sharing the top position in terms of priority feedback.

Coherence in instructional support is also strengthened through the districts' joint school monitoring practices discussed in the Initiatives and Ways of Working section. Coordinated visits build a shared understanding of what is important to improve educational outcomes, what the challenges are, and how best to support schools and teachers. Joint monitoring allows schools and teachers to hear consistent messages on priorities. Joint monitoring and close collaboration also ensure consistent, quicker follow-up. This includes addressing the recommendations of NESA inspectors, as the inspectors' large caseloads mean that they often rely on district and sector education staff doing the follow-up to ensure that changes are made (SL4, NESA).

Time Use

How do sector education inspectors use their time?

For the great majority (76%) of the time-reporting periods, SEIs reported spending most of their time on education-related activities.

SEIs reported spending most of their time on in-person school visits for 25% of the time-reporting periods.

Time is a limited resource, and SEIs who spend a lot of time on non-education-related activities have a lower frequency of school visits.

Reporting and administrative activities still take a lot of time, but **in-person school visit time exceeds that seen in most systems.**

When considering the resources that any education system has, staff time is by far the most expensive, with teacher salaries alone typically constituting more than 60% of education budgets (Crawfurd & Pugatch, 2020). We also know that there are many demands that compete for a limited and fixed amount of labor time available within education systems. Competing demands on time can be especially acute for education system staff in leadership roles and in jobs that have responsibilities across initiatives and parts of the system. Adding to this complexity, in decentralized systems like Rwanda, education actors work in a matrixed system, taking direction from and being accountable to different hierarchies and ministries.

As discussed in the background section, SEIs in Rwanda are part of the sector hierarchy and report directly to the SES (who reports through the district and eventually to the mayor, under the leadership of the Ministry of Local Government). Additionally, SEIs have an important collaboration with and dotted-line accountability to the DDE and the DEO, both of whom also report to the mayor but who take their policy and technical direction from MINEDUC and REB. In complex reporting contexts such as this, the prioritization of activities and time can become fraught if the different parts of the system do not have shared priorities and are not facilitating the use of time to advance those priorities.

Regarding school-facing instructional support actors specifically, we have learned from other research that these individuals spend their time predominantly on administrative activities, reducing the frequency with which they are able to visit schools and provide instructional support (Alsofrom et al., 2023; Bagby et al., 2022). High ratios of instructional support staff to schools add to this challenge, often resulting in very low levels of instructional support being delivered to schools and teachers.

Given these issues, and the need to understand more about how school-facing instructional support staff spend their time, we asked each of the SEIs included in the study to document how they spent their time over a ten-working day period. In deference to simplicity and to ensure high completion rates, we structured the time capture across eight categories, six of which are specific to education-related duties. The categories are as follows:

1. Education-related reporting and administrative activities
2. Education-related policy and technical discussions or trainings
3. In-person school visits

4. Travel for school visits[40]
5. Remote support to schools
6. Field/community education activities
7. Non-education-related activities in the office and the field
8. Meals and breaks

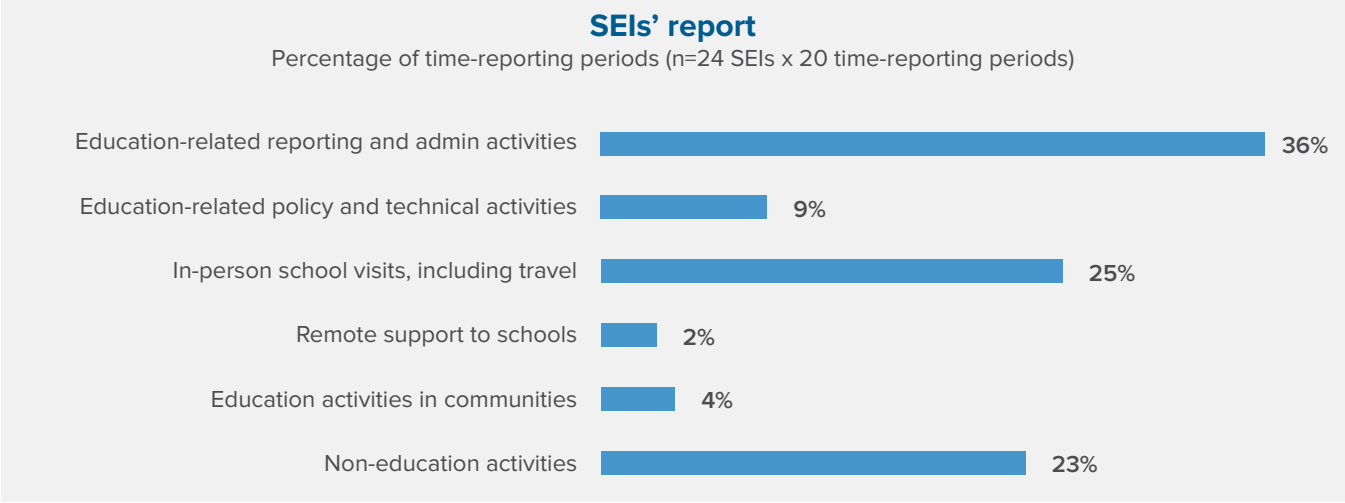
We provided a daily survey to each SEI via WhatsApp that asked them to report all of the activity categories they did each morning and each afternoon and which of those activities they spent the most and the least time on for morning and afternoon. The survey also asked them to estimate the actual amount of time for the activities they spent the most time on. We requested the data at this higher level (rather than requesting detailed activity and hourly reporting) to reduce the burden on the SEIs, increase the likelihood of higher response rates, and reduce the likelihood of low-quality data. We did not track the total time that the SEIs work, though it is our understanding that it is not unusual for SEIs to work beyond the standard working hours. The response rate was 100% across all days and all survey questions. We also administered a post-time-tracking survey to learn from the SEIs about their experience completing the time tracking, triangulate school-based activities and the focus of lesson observations reported on the main SEI survey, and gather recommendations from SEIs about how to improve the time-tracking process. It is important to note that a ten-day window represents a small portion of the academic year, and it is not unusual for specific events, activities, reporting processes, and so forth to influence how education system staff spend their time. As a result, these data should not be interpreted as representative of the academic year.

The findings of the time-use tracking—reported as 20 distinct periods consisting of 10 mornings and 10 afternoons—are presented below.

TIME-USE FINDINGS

Based on their time reporting, across the two study districts, for 15 of the 20 (76%) time-reporting periods, SEIs spent most of their time on education-related activities (Figure 42). More specifically, for 5 of the 20 (25%) time-reporting periods, SEIs reported spending most of their time on in-person school visits.[41]

Figure 42. *Activity spent most time on across time-reporting periods by SEIs*



40 The in-person school visits and travel for school visit categories were combined in our analysis.

41 See Annex G for the proportion of activities that SEIs spent the most time on across all reporting periods, by SEI.

Of the activities that they spent the most time on in mornings or afternoons, 34% of those activities took one to two hours and 51% took three to four hours (in each half day). As such, the activities that SEIs reported spending the most amount of time on constitute a substantial proportion of their working day.

Looking more closely at the distributions of time spent by SEIs, let us first consider the proportion of time-reporting periods in which SEIs spent the most time on education-related administration, reporting, policy, and technical activities over the 10 days, disaggregated by SEI (Figure 43). Across the SEIs, we can see education reporting and administrative activities taking more time than policy and technical discussions. We also see a large range within the distribution across SEIs, with education reporting, administrative, policy, and technical activities taking up the "most time" for 5% to 80% of the time-reporting periods.

Figure 43. *Proportion of time-reporting periods spent most time on education activities by SEIs*

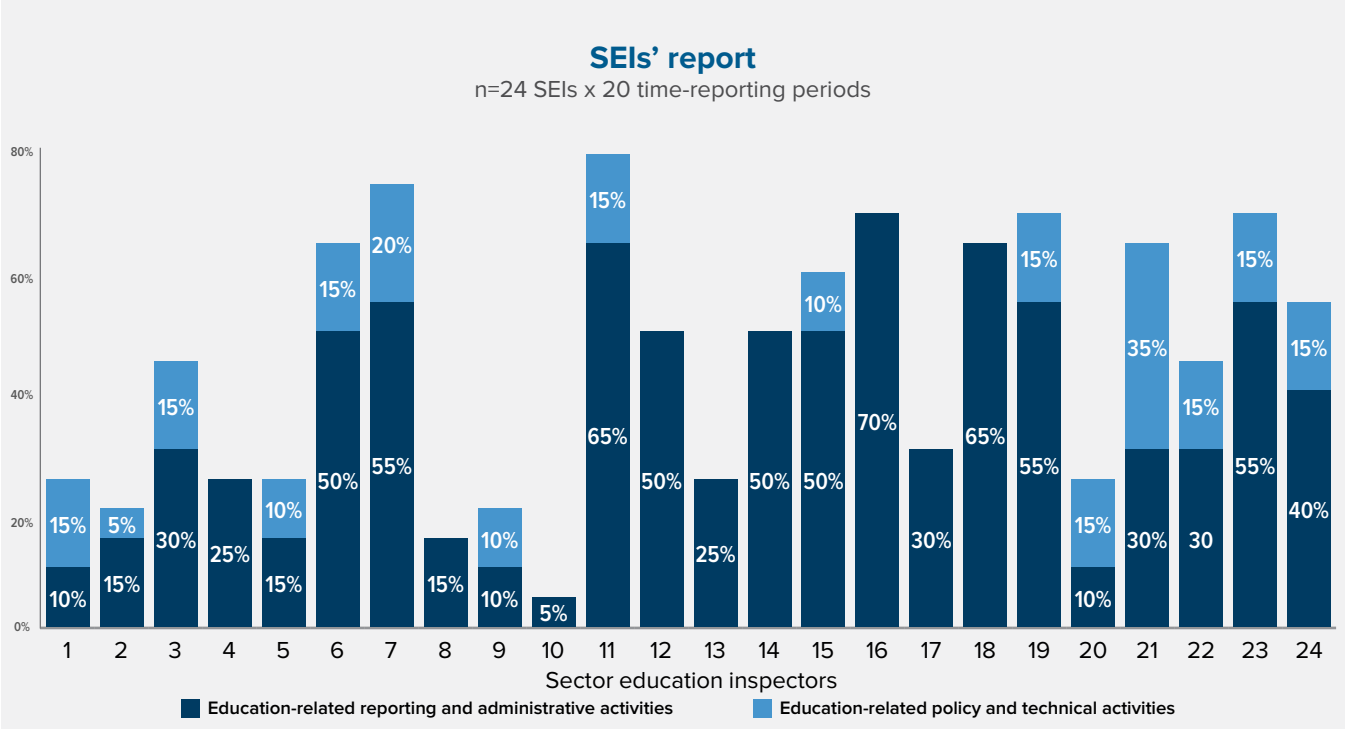
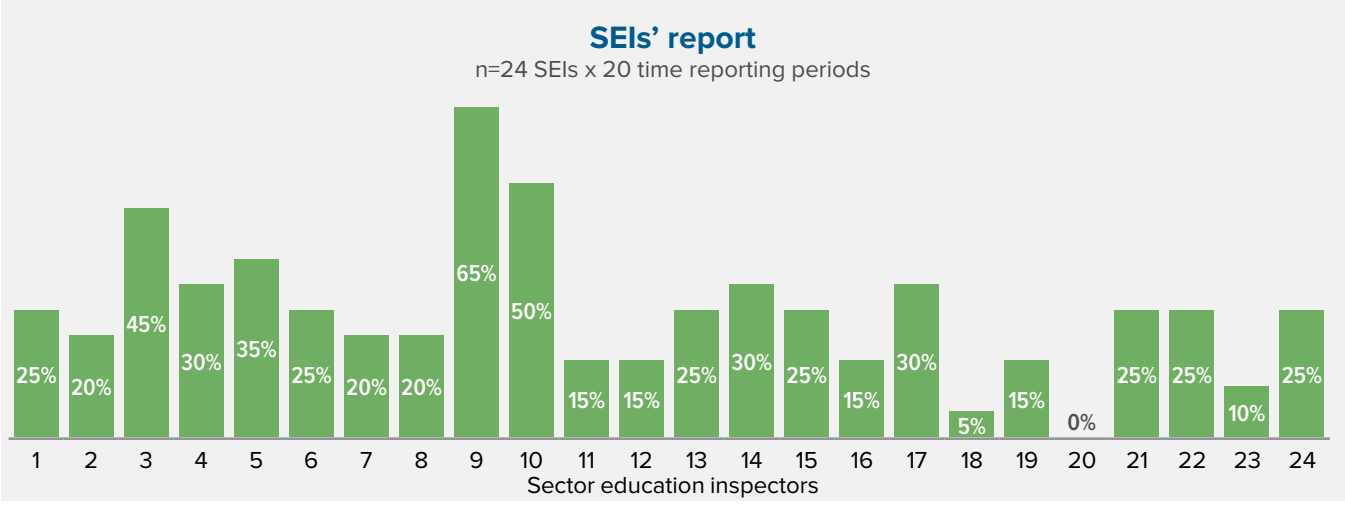


Figure 44. *Proportion of time-reporting periods spent most time on school visits by SEIs*

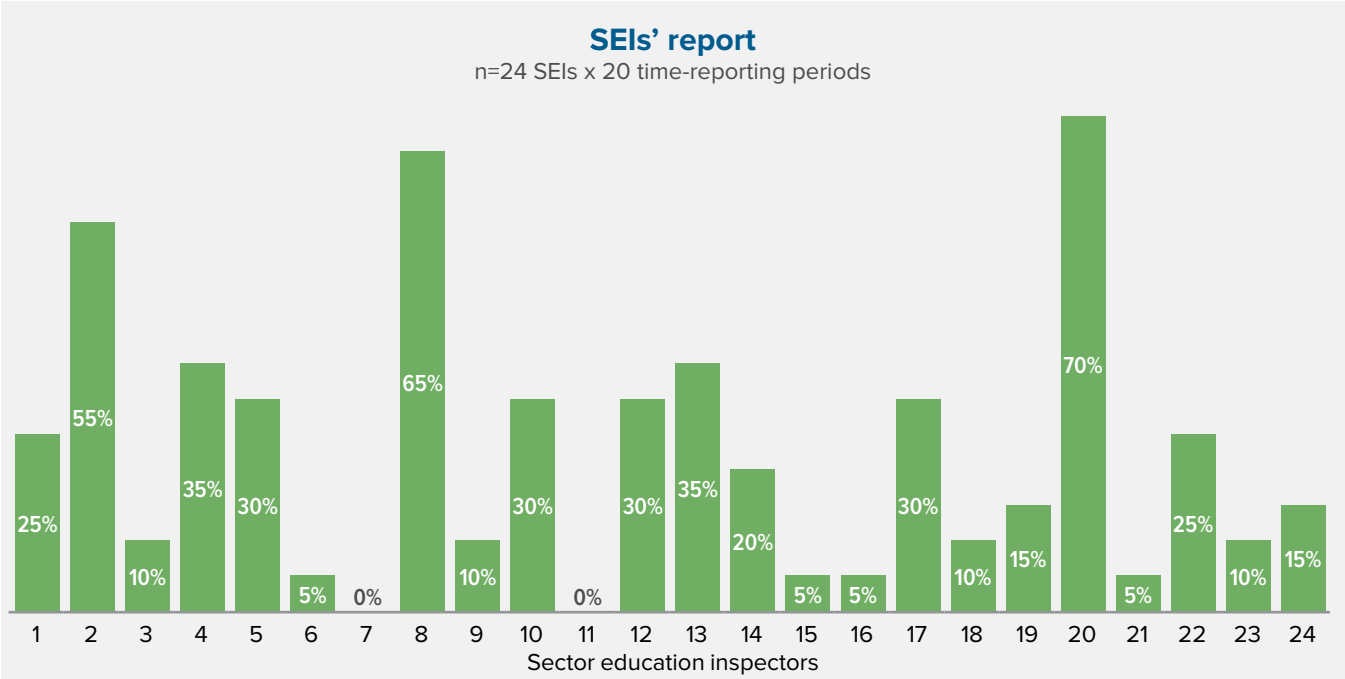


Next, let us look at several additional important distributions by SEI. If we explore the proportion of time-reporting periods in which SEIs spent most of their time on in-person school visits (school visit and related travel are combined), we can see a wide range across the 24 SEIs: while one SEI reported that school visits took most of their time in 65% (13 of 20) of the time-reporting periods, another SEI did not report in-person school visits as taking the majority of their time even once. As discussed above and shown in Figure 44, on average across all SEIs, in-person school visits constituted 25% (5 of 20) of the activities that SEIs spent the most time on across the 10-day reporting period. During the interviews, we heard from district and sector leadership that they see the SEI job as a field-based job and expect SEIs to spend a good portion of their time in schools:

> *I always tell them that their work is not in the office. Since their responsibility is inspecting education; so, their job is at schools. If they cannot inspect schools, for instance, they inspects two or three schools per week, I tell them that they did not work that week.* (sector executive secretary)

Figure 45 shows the data for non-education-related activities organized in the same manner and disaggregated by SEI. Here again, we see a wide range in the proportion of time-reporting periods in which non-education-related activities took most of SEIs' time, from 0% of time-reporting periods to 70% (14 of 20). When we look across these figures at specific SEIs, we see some expected patterns. Take, for instance, SEI 9, whose education reporting/administrative and policy/technical activities took most of their time for 20% (4 of 20) of the reporting periods, in-school visits took most of their time for 65% (13 of 20) of the reporting periods, and non-education activities took up most of their time for only 10% (2 of 20) of the reporting periods.[42] In contrast, we see that SEI 20's time was focused mostly on non-education activities during the reporting period, with 70% (14 of 20) of their activities taking the most time consisting of non-education-related activities, no reporting periods when in-person school visits took up most of their time, and only 25% (5 of 20) of reporting periods when education-related administrative, reporting, policy, and technical activities took up most of their time. The patterns in these data underscore the zero-sum realities of staff time.

Figure 45. *Proportion of time-reporting periods spend most time on non-education activities by SEIs*



42 Education activities in communities make up the remaining 5% of reporting periods.

Ideally, we would be able to put these time data into context, comparing the study districts' SEI time use to that of other districts in Rwanda and other education systems—but such comparison data are not available. Without this, it is difficult to assess how "good" these time-use data are for a system structured like Rwanda. Are SEIs optimizing their time use given the full range of responsibilities that they have? Is it reasonable to expect them to spend more of their time on in-person school visits? We do not know from a time-use data perspective, but we do know that our study districts prioritize school visits and that 23 out of the 24 SEIs included in the study have visited every school they support within the academic year of the study. Additional time studies for middle-tier actors, particularly those tasked with instructional support, will be invaluable to build reference points as we consider time use within education systems.

Recommendations

Recommendations

This study has focused on how two districts in Rwanda have exhibited strong leadership to improve foundational literacy outcomes and has been framed around the capacities, behaviors, and norms exhibited by the study districts. The following recommendations stem from the study findings in three areas: policy, practice, and research. Following these study-driven recommendations, we also include recommendations gathered directly from study respondents through surveys.

Recommendations from Study Findings

Policy

Leadership policies, structures, and job descriptions at the district and sector level should encourage and enable frequent formal and informal connections across district and sector structures and between the districts and school leadership. These efforts can build on the leadership frameworks that have been developed in Rwanda[43] to make them more focused on instructional leadership and support to schools. Strong collaboration between MINEDUC and the Ministry of Local Government is of course critical for this work.

The study districts seem to be successfully managing the matrixed organizational structure between MINEDUC, REB, and the districts and sectors, but this structure is complex and vulnerable to inefficiencies due to competing priorities, communication challenges, and a lack of coordination, especially vis-à-vis other districts and systems. It may be **useful to further codify in policy, procedures, and job descriptions how this matrixed organizational structure can most optimally support schools and, by extension, improved education outcomes**. These policies and procedures can be linked back to the Foundational Learning Strategy and its implementation plan, which provides an important focal point for improving foundational literacy outcomes.

The efforts that the government and its partners have made to bolster the focus of district and sector staff on instructional quality and learning outcomes is paying dividends. As education systems and the people within them evolve, **continued attention to capacity building for foundational literacy should be a priority, with attention to ensuring coherence** in foundational literacy knowledge, pedagogical practices, and instructional support approaches.

Government leadership to ensure that partners are working coherently and in a coordinated fashion has been a strength in Rwanda and should continue to be a priority. School leadership is a critical part of instructional support delivery and should be included in this capacity building.

The government should continue to **strengthen its investments in data systems** that track instructional support activities and identify schools that need additional support, particularly based on foundational literacy outcomes. At present, these data are only partially reported now but represent a powerful tool for middle-tier actors to organize and oversee their work in supporting schools.

43 Such as those developed in collaboration with the Education Development Trust, Mastercard Foundation, and VVOB.

Practice

The commitment at all levels of the district and sector to visit schools and to bring attention to the importance of education outcomes and improving foundational literacy is a hallmark practice of the study districts. **Senior leadership in districts and sectors should reinforce the importance of school visits and lesson observations and should make this a priority within their own job responsibilities**. The practice of **joint monitoring visits** is also recommended to **build mutual understanding and collaborative problem-solving**.

While the amount of time that some SEIs in the study districts spend visiting schools can (and should) be further increased, the overall average is higher than in most education systems. Further measurement on time use by instructional support actors in Rwanda across districts will offer important insights into opportunities to decrease inefficiencies and increase direct support to schools.

The study found that members of the school leadership team are the most frequent providers of instructional coaching to teachers, which despite Rwanda's favorable district/sector-staff-to-school/teacher ratios, represents the most feasible mechanism for instructional coaching. As a result, **additional delineation of responsibilities between district/sector staff and school leadership vis-à-vis instructional observations and coaching is recommended to optimize the team-based instructional leadership and coaching system** in Rwanda.

The study districts have institutionalized frequent formal and informal communications about how schools are doing and what support they need. This in essence has created a continuum of communication that allows for consistency and coordination. It is unclear how the study districts find the time to do this, but the expectations about the cadence of communications are set by the leadership, something that can be replicated across other districts and contexts.

The education system and school cannot achieve foundational learning goals without strong support from parents and communities. At present, there are **important channels through which districts, sectors, and schools engage parents and communities. These could be further optimized by using tailored influence strategies and targeted resources**. The study districts employ a range of strategies to work with communities, including establishing community libraries and ECD centers and supporting competitions focused on literacy. Bolstering these efforts through work with partners to deliver more materials and support is recommended.

Research

This study contributes to the small but growing literature on the middle tier's role in instructional support in sub-Saharan Africa (Asim et al., 2023, 2024; Bantwini & Moorosi, 2018; Cilliers et al., 2022; Myende et al., 2022; Tournier et al., 2023). It also represents the first adapted social network analysis conducted on the middle tier of education in sub-Saharan Africa, adding a different lens to studies of school networks, such as in Tanzania (Randolph et al., 2023). As the field of social network analysis becomes more integrated into research on the middle tier of education systems in developing countries, **additional studies utilizing the adapted social network analysis tool will help generate a more nuanced view of how actors within different systems are interconnected and how policies, structures, and norms enable or discourage those connections**. The integration of qualitative data will be important to complement the adapted social network analysis tool to provide deeper understanding (Daly, 2012; Moolenaar et al., 2012).

Further research in Rwanda or in other countries on districts exhibiting strong leadership for foundational learning will help the sector understand the degree to which these findings are generalizable or specific to the study districts or the Rwandan context. In addition to including the same measurement domains, **future studies should experiment with measuring additional**

domains to broaden our understanding about what is important to measure with respect to the middle tier. As noted in the design section, we do not yet have a robust, well-tested theory of change for how the middle tier can most effectively contribute to improved learning outcomes. This evidence base will come into reality only if we are intentional about how we build on existing research and how we expand our inquiries to test and evolve the unproven theories of change that currently guide our work on the middle tier.

The time-use measures designed for this study provided important insights but were limited in scope and specificity. Additional studies in Rwanda or other contexts are needed to build a robust understanding of how middle-tier actors (especially actors primarily responsible for instructional support to schools) use their time and how more of their time can be dedicated to school support. These data could go hand in hand with the analysis of school support staff levels and placement strategies so that staff allocation within education systems can be optimized.

Respondents' Recommendations

Reflecting on what evidence tells us are essential elements to deliver strong foundational literacy outcomes (effective instruction, quality curricula supported by appropriate teaching and learning materials, sufficient instructional time, and effective school leadership and parental engagement), respondents identified several key areas for improvement:

- **Materials, materials, materials.** Across the board, we heard clearly that additional teaching and learning materials are required to improve foundational literacy outcomes. The materials suggested by respondents include instructional supports for teachers but largely focus on student materials, including textbooks, workbooks, leveled readers, story books, learning toys, and basic supplies (e.g., notebooks). This is especially critical to support students whose families cannot afford even the most basic supplies and for students with learning differences. A fair share of school-based staff mentioned that they often use their own money to buy materials for students.
- **Additional classrooms to reduce student-teacher ratios.** Despite the government's strong efforts to build more classrooms in recent years, respondents noted that class sizes still need to be reduced to deliver quality instruction and support students.
- **Even more training for teachers in Kinyarwanda literacy instruction**. As highlighted in the Context and System Structure section, a series of projects have delivered training and coaching to teachers on early grade literacy instruction over the past 15 years. In some cases, these projects have reached nearly all P1–P3 reading teachers through multiple cycles of training. However, given teacher mobility and the expansion of the teaching corps in the past several years (and the associated recruitment of teachers without full qualifications), there is still a need for in-depth and continuous teacher professional development.
- **Better support structures and processes for students struggling to learn to read.** Respondents noted a range of recommendations to help students who are struggling or have learning differences learn to read. These recommendations include materials that are more responsive to and supportive of students with different learning styles or reading skills; specialized teacher training focused on supporting struggling students; additional or separate instructional time for struggling students, whether through smaller class sizes or remedial classes; and specialized instruction with appropriately trained teachers for students with disabilities or learning differences.

- **Reading competitions and clubs focused on improving literacy.** Several recent development projects have supported reading competitions, storytelling, and reading clubs in school and in communities, and this seems to have taken hold within the districts as positive contributions toward motivating and focusing schools, students, and families to improve literacy. Respondents spoke of the need for more reading activities and competitions to incentivize schools, students, and families and build a culture of reading.
- **Additional strategies for engaging with parents.** Respondents noted that more engagement with parents is necessary to ensure that students come to school regularly and are supported in their literacy development at home. Recommendations include providing additional books in homes and in the community, helping parents understand how they can support reading development, and sensitizing parents about the importance of achieving literacy skills in the early years.

Conclusion

Conclusion

As we consider the evidence base about how the middle tier of education systems functions and how it can be supported to effectively contribute to improved learning outcomes, we are very much still finding our way. We have seen a recent increase in research aimed at developing a deeper understanding of how this middle tier is structured, staffed, and capacitated. These studies typically take an organizational lens, with a strong focus on the formal structures and official policies (e.g., accountability frameworks and job descriptions) that inform those structures. There have also been recent efforts to gauge the degree to which the formal structures and policies are being implemented as envisioned, complemented by analyses of how well those structures and policies are supportive of education system objectives (Tournier et al, 2023) and how bureaucratic norms and informal processes influence how the middle tier delivers on its mandate (Mangla, 2022). However, the breadth, depth, and generalizability of available evidence is still limited, and thus we have an incomplete picture of how the middle tier is functioning and an even less developed understanding of the structures, processes, capacities, and norms within the middle tier that lead to improved foundational learning outcomes. Furthermore, it is still uncommon for studies to take an integrative lens that analyzes the structural, formal aspects of the middle tier as moderated by relationships, informal processes, and norms. This further limits our ability to develop policies and technical assistance that will strengthen the middle tier's ability to contribute to improved learning outcomes.

This study offers an integrated view, exploring the structures, processes, behaviors, and norms that reflect strong leadership for foundational learning by positive case study districts. The insights offered by this study, in some cases, align with prevailing hypotheses about effective education systems, such as collaborative problem-solving, voluntary accountability norms, and strong relationships and peer-to-peer support. Also supporting the prevailing hypotheses about effective middle tiers of education systems, we found good alignment across actors in terms of orientation toward and knowledge of foundational literacy, providing a reasonable level of coherence in the signals sent to school leadership and teachers about what is important in the classroom and how to focus efforts. We also found evidence that having a clear and consistent policy framework with well-articulated objectives and associated outcome tracking provides an important foundation and inspiration for the districts' work.

The study findings are less aligned with prevailing hypotheses about the centrality of the middle tier in directly providing instructional coaching to teachers. While we found that district actors prioritize school visits and that all actors—from top political leadership to staff at the sector level—recognize and act on the importance of visiting schools, observing lessons, and engaging with teachers, we also found that the school leadership team, represented by the principal, school-based mentor, and subject advisor in this study, are the most consistent and frequent providers of instructional coaching to teachers. Even in a context such as Rwanda, with favorable district/sector-staff-to-school/teacher ratios, the middle tier is not the primary provider of instructional support to teachers. This stands in contrast to many of the current policies and technical assistance projects that place middle-tier actors squarely in the role of instructional coaches. Rather, we found that districts' role is focused more on amplifying national policies and priorities and working within their structures to effectively implement policies and track progress toward objectives. Additionally, district actors establish strong norms around the importance of the classroom, quality instructional delivery, and student learning, and reinforce this with consistent presence in schools and classrooms. These findings should be considered as policies and technical assistance projects define and invest in middle-tier and school-based structures and capacities.

Annexes

ANNEX A: Case Study Selection

The value of positive deviance research rests heavily on the selection of positive case studies. The findings are based on the proposition that the evidence uncovered is reflective of the norms, behaviors, and capacities that have resulted in better outcomes. While positive deviance research is not causal in nature, there is still an expectation that one can map positive deviance cases to better outcomes. The selection of positive deviance cases can be straightforward when (1) the desired outcomes are clearly defined, (2) the outcomes are systematically, reliably, and comprehensively measured, and (3) the outcomes can be traced to the positive deviant cases through validated intermediate outcomes. In addition to these three considerations for case identification, selection requires access to data to ensure that selected cases do not have special advantages, such as higher socioeconomic status or differing population characteristics (e.g., educational attainment or linguistic composition). In our country and case study selection, we also had the additional consideration of wanting to understand the influence of policy reform and technical assistance on the study cases and wanted to choose a context with robust and identifiable policy reforms and technical assistance programs focused on the middle tier and improvements in foundational literacy outcomes.

It was with these case selection considerations in mind that we approached our case study selection. Beginning at the country level, we considered several countries where substantive policy reform and technical assistance interventions to strengthen the middle tier's contribution to improved foundational literacy outcomes had been implemented. Once those candidate countries were identified, we considered a range of criteria, including, the clarity of signals of positive deviant cases, the nature of historic and current programs and interventions building instructional leadership in middle tier, the availability of government collaboration and local research support, and operational considerations (de Boer, 2023). We also wanted to conduct the study in a context where substantive improvements in foundational literacy outcomes had been achieved.

Rwanda emerged as a top candidate given that country's policy commitments and the level of investments that Rwanda and its partners have made to improve foundational learning outcomes (including through the middle tier of the system), and the likelihood that data on outcomes would be available to support selection of case studies.

Moving from country selection, we began to consider selection for the two positive deviant districts to be included in the study. Referring to the three conditions for positive deviance selection noted above, in this instance, we had a very clearly defined outcome—improvements in foundational literacy outcomes. For the second consideration—that outcomes are systematically, reliably, and comprehensively measured—we had a mixed situation. Rwanda does administer a nationally representative early grade literacy assessment (in grade 3, known as P3) and a census-based national end-of-primary exam (in P6), both of which are reported at the district level. There are also Kinyarwanda reading outcome data over time to provide insights into which districts are improving outcomes.[1] Additionally, there are classroom-based literacy assessments implemented in Rwanda, but the reporting is not consistent.

The third consideration—that outcomes can be traced to the positive deviant cases (in this case tracing district and sector actors' behaviors to improved student literacy outcomes) through validated intermediate outcomes—is much less straightforward for middle-tier research. The indicators to

1 There have been changes to the instruments and sample over time, which may have influenced the equivalency of the results across different assessment cycles.

measure districts' leadership for foundational learning and instructional leadership[2] are not well-established or validated in the sector, and the data for provisional indicators are generally not systematically, reliably, and comprehensively measured. Take, for example, the prominent hypothesis that high-quality and frequent instructional support delivered to teachers by district staff is a prerequisite for a district to be considered a positive deviant case. Because of the dearth of systematically collected data on coaching frequency and quality by districts, and a lack of research studies to connect coaching behaviors by system actors to teacher instructional quality and ultimately to student outcomes, we were not able to use "coaching behaviors" as a criterion to identify positive deviant districts. We also had to recognize that there are many intervening factors in between the middle tier and student learning outcomes, including student and household level factors that can greatly influence educational outcomes.

Because of these factors, we decided to conduct the first phase of the case study selection using qualitative information from experts working on foundational literacy and systems strengthening in Rwanda and referencing a predefined identification protocol. From these initial interviews, we identified seven potential positive districts: Burera, Gisagara, Huye, Ngoma, Nyagatare, Ruhango, and Rulindo. Huye district was excluded because that district is participating in the Supporting Teacher Achievement in Rwandan Schools program and randomized controlled trial, which includes teacher *imihigos* (performance contracts) that include financial rewards and non-customary engagement by SEIs focused on improving learning outcomes. We determined that participation in this program presented too high a risk for biased findings. For the remaining six candidate districts, we reviewed the following:

- Publicly available data on household and population variables (e.g., infrastructure and literacy rates) (National Institute of Statistics Rwanda, 2022)
- District development strategies and associated district imihigos
- P3 Kinyarwanda Learning Achievement in Rwandan Schools scores (sample is representative at province level only), 2022–2023 school year
- P6 Kinyarwanda leaving exam average scores and distributions (census sample), 2022–2023 school year (National Examination and School Inspection Authority, 2023a, 2023b)[3]

2 Instructional leadership is defined as the full set of activities that an actor might take to improve foundational learning outcomes. Leadership can be exhibited by all layers of the middle tier but is often the responsibility of senior staff within the middle tier. Instructional support: defined as activities associated with providing direct instructional support to teachers that aims to improve mastery of content, pedagogical skills, classroom management practices, and other activities leading to improved student foundational learning outcomes. These activities are typically performed by school-facing staff.

3 P6 Kinyarwanda pass rates improved 6% and 7.5% between 2021 to 2022 for Ngoma and Rulindo, respectively, with a total pass rate of 99% and 97% in 2022, respectively.

Based on these data, Ngoma and Rulindo were provisionally selected. A review of key population and infrastructure data found that these two districts were well-matched and did not have resources beyond the national average (Table A1).

Table A1. *Key population and infrastructure data*

Control Variable	National	Northern	Eastern
		Rulindo	**Ngoma**
Population density	503	635	498
HH with electricity	61	54.7	58.3
HH member owns cell phone	78.1	77.8	71.4
% of HH with dirt floors	60.4	70.8	60.9
% pop over 21 who use internet (both sexes)	16.9	11	9.2
Adult literacy rate (+15)	69.7	71.1	70.5
Completed upper secondary school	7.1	5.7	4.4
Never attended school	16.7	14.1	17.7
Schools with internet connection	38	57	40

With this district selection complete, school data were reviewed and schools with upper secondary or technical and vocational education cycles, private schools, boarding schools, urban schools, and schools that were started in 2020 or later were excluded. For the remaining schools, the proportion of students scoring in the top two P6 leaving exam levels were analyzed by sector to identify the school sample (four schools per district). Within schools, no selection was required for the head teacher or SBM, and when there was more than one P1, P2, or P3 Kinyarwanda teacher, the selection was based on availability for the survey.

In summary, identifying positive deviant districts is complex for several reasons. There is a temporal distance between district leadership for foundational literacy and students' learning outcomes. A district's decision to prioritize foundational literacy and create more robust instructional leadership will not manifest immediately in student learning outcomes—it will invariably take some time. Moreover, districts have varying degrees of control over the range of factors that lead to improved learning outcomes, and we know that factors outside of the education system, such as poverty levels, and parental characteristics and engagement, have a strong effect on student learning outcomes. Other factors within the education system function independently of districts (e.g., quality of curriculum, overall resourcing, and recruitment of teachers) and yet have a material effect on student outcomes. The information referenced in the selection process has limitations in terms of identifying the specific contribution that district actors are making to their districts' success, but in sum, we selected districts that have been highlighted by education system experts as being committed to improving foundational literacy outcomes and that have quantitative data showing improvements in P6 Kinyarwanda scores, as well as non-preferential demographic and geographic factors.

ANNEX B: Fielding the Study

Research Approvals and Ethics

The study received approval from and was overseen by the National Council on Science and Technology and the Rwandan National Ethics Committee. All data collectors were trained on research ethics. All respondents provided voluntary informed consent. The study was delivered in compliance with Rwanda's Data Privacy and Protection Act of 2019. Personally identifiable data were and continue to be properly managed and kept confidential. The reporting of findings is structured in a manner that protects the anonymity of respondents at the district level.

Instrument Piloting

There were nine unique interview guides and eight unique surveys deployed in this study, with triangulation of domains and items as appropriate. The guides and surveys were originally developed in English by the research team and subsequently translated into Kinyarwanda and back translated into English by the data collection partner. The translations were reviewed during data collector training for accuracy and revised accordingly. The English and Kinyarwanda versions of the surveys were coded in SurveyCTO, with multiple rounds of testing throughout training and piloting by both the research and data collection team.[4]

A pilot plan was developed and implemented to ensure that translations were accurate; that interview and survey questions were relevant, well-understood, and well-structured; and that the administration fit within the planned interview and survey time allocation. All interview guides were piloted except for the guides for the NESA inspectors, mayors, and vice mayors given the overlap in items with other guides. Cognitive debriefs were conducted after each interview pilot to assess the relevance, comprehension, and quality of phrasing for the interview questions. All surveys were piloted with all respondent types, with a subset of respondents responding to specific cognitive debrief questions. Particular attention was given to the pilot of the adapted social network measurement given the novelty of the measure and associated protocols.

For all interview guide and survey pilot administrations, data collectors documented the responses to cognitive debrief questions and noted difficulties and comprehension issues for the surveys in a structured format. The data collection team and principal investigator met several times to review the pilot administration results and agree on adjustments to the instruments and protocols. The primary adjustments included updated translations, the conversion of open-text items to items with set response options, the refinement of response options for surveys, and a general reduction in the length of the interview guides and surveys. Additionally, the research team reviewed all pilot data to identify the degree of variation in response patterns, responses that were not aligned with the focus of the question, and completeness and cogency of open-text responses. The interview guides and surveys were further refined after the pilot data review, with translation and SurveyCTO coding updates.

4 Interview guides and surveys available upon request.

Training and Field Preparation

The data collector training plan was co-developed by the principal investigator and the data collection partner (Laterite). The training was partitioned into two phases. The first phase focused on training for district- and sector-level data collection and was led by the principal investigator for a period of five days. The second phase of training, which was four days in duration, focused on school-level data collection and was led by Laterite with virtual support by the principal investigator.

Prior to data collection, all participants were identified and informed about upcoming data collection activities. Respondents at the district and sector level were contacted individually via phone, and arrangements for interview and survey times were made. A team of data collectors visited each of the eight schools to collect information about the head teacher, SBM, a member of the PTA, and three language teachers from lower primary to complete the listing for school-based respondents.

Data Collection

Data collection was conducted in two waves. The first wave focused on the district-level respondents and took place May 27–30, 2024, with two days per district. The data collection team included three pairs of data collectors and two field supervisors. Generally, surveys were conducted in the mornings and interviews were conducted in the afternoons, using paired teams. For interviews, one data collector led the interview, while the other was responsible for documenting responses; the full interview was recorded. Given the seniority of district- and sector-level respondents and their job responsibilities, securing appointments for interviews and surveys was challenging, and additional time was added to complete the sample following the primary data collection phase.

The SEIs were gathered in a workshop-like format for four half-days (two half-days per district) to administer the survey and train the SEIs on the time-tracking survey. The principal investigator and Laterite data operations associate and country data manager conducted the time-tracking survey training.

The second wave of data collection focused on school-level data collection and took place June 10–12, with a total of eight data collectors, supported by the Laterite data operations associate and country data manager.

The data operations associate, with support from the field coordinators, received information from the spot-checks and daily debriefs on the progress of data collection, updates on the field plans, and information about any challenges faced that could impact the quality of the data. Flagged issues were followed up on by the field team with the support of the senior data quality manager and the principal investigator.

ANNEX C: Data Capture, Cleaning, and Analysis

Data Capture

Over the course of data collection, survey data were uploaded to the Laterite SurveyCTO server at the end of each workday. In-office high-frequency data quality checks were undertaken by the Laterite team to track the progress of data collection, in particular completion status by location, respondent, and data collector. Additionally, the Laterite team checked submissions for survey duplication, skipped questions, and missing responses. Respondents' names from the listing were cross-checked with the submissions to ensure that the listed respondents were the same as the final sample.

For school surveys (with the head teachers, teachers, and SBMs), sections of the surveys (emphasis on open-text questions) were audio-recorded for quality-control purposes. No issues were identified from the audio audit, and the answers in the dataset matched what was captured in the audio recordings.

For the 10-day time-tracking survey submitted by SEIs, the Laterite team checked the submissions daily for completion rates, inconsistencies between the date values (the date on which the survey was filled out) and the time values (the date for which they were reporting the time spent on different activities), and alignment of time categories reported (e.g., "in-person school visits" and "travel for school visits"). Any incomplete submissions or inconsistencies were noted and resolved directly with the relevant SEIs.

Data Preparation

Following the conclusion of all data collection activities, Laterite cleaned the datasets using Stata 15. The data cleaning exercise involved transforming the raw csv datasets downloaded from SurveyCTO into de-duplicated, clean datasets. Laterite employed data cleaning steps for each of the eight unique survey instruments in the study (as applicable), including the following:

- Identifying and cleaning duplicates
- Cleaning respondent identifications (identifiers and names)
- Identifying and cleaning missing values
- Identifying and cleaning outliers
- Cleaning location data per corrections made by respondents
- Translating free-form values recorded in Kinyarwanda
- Cleaning dummy variables' values
- Renaming, labeling, ordering, and assigning the correct variable type (numeric or text)
- Dropping unwanted variables
- De-identifying the data

The clean, de-identified survey datasets were stored in a secured Google Drive folder in accordance with the data protection agreement set in place during the inception of the project. After the data preparation and cleaning was finished, the research team identified that data collectors had selected a large proportion of "other" response options with corresponding open-text responses. These text responses were reviewed and were used to further clean the data by selecting appropriate response options (if listed) or generate additional response options as relevant. Sixteen questions in the DEO, SEI, head teacher, and SBM surveys required recoding of "other" responses. Thirteen questions in the teacher survey and seven questions in the DDE surveys required recoding of "other" responses.

Key informant interviews were recorded, transcribed, and translated from Kinyarwanda to English by Laterite. In total, 15 interviews at the district and sector level (7 in Ngoma and 8 in Rulindo) and 8 PTA representative interviews (4 per district) were processed. Open-text responses in the survey were written on tablets in Kinyarwanda by survey data collectors during data collection and then translated into English by Laterite for qualitative analysis.

Data Analysis

QUANTITATIVE

Based on the quantitative data analysis plan, survey responses were tabulated for each survey question, both overall and by district. The time-use questions were tabulated by district, by day, and by respondent. To understand the frequency of activities at the day level, we included activities that were mentioned as part of either the morning or afternoon in the by-day analysis. In the visualization of the time-use data, "in-person school visits" and "travel for school visits" were combined.

The adapted social network analysis used a multi-stage process. Responses to the questions were first tabulated, both overall and by district, and then used to create a numeric index representing the strength of the responses. A response of "low" was assigned a value of 1, "medium" a value of 2, and "high" a value of 3. The index was generated as a weighted average using the following formula:

$$Index = (Percent_{Low} * 1) + (Percent_{Medium} * 2) + (Percent_{High} * 3)$$

A higher index value represents more intense responses.

QUALITATIVE

The interview transcripts were analyzed and coded in NVivo software. The code list draws on the domains in the study's conceptual framework (e.g., accountability, priorities, etc.), as well as specific questions determined to be important to the analysis (e.g., district challenges, relationships with parents, etc.). The codes and sub-codes are presented in Table A2. During the analysis, two additional codes were identified and added: (1) coordination and (2) monitoring and supervision.

Table A2. *Codes used for qualitative analysis in NVivo*

Accountability & incentives	Prioritization
Coordination	▶ District priority education outcomes
Data engagement	▶ Individual priorities for education
District/sector initiatives & innovations	▶ Education sector importance
District challenges	▶ Setting priorities
District office profile	Relationships with stakeholders
District successes	▶ Community
Influence & decision-making	▶ MINEDUC & REB
Knowledge & skills	▶ Parents
Leadership & management	Resources
Monitoring & supervision	Responsibilities & norms
Trust	Time use

After the coding of the interviews, a series of analytical memos were developed to capture descriptive, holistic, and thematic analyses, as described by Mihas (2022). Each memo represents a different angle or way to "slice" the data, with the goal of meaning-making through engaging with respondent stories in different ways and triangulating practices and beliefs across roles and districts.[5] Codes were developed for respondent roles to be used in reporting to respond to concerns about anonymity given the small sample for several respondent types. These are detailed in Table A2 in Annex D. These codes are referred to in the study findings to address two key dimensions of qualitative research quality (Hanson et al., 2019). First, the codes reflect the *confirmability* of the findings, allowing the reader to trace the link between the data and the findings. In addition, citing multiple sources for a finding represents that the finding was triangulated across several respondents, improving the report's *credibility*.

The authors reflected on the findings from the quantitative and qualitative data throughout the analysis stage and identified areas for integration, triangulation, and further investigation. The report identifies where the quantitative and qualitative data align or differ, with discussion about implications.

5 See Annex xx for qualitative memos.

ANNEX D: Respondent Codes Used in Qualitative Analysis

Table A3. *Roles and number of respondents, with codes used for report referencing*

Group	Roles included (# of respondents)	Qualitative data source	Code for report referencing
National			
NESA inspector	National Examination and School Inspection Authority inspector (2)	In-person interview	NESA
District			
Senior leadership	Mayor (2); vice mayor of social affairs (2); director of planning, monitoring, and evaluation (2); director of administration and finance (2); district executive secretary (2)	In-person interview	SL (1–7)
Technical leadership	District director of education (2); district education officer (primary education) (2)	Enumerated open-text items within a survey	TL
Sector			
Senior leadership	Sector executive secretary (2)	In-person interview	SL (1-7)
Sector education inspectors	Sector education inspectors (24)	Enumerated open-text items within a survey	SES
School and parents			
School leadership	Head teachers (8)	Enumerated open-text items within a survey	HT
School-based mentors	School-based mentors (8)		SBM
Teachers	Primary teachers (24)		T
Parents	District parent representative (1); parent-teacher association representative (8)	In-person interview	PTA

ANNEX E: Study Limitations

Design and Measurement

Positive deviance studies, by their very definition, are exploratory in nature and are premised on the idea that there are capacities, behaviors, and norms that have not previously been identified (either individually or operating together) that are important to achieving certain outcomes. It is within this framing that we developed the respondent sampling and measurement strategy for this study. This was also the motivation for using both qualitative and quantitative data collection methods to gather information across more than 10 measurement domains with 15 different respondents within each district.

We referenced existing theories about strongly performing education systems and borrowed from other disciplines about organizational effectiveness, behavior change, and service delivery to develop the measures and identify respondents. And while we feel that we captured a comprehensive view of the study districts, it is possible that there are essential capacities, behaviors, and norms that are important in making these districts strong leaders for foundational learning that we did not capture. At a more granular level, it is important to note that most of our survey data are self-reported and, as such, vulnerable to social-desirability and recall biases. We made efforts to phrase questions to minimize these biases, but the influence of these biases on the findings is still a possibility. The interview questions and surveys were piloted to check for translation and comprehension.

Additionally, we have summarized the development project interventions targeting improvements to foundational learning, with a focus on engagement of the middle tier, but we are not able to identify the specific policies or programs that have contributed to the study districts' current behaviors.

Sample

Our sample of two districts is certainly not a representation sample of the 30 districts in Rwanda—nor is it intended to be. Positive deviance studies focus on learning from the outliers rather than positing that the sample is representative of the whole. In that manner, our sample of two districts supports the research objectives.

Given that we collected data from only these two districts, we are not able to say how the two districts in this study are similar to or different from the other districts in Rwanda. Again, that is typically not a design requirement for a positive deviant study, but it bears mentioning in terms of interpreting the findings. For the district- and sector-level respondents, the study's sample is either census-based (includes all respondents of that type, such as the mayors, vice mayors, DDEs, etc.) or nearly so (e.g., SEIs sampled are 12 of 14 in one district and 12 of 17 in the other district). This is not the case for the school-level respondents. We sampled four schools in each district, which is not a representative sample. Additionally, these schools were chosen based on their strong performance (within the school inclusion criteria) and, as a result, the sample is not representative of the schools or school-based staff within those districts).

Selection

Given the positive deviance design of this study, we focused a great deal on the selection of the districts to be included in the study. As noted in greater detail in the study design section, selection for positive deviance is fundamental to the validity of the study. The clarity of selection variables for positive deviance studies can vary a great deal depending on the evidence base about what constitutes a positive deviant, the proximity of the subject under study to the outcomes of interest, and the availability of reliable data aligned with selection variables or outcomes of interest. In our case, we feel confident that our selected districts do not enjoy any special advantage over other districts in Rwanda, which is a key requirement for positive deviant selection. The information referenced in the selection process has limitations in terms of identifying the specific contribution that district actors are making to their district's improvements in foundational learning, but in sum, we selected districts that have been highlighted by education system experts as engaging in practices that improve foundational literacy outcomes and that have quantitative data showing improvements in P6 Kinyarwanda scores, as well as non-preferential demographic and geographic factors.

ANNEX F: Technical Assistance Programs

This discussion begins by outlining a series of USAID-funded projects (given the focus on foundational learning) and then touches on several other development projects that are germane to the experiences of middle-tier actors working to support education in Rwanda.

USAID funded a series of programs specifically focused on improving foundational learning outcomes over the past 15-plus years in Rwanda, beginning with the Literacy, Language and Learning (L3) project that operated from 2011 to 2017. The L3 program focused on a range of pathways to improving outcomes, including curricular revisions, the provision of teaching and learning materials, the utilization of interactive audio instruction, the provision of teacher preparation and coaching, engagement with communities to expand learning opportunities outside of schools, standards development, and support to national actors to improve capacity. The L3 project also integrated inclusivity goals into its work.

L3 worked in 12 of the 30 districts in Rwanda.[6] With respect to the middle tier (i.e., districts and sectors), L3 engaged DEOs and SEIs[7] throughout these activities, primarily to elicit their support in rolling out and monitoring the school- and community-based activities. Over the course of L3, DEOs (12) and SEIs (163) were trained on the new curriculum and materials alongside teachers and involved in the planning and preparation of school general assembly committee trainings and the organization and delivery of literacy campaigns and literacy days in districts. Based on a review of L3 project reports, DEOs and SEIs were consistently engaged in planning and training, but the focus was primarily on getting the concurrence from DEOs and SEIs to support what the project was implementing, rather than the DEOs and SEIs being the central agents of change. There is little reference to engagement with DEOs and SEIs about their specific roles and expectations to support improved practices in the classroom. The orientation toward DEOs and SEIs was focused on these actors as project implementation support, with an emphasis on getting structures, such as the school general assembly committees, to execute the project guidance. For example, SEIs were "trained and supported to monitor the action plans of the SGACs using checklists provided by L3. Regular follow-up M&E meetings were held with the [SEIs] to review implementation, to share best practices and to discuss challenges and suggest solutions" (USAID, 2018).

The L3 results framework does not explicitly mention capacity development of the middle tier as a goal of the project, though strengthening the national ministry's capacity is included as one of the project goals. This is not a critique of the L3 design but rather a reflection on the level of focus on strengthening the middle tier at that point in time.

The successor to the L3 project was Soma Umenye (read and understand). Launched in 2016, this US$72 million activity sought to increase early grade reading outcomes by distributing teaching and learning materials, improving classroom instruction and supervision, increasing the use of assessment and remediation, and strengthening systemic capacity to deliver early grade reading instruction. Soma Umenye was part of USAID's larger Literacy Enhanced Across Rwanda Now project, which included a community engagement activity (Mureke Dusome) and a pre-primary activity (Itegure Gusoma). The scale of Soma Umenye was national, engaging over 3,000 public and government-aided schools across all 30 districts, and more than 4,000 administrators and school leaders, as well as more than 18,000 grade 1–3 teachers and two million students. The scope of the activity in many respects was similar to that of L3, with a focus on improving the curriculum and lesson plans,

6 One of this study's districts (Rulindo) was covered by the L3 program.

7 SEIs were called sector education officers at the time of the L3 project.

developing teaching and learning materials, building the skills of school leadership and teachers, and promoting gender-responsive and inclusive education delivery. Additionally, Soma Umenye had a more pronounced focus on supporting the development of a comprehensive assessment for early grade reading and linking that assessment data to school support and remedial opportunities for students.[8]

The Soma Umenye project engaged district- and sector-level officials in the design and implementation of project activities and recognized that the middle tier was a critical pathway to sustainability in general. DEOs and SEIs, along with other system actors, were recruited to be part of a national reading training team, and the project engaged DEO and SEI support to encourage and monitor school-based professional development and instructional support that was to be led by the head teacher or director of studies at the school level.[9] DEOs and SEIs were trained on instructional strategies to improve foundational literacy outcomes and, in some cases, delivered training to school leaders, though they were not expected to deliver teacher professional development or coaching directly. They were, however, expected to engage more directly with the classroom-based reading assessment (LEGRA),[10] training teachers on administration, ensuring that students were being assessed and that data were being used to inform instruction and support specific students, and facilitating district and sector meetings to discuss results. The project also facilitated the use of data and digital resources by DEOs and SEIs by providing tablets and laptops with training to review LEGRA data.

As with L3, Soma Umenye recognized DEOs and SEIs and other district and sector actors as critical to the success of the program but did not explicitly identify capacity building, policy reforms, or other initiatives aimed at the district or sector level in their results framework.

The follow-on—and current—primary foundational learning program funded by USAID in Rwanda is Tunoze Gusoma. This US$30 million program (2021–2026) builds on the two programs discussed above, with an additional emphasis on systems strengthening, early childhood education, inclusivity, and social emotional skills development. Building the capacity of and engaging with DEOs and SEIs is a major component of the systems strengthening aspect of this project. With SEIs specifically, Tunoze Gusoma engages SEIs intensively in a number of ways (see Figure A1) and has worked with national and district leadership to include foundational literacy instructional observation and coaching frequency data into SEIs' performance contracts. Project reports indicate that SEIs are increasingly viewed as pedagogical coaches and mentors rather than inspectors and that SEIs are taking more ownership and are better capacitated to conduct lesson observations and reflect on the findings with school leadership and teachers. Joint coaching visits (with SEIs and Tunoze Gusoma staff) and consistent collection and use of data cited above have been instrumental to these developments.

Additionally, the Tunoze Gusoma project includes "education systems management strengthened for improved literacy outcomes" in its top-line project goals, further illustrating the increasing focus on systems strengthening in Rwanda.

Briefly, it is important to note that other development partners, including the Foreign Commonwealth and Development Office, the Global Partnership for Education, the Japanese International Cooperation Agency, the Mastercard Foundation, UNICEF, and the World Bank, among others, have also made important contributions to improving foundational learning and the systems that support the delivery of foundational learning in Rwanda. Many of these partners have focused either directly on improving

8 This list is illustrative of the primary focus of Soma Umenye and is not meant as an exhaustive description.

9 Soma Umenye developed a coaching protocol and lesson observations to support this school-based coaching. Over the course of the project, Soma Umenye saw a steady increase in the frequency of school-based coaching, according to teachers interviewed in project monitoring. While coaching was less infrequent in 2019 (only a third to a half of school-based coaches were coaching teachers), in 2021 the majority (51%) of teachers reported that their school-based coaches were coaching them.

10 LEGRA is an adaptation of Room to Read's teacher-administered, classroom-based early grade reading assessment. The assessment includes a set of EGRA-like subtasks and is administered twice yearly or termly by teachers (sometimes with the support of coaches) to all students. Coaches jointly analyze the results with the teachers to identify adaptation and support strategies based on class and student level results.

foundational learning or have supported development of policy improvements and leadership capacity that have bolstered foundational learning initiatives.

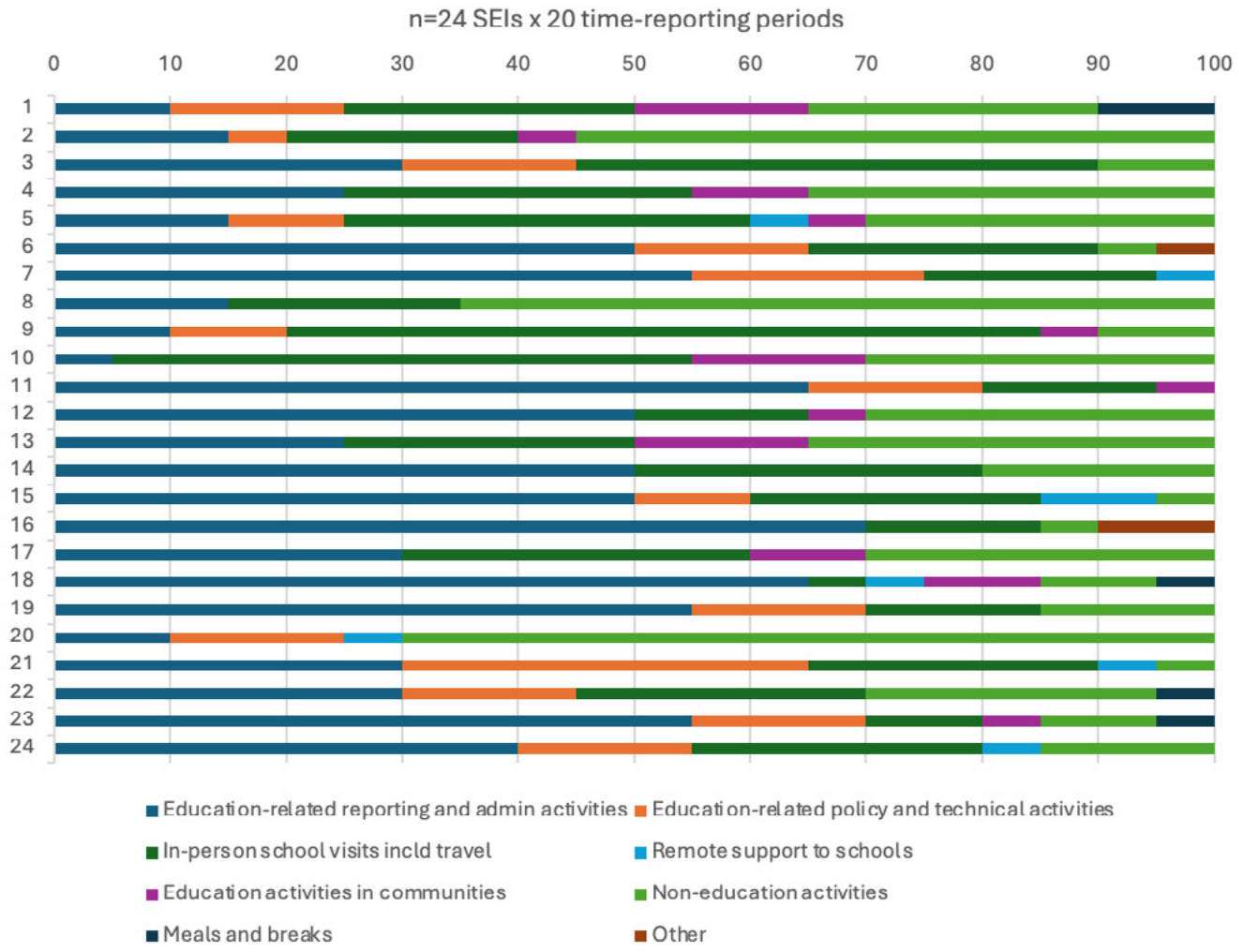
Figure A1. *Tunoze Gusoma's engagement with SEIs*

- Training on how to support literacy and socio-emotional instructional improvements
- Inclusion in all capacity-building activities with school-based staff
- Joint school support visits with Tunoze project staff
- Piloting and use of fidelity of implementation tools
- Training on how to use data to identify and support struggling schools
- Capacity strengthening of SEIs to organize and conduct sector-level school leaders' professional learning communities
- Participation in district review meetings part of collaborating, learning, and adapting process
- Engagement of SEIs as representatives in project planning, activity design, material development, and validation

In sum, looking across the most substantive development projects focused on improving foundational learning outcomes, we see a continued focus on the fundamentals of foundational learning delivery and consistency in the conceptualization of what makes an effective literacy program (e.g., teaching, text, tongue, test, and time). We also see an evolution of the delivery approach that has progressively focused more on building the capacity of system actors to deliver and sustain the program components. This focus has increasingly engaged middle-tier actors as instrumental to the support of teachers and the improvement of instructional quality. This work has been undergirded by consistent messages from the national level about the priority of importance of improving foundational learning outcomes.

ANNEX G: Additional Time-Use Findings

Figure A2. *SEIs' report: Proportion of time-reporting periods, activity spent most time on, by SEI*



ANNEX H: District Selection Interview Questions

Note: This interview protocol intentionally begins with broad questions to understand how respondents are thinking about what constitutes "success." The protocol then moves to more specific criteria for success aligned with the definitions embedded in the study design.

1. **ASK:** Which district education offices seem to be **more successful** than others in improving foundational literacy outcomes?

   1.a. FOLLOW-UP: Why do these districts come to mind?

   1.b. FOLLOW-UP: In what ways are they more successful?

   1.c. FOLLOW-UP: [IF MORE THAN ONE DISTRICT] Are the districts successful in different ways?

   At this point—decide whether to stay with the original districts that they mention or whether to prompt them to think about other inclusion criteria for success.

2. **ASK:** Which districts seem to demonstrate the **strongest leadership and advocacy** toward improving foundational literacy outcomes?

   2.a. FOLLOW-UP: In what ways do they demonstrate this leadership and advocacy?

   From here forward—specify the focus for questions and set the framing for different levels and different respondents.

   STATEMENT: Now I want to ask a few more specific questions about certain actions by districts. When responding, you can consider the districts you already mentioned or include additional or different districts in response to these specific questions.

3. **ASK:** Which districts seem to **prioritize foundational literacy when allocating resources or making staffing decisions**?

   3.a. FOLLOW-UP: In what ways have you seen them prioritize foundational literacy when allocating resources?

   POSSIBLE PROMPTS:

   - Funding for materials
   - Staffing (positions)
   - Staff development focus

4. **ASK:** Which districts seem to **set expectations about improving foundational learning outcomes and communicate those expectations** to their teams, schools, and communities?

   POSSIBLE PROMPTS:

   - District-specific goals for learning outcomes
   - Advocacy with public and private national and local entities (including communities) to improve foundational learning
   - Development of incentives for schools to improve foundational learning outcomes
   - Integration of foundational learning into district-wide events and activities

5. **ASK:** Which districts seem to **provide high-quality support to schools and teachers** that is focused on foundational literacy?

   POSSIBLE PROMPTS:

   - Teacher professional development for foundational learning
   - Instructional coaching to teachers
   - Development or implementation support for communities of practice or professional learning communities focused on foundational learning
   - Promotion of and support for learning and reflection process at the school level

6. **ASK:** Which districts seem to monitor instructional quality and outcomes for foundational literacy effectively?

   POSSIBLE PROMPTS:

   - Collection and use of data about foundational literacy outcomes (conducting formative assessments, use of summative assessments data, etc.)
   - Use of instructional quality and learning outcome data to target support to schools
   - Observation of foundational literacy lessons
   - Feedback to teachers about how to improve instruction for foundational literacy (pedagogy, delivery of content, use of time, classroom management, student engagement strategies)
   - Discussion of student learning outcomes with school system, parents, etc.
   - Development or improvement of observation and monitoring tools focused on foundational learning

7. **ASK:** Coming back to the original districts that you mentioned as being successful, based on these criteria we discussed, does the list you provided change at all?

   7.a. FOLLOW-UP: How does it change? Why adding districts? Why removing districts?

ANNEX I: Social Network Analysis Measure

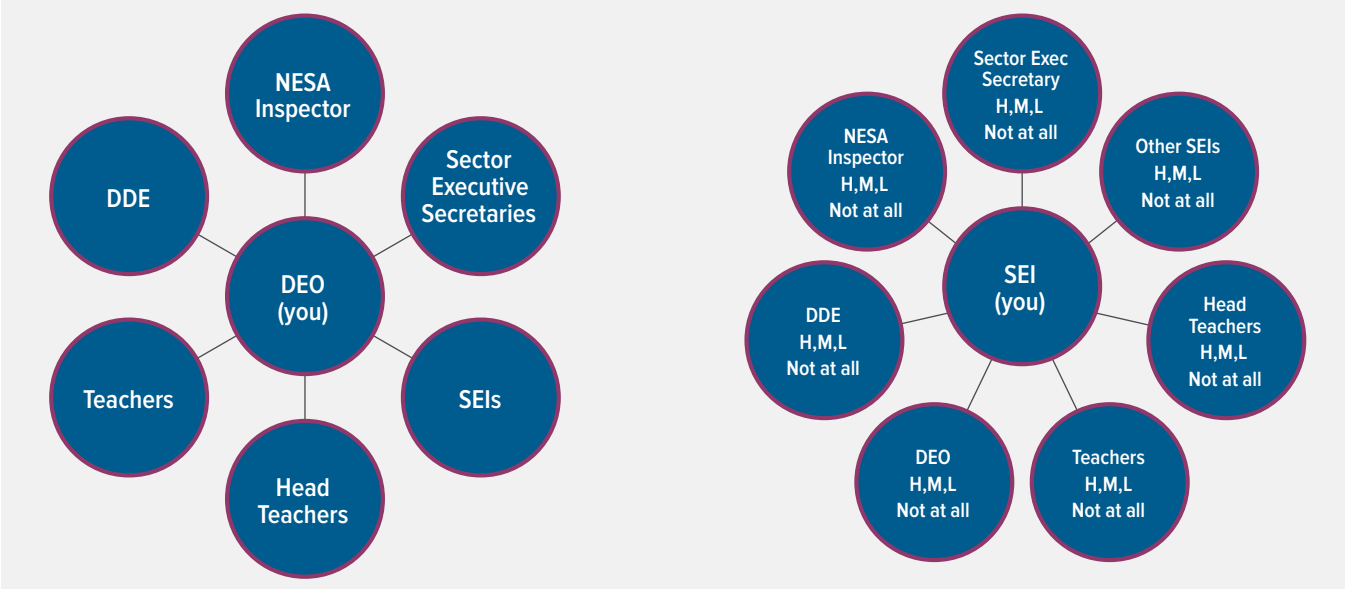
As part of this study, we developed a new measure inspired by social network analysis and adapted to focus on seven different domains relevant to our study questions. The social network analysis tool was piloted with six SEIs using a pilot protocol that included cognitive debriefs focused on comprehension, understanding how respondents were defining key terms, and examples of events or references that respondents were using. The pilot found strong comprehension and appropriate definitions and references and variation in responses.

The measure was administered as part of an in-person orally administered survey to DEOs and SEIs. The measure includes a set of seven questions about aspects of relationships and connectivity with DEOs and SEIs colleagues. The questions were as follows:

1. What is the strength of your overall relationship with the following colleagues?
2. What is the frequency of discussions about how to improve foundational literacy outcomes?
3. To what extent do you rely on the following people for technical advice about how to improve foundational literacy outcomes?
4. What is the level of influence the following people have on how you spend your time/your priorities?
5. What is the level of influence you have on how the following people spend their time/their priorities?
6. To what extent do you rely on the following people if you have a challenge with schools or teachers?
7. What is the likelihood that you would go to the following people for advice for a personal problem?

For DEOs and SEIs, we asked each of these questions, focusing on the colleagues shown in Figure A3.

Figure A3. *Social network analysis respondent prompt*



ANNEX J: Key Informant Interview Questions, by Respondent

	A	B	C	D	E	F	G	H	I
Role	Mayor	Vice mayor	District executive secretary	District director planning /M&E	District director of finance	District parent committee	Sector executive secretary	NESA	PTA parent representative

Question in English	Question in Kinyarwanda	A	B	C	D	E	F	G	H	I
Which sector (e.g., health, economic development, education) is this district most committed to in terms of allocating resources?	Ni uruhe rwego (urugero: Ubuzima, Iterambere ry'ubukungu, Uburezi) aka karere gahyiramo imbaraga ndetse n'ubushobozi?	x	x	x	x	x				
How does education fit into these priorities?	Nihe uburezi buhurira n'urwo rwego mushyiramo imbaraga cyane?	x	x	x	x	x				
How are decisions made in this district about what resources (for example, teacher hiring, materials, training) are allocated to education?	Ni gute ibyemezo byerekeye ibicyenewe ndetse n'ubushobozi bugenerwa uburezi, bifatwa muri kano karere. (urugero: Guha akazi abarimu, ibikoresho, amahugurwa)?	x	x	x	x	x	x	x	x	
Based on your understanding, what does this district prioritize in terms of educational outcomes? What are the most important education outcomes for this district? [PROMPT FOR ALL OPTIONS THEY CAN THINK OF]	Ukurikije uko ubyumva, Ni izihe ntego aka karere gashyiramo imbaraga nyinshi mu b ijyanye n'uburezi? N'izihe ntego z'ingenzi mu burezi muri aka karere? [GORAGOZA KUGIRANGO UBASHE KUBONA IBISUBIZO BYOSE BISHOBOKA]	x	x	x	x	x	x	x	x	
Follow-up for SES:	Ibi Bibazwa Umunyamabanganshingwabikorwa w'umurenge							x		
a. Are these priorities the same for your sector?	a. Ese izo ntego z'uburezi ku rwego rw'akarere ni zimwe n'izo mu murenge wanyu?							x		
b. If not, please elaborate on how they are different and how those decisions were made.	b. Niba ataribyo, watubwira birambuye uburyo bitandukanye ndetse n'uburyo ibyo byemezo bifatwa							x		
What or who is the biggest influence in setting these priorities?	Ninde/N'iki wavugako agira/kigira uruhare runini mu gushyiraho intego z'uburezi mu karere kanyu?	x	x	x	x	x	x	x	x	
Can you please describe your leadership role with respect to education? What do you do to support improvements in education outcomes?	Watubwira birambuye, mu inshingano zawe nk'umuyobozi, uruhare rwawe mubijyanye n'iterambere ry'uburezi? Niki ukora kugirango ushyigikire iterambere ry'uburezi?	x	x	x			x	x	x	x
Data collector note: Emphasize "in your role, individually, as a leader" (rather than the office's role)	AMABWIRIZA: Sobanurako ijambo " Mu kazi kanyu" tuba tuvuga wowe kugiti cyawe (bidasobanura wowe ndetse n'abandi mu korana mu biro)	x	x	x			x	x	x	x
In your own leadership, advocacy, and planning, what grades and subjects do you prioritize?	Mu miyoborere yawe bwite cg mu buvugizi no gitegura, ni iyihe myaka y'amashuri ndetse n'amasomo mwibandaho cyane?	x	x	x	x	x				
Why do you prioritize in that manner?	Ese kuki aribyo mwibandaho?	x	x	x	x	x				
To what do you attribute this district's success in improving early grade reading/foundational literacy outcomes? [Prompt for details]	Niki cyangwa se ninde mucyesha uyu musarururo wo guteza imbere uburezi bw'ibanze/mu gusoma no kwandika mu icyiciro cya mbere cy'amashuri abanza mu karere kanyu?	x	x	x				x	x	
Who do you think should be most accountable for improving students' early grade reading/ foundational literacy outcomes? (consider all groups from national, district, school and community levels)	Utekereza ko arinde ukwiye kubazwa cyane umusaruro mu guteza imbere uburezi bw'ibanze/ mu gusoma no kwandika mu icyiciro cya mbere cy'amashuri abanza? [Tekereza mu nzego zose, ku rwego w'igihigu, akarere, amashuri, ndetse n'umuryango mugari/Mu mudugudu]	x	x	x			x	x		x
Can you describe how you work with MINEDUC/REB?	Wansobanurira uburyo ukorana na REB/INEDUC	x	x	x				x		

Question in English	Question in Kinyarwanda	A	B	C	D	E	F	G	H	I
PROMPT: What are some examples of how you work together?	SOBANUZA: Ni izihe ngero zigaragaza uburyo ukorana na MINEDUC/REB?	x	x	x				x		
How would you describe your office's relationship with MINEDUC/REB?	Wadusobanurira imikoranire n'imibanire y'ibiro byanyu na MINEDUC/REB?	x	x	x				x		
PROMPT: What are some examples of how you work together?	SOBANUZA: Ni izihe ngero zigaragaza uburyo mu korana							x		
How would you describe your office's relationship with the DDE/DEO's office?	Mwadusobanurira imikoranire y'ibiro byanyu bigirana na DDE/DEO?							x		
How would you describe your office's relationship with the sectors (Sector Executive Committee, SEIs)?	Mwadusobanurira imikoranire y'ibiro byanyu bigirana na SEIs?		x							
When thinking about what it would take to improve early grade reading/foundational literacy outcomes **even more** in your district, what would your top three priority actions or resources be?	Iyo utekereje ibisabwa mu guteza imbere uburezi bw'ibanze/gusoma no kwandika mu icyiciro cyambere cy'amashuri abanza mu karere kanyu. Ni ibihe bitatu by'ingenzi cg bikeneye ubushoboz byihutirwa kurusha ibindi?	x	x	x			x	x	x	x
Can you please describe your role with respect to planning and M&E for education?	Mwatubwira birambuye uruhare rwanyu mu igenamigambi ry'uburezi.				x					
Can you please describe your role with respect to financing/resource allocation for education?	Mwatubwira birambuye uruhare rwanyu mubijyanye n'ingengo y'imali n'ubushobozi bishyirwa mu uburezi?					x				
Do you feel like your district has enough resources to improve learning outcomes?	Utekerezako akarere kanyu gafite ubushobozi buhagije mu kuzamura ibipimo by'imitsindishirize y'abanyeshuri?					x				
Who in this district is the strongest leader/ advocate for improving early grade reading/ foundational literacy?	Ninde witangira uburezi bw'ibanze/gusoma no kwandika mu icyiciro cyambere cy'amashuri abanza mu karere kanyu?						x		x	x
Regarding your support for this district. I have a few questions about priorities and how you spend your time especially related to your support for this district.	Kubyerekeye uruhare rwawe hano mu karere. Mfite ibibazo bike ku ntego zawe (priorities) n'uburyo ukoresha umwanya wawe cyane cyane ku bijyanye n'ubufasha utanga muri kano karere.								x	
a. How do your priorities get set?	a. Nigute intego zawe (priorities) zishyirwaho?						x		x	x
b. What do you spend most of your time on?	b. Ni ibihe bikorwa bigutwara umwanya munini?								x	
c. What and who influences you to prioritize your work in that manner?	c. Ni iki/ ninde kigena/ugena uko ukoresha umwanya wawe muri ubwo buryo?								x	
d. According to your best estimate, in a typical month, how many schools do you visit?	d. Ugereranije, mu gihe cy'ukwezi, ni inshuro zingahe uzura ibigo by'amashuri?								x	
e. What do you typically do when you visits schools?	e. Ubusanzwe, ni ibihe bikorwa ukora iyo wasuye ikigo cy'ishuri								x	
f. What do you think you should spend more time on?	e. Ni ibihe bikorwa utekerezako wagakwiye guha umwanya munini?									
Can you tell me about your collaboration and relationship with the DDE and DEO for pre-primary/primary in this district?	Mwambwira biramnbuye ku mikoranire/ n'imibanire y'akarere kanyu na DDE [diregiteri w'uburezi mu karere] na DEO [Umukozi ushinzwe uburezi bw'ibanze mu karere]?									
Can you tell me about your office's collaboration and relationship with the SES's office and the SEIs in this district?	Mwambwira biramnbuye ku mikoranire/ n'imibanire y'ibiro byanyu n'Abanyamabanga nshingwabikorwa, abakozi bashinzwe uburezi mu mirenge)?									
How would you describe the information that you have about student Kinyarwanda and English learning outcomes/scores?	Mwambwira birambuye amakuru mufite yerekeye imitsindire y'abanyeshuri mu isomo ry'ikinyarwanda n'icyongereza?									
a. Where do you get these data from?	a. Ayo makuru uyakurahe?									
b. How do you act on these data/what decisions do you make based on these data?	b. Ayo makuru uyamaza iki/ ni ibihe byemezo ufata ushingiye kuri ayo makuru?									
c. Do you know what the official benchmarks are for P3 Kinyarwanda oral reading fluency?	c. Ni iki/ ninde kigena/ugena uko ukoresha umwanya wawe muri ubwo buryo?								x	
d. What is the benchmark?	Ni ikihe gipimo fatizo cyo gusoma no Kwandika (Benchmark)?								x	

Question in English	Question in Kinyarwanda	A	B	C	D	E	F	G	H	I
What motivated you to become a member of the PTA at this school?	Ni iki cyaguteye kuba muri komite y'ababyeyi muri iki kigo cy'ishuri?									x
Do you have children who currently attend this school?	Kuri ubu ufite abana biga kuri iki kigo cy'ishuri?									
Thinking about this school specifically, and the communications you received from the school leadership (head teacher), what do you think their priorities are in terms of educational outcomes?	Utekereje kuri iki kigo by'umwihariko ndetse n'amakuru atangwa n'umuyobozi w'ikigo cy'ishuri. Utekerezako ari izihe ntego z'ingenzi mu byerekeye uburezi?									
Where does this school put most of its resources, and what outcomes are they aimed at achieving?	Nihe, iki kigo gishyira imbaraga/ubushobozi bwinshi, ndetse ni izihe ntumbero bifuza kugeraho?									
Who is the strongest advocate in this sector for improving learning outcomes?	Ninde muntu ugira uruhare runini mu guteza imbere uburezi mu murenge wanyu?									
a. Why do you indicate this person is the strongest advocate?	Kubera iki utekerezako uyu muntu ariwe ufite uruhare runini muguteza imbere uburezi mu murenge wanyu?									x
What **grades** do you think this school should priorities in terms of effort? And why?	Nihe mu wuhe mwaka w'amashuri abanza utekerezako iki kigo cy'ishuri kigomba gushyira imbaraga nyinshi/kubera iki?									x
What **subjects** do you think this school should priorities in terms of effort? And why?	Ni ayahe masomo utekerezako iki kigo cy'ishuri kigomba gushyira imbaraga nyinshi/Kubera iki?									x
What **outcomes** do you think this school should prioritize in terms of effort? And why?	Ni izihe ntego utekerezako iki kigo kigomba gushyiraho imbaraga nyinshi/Kubera iki?									
Regarding the SEIs who work for you. I have a few questions about their priorities and how they spend their time.	Kubirebana na ba SEI mu korana, mfite ibibazo bike birebana n'inshingano zabo ndetse n'uburyo bakoresha umwanya wabo.									
How do the SEIs' priorities get set?	a. Ni gute inshingano zaba SEIs zishyirwaho?							x		
b. What do they spend most of their time on?	b. Ni ibihe bikorwa baha umwanya munini?									
c. What and who influences you to prioritize their work in that manner?	c. N'iki/Ninde kigena/ugena ubwo buryo bakoresha umwanya wabo mu kazi?									
d. According to your best estimate, how much of their time do they spend visiting the schools that they support in their sector? [Data collector note: Encourage respondent to provide a percentage of time (e.g., 25%, 50%)]	d. Mushingiye kubyo muzi, Ni umwanya ungana ute bamara basura ibigo by'amashuri bakurikirana mu murenge? UBAZA: Shishikariza ubazwa gutanga ijanisha ry'igihe bimutwara (urugero: 25%, 50%)									
e. What do you think they should spend more time on?	e. Utekerezako ari ibihe bikorwa bagakwiye guha umwanya mu nini?							x		
What do you think other districts can learn from your district's experience in improving early grade reading/foundational literacy outcomes?	Ese ni ibihe bintu utekerezako utundi turere twakwigira k'ubunararibonye bwanyu mu kuzamura imitsindishirize mu gusoma no kwandika mu cy'icyiro cyambere cy'amashuri abanza?	x	x	x				x		

ANNEX K: Qualitative Analysis Memos

Throughout the qualitative analysis, a series of memos were drafted reflecting different perspectives on the data, as follows:

- **A half-page holistic memo for each of the 23 respondents,** which captured the main data, insights, and practices raised in the interview.
- A district-wide memo was prepared for each district, which pulled data from all respondents to answer the question **"According to senior leadership, and to parents, what are each district's priorities, key actors, practices, and beliefs as related to improving foundational learning?"** This memo sought to bring together the interviews to understand each district's unique bundle of priorities, initiatives, and strategies.
- **Summary of interview findings by district and role for eight questions asked to multiple respondents.** For example, it summarized how each role across districts responded to the question "To what do you attribute this district's success in improving early grade reading?"
- **Summary of interview findings by study domain and respondent group (leaders and parents), by district.** For example, a summary of leadership and management findings for Ngoma leaders and PTA representatives and for Rulindo leaders and PTA representatives.
- **Summary of the 20 open-text questions for DDEs, DEOs, SEIs, head teachers, SBMs, and teachers** from surveys. The memo summarizes the responses to each cross-respondent question by role. For example, it features a summary of the 24 SEI open-text responses to the question "What activities would you spend more time on to improve student foundational literacy outcomes?"

Excerpts from Memos Based on Qualitative Data

1. Holistic memo for a respondent (Excerpt for Senior Leader 3)

- Leadership comes out strongly – head teacher leadership, district leadership (her leadership)
- Says they organize school leadership trainings, organize meetings with school leaders to discuss best practices, what others can learn from them, what is being left behind. Says all these are responsibilities of the leader.
- Says that sector and cell leadership are helpful in mobilizing residents to send their children to read, participate in competitions. Cell libraries would be very helpful.
- School absenteeism, working with parents, schools and communities to identify and support children who are not able to attend regularly is a major focus of this district.
- The library program appears once again to be a top district initiative that they feel is making a difference in improving reading outcomes, getting students and parents involved in reading at home. She wants to expand this into cell offices, more books available and link it to other leisure activities. District works with SEI's on program of learning how to read.
- Feels that the most experienced teachers should work in early grades – not the least. It's the hardest to teach foundations.

- Resources – once again, no issue or complaint about lack of resources provided by the national level. Or those that the district can spend. The vice mayor appears content with what is given. Mentions that it is up to the district to make their case of how much resources they need for education to the national level.
- Says education is the top budgeted sector in the district.
- Strong emphasis on ECD/early primary 1–3. Says that minister spoke to them and reinforced this. This is mentioned as a district priority and also her individual priority. Prioritize languages, ensure teachers can speak the languages they teach.
- Community engagement – says that residents have a right to voice opinions in planning. Parents play a strong role in providing materials, school fees.
- He/she provides a strong statement at the end of the interview, on the theme of staff responsibility – following up with sector staff for example to make sure they complete their duties faithfully and well. Have to look at how to handle this, can't just fire people, might have to change position.
- says that his/her role is crucial for coordination, part of leadership committee, he/she has to present on it. Yet says there is a gap, as sometimes information goes to the education unit instead of her first. He/she is responsible so wants to get the information first and then allocate it to the education unity. The director of education will not act without informing him/her first, but information, to him/her, should go MINEDUC - > him/her - >education unit. He/she says sectors and school leaders identify issues, they go to him/her directly. This is preferred. "They see this office as a place to get help, and it depends on how we receive and treat and give them advice. No one can harm them or stop them from doing their responsibilities as long as we look out for them." (Trust/Psychological safety quote)
- SEIs typically do follow up on his/her behalf, but he/she likes to go there to see issues and try to find out more.
- MINEDUC/REB – Good working relationship – they give us teachers, books, other materials. – also mentions NESA, help us monitor if government policy is being implemented properly.

Note: As a result of this interview, I added two codes: Supervision & Monitoring and Coordination. On supervision and monitoring, this is a big part of what the respondent does personally in the district. School visits, what he/she checks for. There is a mix of everything – hygiene, school feeding, infrastructure, lesson plans, how teachers are teaching. He/she goes with the technical team to get their advice if the teacher is teaching the right thing. On coordination: Respondent speaks about who gets information first, how the "resources" flow in the district/sector/school system

2. District-wide holistic memo (Excerpt on priorities for District 2)

Prompt: According to senior leadership, and to parents, what are each district's district priorities, key actors, practices, and beliefs as related to improving foundational learning?

Priorities:

Early grade Kin/literacy

SL2: "The first objective is to aim for literacy and numeracy for children from their lower primary." A lot of effort is put on ECD, nursery school and early primary levels

SL4: Subject and grade priorities in the district: writing, reading, mathematics from primary 1–3, Kinyarwanda.

SL3: We prioritize all grades, but the lower grades more. We prioritize all subjects. We never know which subject may be more favorable for their development.

Quality of education/learning

SES: "Our district is magnificent … we prioritize better learning results. They prioritize academic performance" These are same for the district.

SL4: Quality of education is a priority and education for all. A child should know how to read and write so they can have basic education.

SL5: All teachers have knowledge and ability to teach children well

Discipline

SL2: Second objective of district is to teach children discipline instead of just regular normal subjects

SL3: The goal is to have a manageable pupil. Student can understand what they are learning, get all the required tools to help them understand, most especially, learn about discipline. They are clean. They must follow the annual curriculum.

Monitoring/inspection of schools

NESA inspector: I cannot say the district priorities. I only know the MINEDUC policies. I don't follow what the district has set.

SL4: Monitoring is a priority in the district finding out which schools are overcrowded, do advocacy with ministry in charge to resolve it

SL5: "constant monitoring of schools" is a district priority. Is the teacher training, does head teacher follow up on teachers' teaching. Inspection helps ensure that someone is fulfilling their responsibilities.

School feeding

SL4: School feeding is a district priority, reducing number of dropouts

SL5: School feeding is a priority

Dropout/out-of-school children

SL5: All children should be in school, work cross-sectorally to ensure all children are in school (govt authorities, grassroots authorities, village leaders)

SL2: Third objective of district is to prevent student drop out

NESA inspector: District is most committed to students, teachers and head teachers attendance.

PTA 2: Community engagement with village chief, parents, security agencies, Dasso, coordinate to get child to return to school

Overcrowding of schools/enough teachers

SL5: Overcrowding is a priority, we need to build more classrooms, district getting more populated

SL2: The fourth objective of district is to follow up and make sure all schools have enough teachers

(Challenges – overcrowding/lack of classrooms, lack of books)

Parents:

PTA 1: Teaching Kinyarwanda is a priority, focus a lot on it. Also, sixth grade national examination results.

PTA 2: Priority for school is to be at the top. Teacher time on task. Student attendance, parental engagement in homework at home.

PTA 3: Priority having outstanding performance – create time for students to study hard. Want more classrooms for primary 1–3. Two shifts a day now. Clean healthy students.

PTA 4: We don't want children to drop out of school. We want to help out children succeed, for that we need Kinyarwanda and foundational learning in early grades, nursery.

3. Summary of interview findings by district and role (Excerpt for one question)

To what do you attribute this district's success in improving early grade reading/foundational literacy outcomes?	
District 1	**District 2**
SL1: Our partners and our country leader. The district's leadership committee always helps to make progress. Teachers help us. Citizens we inform through citizens meetings every Tuesday helps us raise awareness about children's participation in foundational literacy programs. Established ECDs in every village – we are happy about that. Every village leaders strives to have at least 3 ECDs in their village. Also, partnership, the district pays community workers who teach those children reading and writing. They organize plays, competitions at village level, cell level.	**SL1:** Success comes from following, monitoring, setting those strategies, informing teachers that the most important things are reading and writing. You can't learn mathematics without that. We attribute success to follow-up and monitoring and regularly talking to and encouraging teacher. And different competitions with small prizes, a pen or notebook.
SL2: Many people (ministry, affiliated institutions, partners) work with teachers who teach early grade literacy. Soma Umenye program before, now Tunoze Gusoma and Uburezi Iwacu help us set up community libraries, inspire children, develop reading culture. Makes books closer to children, more access. Teachers also play a big role, following up on children's reading.	**SL2:** Collaboration of different parties and partners. Parents, students, teachers, school leaders, those in charge of education: district advisory committee and the development partners in education.
SL3: Uburezi Iqacu as a partner is bringing libraries, it is filled with children. They are mobilizing residents and sectors, cell leadership, to raise parents awareness of reading, they compete against each other. We need more libraries in different places, to encourage people to read, then award the best in reading.	**SL3:** We have partners like Tunoze Gusoma and Soma Umenye, provide training based on Kin language. I have seen the benefits in the district.
SL4: Having capable teachers, not leaving any child behind, having materials like books. Classrooms are there but other efforts take longer to see them – such as school feeding. We do assessments between schools every semester, and we prepare exam every trimester for all students, and NESA every 6 months. All done for self-assessment, like an evaluation by district and sector leaders to evaluate quality of education. We focus also on ECD, school readiness for P1. We have libraries. Schools often coach the children, using private coaching. SEIs play a big role in follow ups, based on results and targets of the district. We do competitions for reading.	**SL4:** Good governance from high authorities of the country. Our job is to implement government programs, we must think about how to reduce dropouts? Build classrooms, but most important is the school feeding program. Improves motivation to attend. In the district, we attribute success to teamwork – for everyone to know their responsibilities, hold a meeting to self-evaluated to know how decisions are being made in the district. Problems never cease to arise but we use teamwork to find solutions to them. Parent committees are part of this.
	SL5: Have enough learning materials and make sure teachers are using them. Books available in school for classtime, and books they can borrow over the weekend. Parent mobilization also important, around revision, reading at home.
	SL6: Teachers should be given the basic needs they need to provide the right education. Teachers should be close to students (accommodation), be disciplined with students, and be given meals, access to credit, documents without difficulties.
NESA: Partnership with different authorities such as school leadership, sector leadership esp. SEIs, district staff in charge of education, and leaders. We attribute reading and writing success in Kin to Tunoze Gusoma, trained teachers and leaders well. SEIs given responsibilities to look after schools and how they taught Kin reading and writing. The program also provided books to students to help them improve teaching Kin and reading and writing in Kin.	**NESA:** It is not to whom, but what! It is due to collaboration; people complement one another from the district level to the teacher in class. Collaboration is the one that leads to success. District people meet with sector, then sector people meet with schools, school heads meet with teachers… and teachers bring back students not attending class back. "*this has started from the district level and all the people collaborated to solve the problems the students are facing. So, when the aim is to solve the problem that a student has, there is no reason why a student cannot improve in his/her studies.*"

4. Summary of interview findings by study domain and respondent group (leaders and parents), by district (anonymized)

Domain	Group	District 1	District 2
Prioritization	Leaders	**District priorities:** Quality of education and improved learning outcomes, with a focus on early grade foundational learning (Kinyarwanda) and ECD. The district has a strong focus on out-of-school children and dropout prevention, led by SL2. **Setting priorities:** Education top budgeted sector in district. There is a leadership committee, and education decisions are made by a district steering committee (infrastructure) and planning committee.	**District priorities:** Early grade Kinyarwanda literacy and numeracy. Quality of education. SL2 and SL3 also mention discipline. Reducing dropout and out-of-school children, including implementing school feeding is also a priority. Leadership team also mention monitoring and inspection of schools as a priority. Some staff say reducing overcrowding of schools is also a district goal. **Setting priorities:** Education is the top budgeted sector in the district. Priorities are set by advisory committee, based on national budgets and policies. District data and citizen voices also inform priorities for resource allocation.
	Parents	PTA reps say schools focus on early grade foundational learning (Kinyarwanda), nursery and ECD. One PTA says the school focuses on grade 6 (school leaving exam). Other priorities include reducing school absenteeism and dropout, in part through the school feeding program. PTA reps say early grades and ECD (and one rep grade 6) are the grades they think schools should prioritize.	PTA reps report school priorities are academic performance (most on early grades, and some say grade 6 exam). PTA reps say most school resources are put into early grades. Other priorities are improving student attendance and reducing dropout and parental engagement in homework. PTA reps also say early primary grades are where they think the school should prioritize.
Leadership & Management	Leaders	SL2 describes leadership role as participating in district education meetings to set goals and action plans. Second, follow up on school performance, speak with those not fulfilling their duties and participate in dropout assessment. Solve infrastructure issues, and encourage parents to help their children prepare for school year. SL2 leads an educational retreat to ask people updates on their area of responsibility. SL3 emphasizes monitoring school leadership in visits, importance of leaders' ownership, planning, monitoring of school activities.	SL2 says his leadership role has three components: it is his/her job to advocate for infrastructure, school resources and enough teachers. Second, conduct school visits and follow up on education issues. Third, facilitate the work of other education staff, meet and listen to them, advocate on their behalf or help solve issues they point out. Other staff link district leadership with the successful enactment of coordination and implementation in the district (SES, SL5). The vice mayor and a DEO are flagged by other members of the leadership team as strong advocates.
	Parents	Parent PTA leaders indicate the biggest advocate for foundational learning vary: district leadership, SEI, teacher, and a community leader. The PTA district representative appreciates visits by district leaders to schools.	Parent PTA leaders indicate the strongest advocate for foundational learning are school (head teacher), sector (SEI and SES) and district leaders.
Knowledge & Skills	Leaders	SL2 says that ensuring early grade teachers have mastered Kinyarwanda is important, and the SL1 emphasizes qualified teachers for ECD. District organizes trainings led by MINEDUC, REB and NESA, but also supports their own teacher training initiatives, often lead by SEIs. The district also facilitates peer learning sessions for teachers and head teachers will visit different schools. NESA inspector was less accurate in stating the P3 reading fluency benchmark.	SL2 emphasizes importance of in-service teacher training on early grade reading and writing, using REB and partner lessons. Leaders discuss peer learning activities at school level: Teachers meet one Wednesday a month for the communities of practice. Head teachers also meet together – they select a school to visit and discuss issues and problem-solve. NESA inspector knew the P3 reading fluency benchmark.
	Parents	Parents' committees in the sector visited have been trained to inspect how teachers teach. PTA reps emphasize the importance of qualified, trained teachers for early grade foundational learning. There is a belief in the importance of foundational literacy skills as a basis for future school success. Some also mention teacher and head teacher peer learning initiatives.	PTA reps call for more qualified, competent teachers as part of their priorities for more resources. There is a widespread belief by parents in the importance of early grade literacy and numeracy skills, and ECDs as good foundations for future success in school. Schools organize extra classes on Saturdays or school breaks and parents support this.

Domain	Group	District 1	District 2
Resources & Time Use	**Leaders**	Resource allocation decisions are made by the district education committee and the planning committee, based on the budgets and resources received from the national level. The SL3 spends a lot of time on school inspection and monitoring. The district has cars that are often used for joint monitoring school visits. The district admin and finance officer believes there is enough resources from the national level for education activities in the district.	Resource allocation decisions are made by the advisory committee, led by SL2. There are steering committees for infrastructure, and other education issues. We also take ideas from citizens (SL3) to allocate resources in education. At the beginning of the school year, SL3 meets with HT, SES, SEIs, district education leaders to plan the school year. The district admin and finance officer believes the district receives sufficient resources. District and sector leaders concur.
	Parents	For time use, two of four schools mentioned starting class earlier: at 7am with a revision program for struggling students, and 9am in another. In terms of resources, parents indicate that schools need more resources in terms of classroom space, books. PTA says some parents can't afford school fees, learning materials and books.	For time use, PTA members in three of four schools say there are extra classes organized outside of school term (Saturday, school breaks). Not just for primary SLE, but also for younger children. In terms of resources, parents say schools need more teaching and learning materials (books) and classroom space (one school is double shifting). One school has no electricity or water, takes away from learning time. Parents can struggle to pay their share of the school feeding fee. School actors try to help parents get resources for their child's school attendance.
Data Engagement	**Leaders**	SL2 and district team meet after national examinations to review progress, and compare performance across sectors. Use of data to allocate resources based on school-age population projections at beginning of the school year.	In this district, after national examinations, district leadership asks all head teachers and SL1 to present on performance.
	Parents	In one school, parents meet with head techer and teachers, review national exam performance, discuss challenges and activities to improve. Other PTA reps do not mention data engagement as part of the role: rather, there is a more relational emphasis.	*[Data and engagement not mentioned]*
Responsibilities & Norms	**Leaders**	District is seen by the leadership team as responsible for policy implementation from MINEDUC and REB: "an implementing institution" (SL2). There is a belief across the leadership team that it is the responsibility of the district to advocate for the resources it needs from the national level. There is also a sense of capacity/efficacy, that if the national level gives us funds to build 100 classrooms, they will build 100 classrooms.	The district is described by SL2 / SL3 /SL4 as an implementing agency: policies are set at the national level and they consider it the district's job to implement them. They maintain it's the district's role to listen for problems on the ground and let the national level know to take action. The SL4 says that the district's implementation practices can be considered its "specialty." SL2 and leaders discuss the responsibility of the top leadership to advocate to MINEDUC, REB for additional resources for the next budget, if there are unmet needs in the district.
	Parents	PTA reps see themselves as responsible for calling parent meetings, acting as a liaison between the school and parents. PTA reps discuss parent responsibilities for school-age children at these meetings: arriving on time, tidy, with school feeding fees paid, and ensuring homework/ reading time at home.	PTA reps see themselves as responsible for connecting the school and parents – calling parent meetings, ensuring children attend school on time with their materials and school feeding fees, and don't drop out. Liaise with the village chief and, if necessary, security agencies in cases of absenteeism. Support teachers in cases of student behavioral issues by speaking to the parents. They discuss parental responsibilities for their children's education: following up on their children's learning progress, hygiene, uniforms and school materials.

Domain	Group	District 1	District 2
Accountability & Incentives	**Leaders**	SL2 says teachers most accountable for improving learning outcomes, but they must be supported. SL3,SL4and SL1 say parents must put in most effort, then teachers. Because children spend the most time with them. They can follow up on homework, do exercises, read at home together. SL2 says district success in foundational learning in part due to "following up with the head teachers, setting goals, and evaluating whether the goals were achieved." SL3 also recognizes outstanding teachers and schools each term. Based on exam results.	The leadership team varies in who they say is the most accountable for improving foundational learning outcomes. SL2 says MINEDUC, while the vice mayor says everyone. SL4 indicated that parents were most accountable and the SL1 said teacher, parent and child. The leadership team attribute improvements in foundational learning in part to incentives: school and village reading competitions, small prizes given to winners. Also, the leadership team commend the SL3's initiative to give small rewards to best performing schools, teachers, students, based on the primary school leaving examination.
	Parents	PTA reps say that the most accountable person for foundational learning outcomes are the SEI, teachers (2 PTA reps), the Minister of education. PTA reps also say head teachers and teachers are the most accountable for improving learning outcomes. The head teacher "connects all things". District PTA rep speaks to the Soma Umenye program organizing reading competitions in villages. Other PTA reps don't speak about this. One PTA rep calls for rewards for high performing teachers to motivate them.	PTA reps say head teachers, teachers and Tuzome Gusoma partners are the most accountable for improving learning outcomes. Teachers organize competitions based on the material covered in class, winners receive recognition and this motivates students to work harder. There are reading competitions during the last days of the month, judges come and give awards to students.
Influence & Decision-Making	**Leaders**	SL2 refers to the *imihigo* as the influence on setting priorities in the district. The SL3 also refers to the citizens' input in decision-making and resource allocation. The SL4and NESA inspector say the district administration has the most influence. The district admin and finance say exam performance influences district efforts to improve.	SL2, SL3 and director of planning say that MINEDUC/ Education Sector Plan/Vision 2050 have the biggest influence on setting priorities in the district. Other leadership staff (SL4/ SL6/NESA) say the district leaders exert the greatest influence.
	Parents	When asked who has the most influence in setting priorities, PTA district representative says the district leaders and SL3 . PTA leaders express that they have influence over other parents, can help motivate them to improve their child's attendance. One says he is "ambassador" of the school and can advocate for the school's challenges to the wider community. Parents in PTAs feel there are opportunities to contribute to school decision-making.	*[No district PTA interview in this district]* PTA leaders feel they have influence over parents to encourage them to pay school feeding fees, prepare their children with materials.
Monitoring & Supervision	**Leaders**	SL2, SL3, SL4 and SL1 all conduct joint school inspections and follow-up visits to schools. DAF says the district invests a lot in school follow-up, which solves any gap quickly. SES says he has trained parents committee to inspect how teachers teach.	Supervision and monitoring are carried out by all members of the leadership team – SL2, SL3 , SL4, SL1. They do planned and unplanned inspection visits. SL3 can monitor platforms to see daily reports of SEI school visits, give feedback.
	Parents	PTA rep says district-level joint monitoring and supervision of schools is a district strength. PTA reps say SEI play big role in improving learning outcomes – they visit frequently, tour schools, facilitate meetings with stakeholders. They also monitor for out-of-school children, find them, and follow up with parents.	PTA reps can undertake school visits and inspections, looking at school hygiene and teaching. Some reps also intervene on discipline cases for children, and report issues they see to the head teacher.
Coordination	**Leaders**	SL2 emphasizes working together. SL3 says main role is to coordinate across education actors and activities: policies are set but "coordination is the most difficult part." NESA inspector highlights coordination across sector/ district as key to his/her success in implementation of recommendations. SL4 highlights regular and well thought out coordination between middle tier, and "continuous meetings" between parents, school and middle tier as important to district success.	District leaders (SL2, SL3 SL4, NESA, M&E) strongly attribute the district's success in improving foundational literacy to successful coordination across staff, schools and partners. Coordination is also attributed to strong leadership in the district. The district conducts joint monitoring visits, and frequent meetings between levels and stakeholders. For example, the SL3 hosts monthly meetings with SL1 and SEIs to know what is happening in the district. The SL3 also is active on a platform to see reports from school visits daily.
	Parents	Parents speak to their roles connecting school and other parents – facilitating discussions of teacher problems and following up with parents on the issues.	Parent reps coordinate with school staff, parents, village leaders, and security agencies. They feel there is good collaboration in the sector on education – between head teachers, SEIs, SL1 and district.

5. Summary of the enumerated open-text survey questions for DDEs, DEOs, SEIs, head teachers, SBMs, and teachers

Question: What do you think are the most important things you do in your role as a DEO/SEI/HT/SBM to improve Kinyarwanda foundational literacy outcomes? Please offer specific examples.

DEOs: DEOs describe the most important things they do in their role to improve foundational literacy outcomes are the advice and technical support they give SEIs and schools, inspection, and monitoring of schools and teachers identified as in need of training.

SEIs: SEIs emphasize many activities as part of their leadership role in improving foundational learning outcomes: notably, classroom observation and monitoring of teaching and learning in Kinyarwanda (emphasis on advice, rather than punitive orientation), monitoring head teacher leadership and advising them on findings of school visit for follow-up, supporting communities of practice for teachers and peer learning sessions for head teachers, organize reading competitions, discussing semester LEGRA results on early grade learning performance, frequent meetings with parents on education issues and inviting parents to visit schools and observe teaching.

HT: Head teachers emphasize their leadership role in organizing reading competitions and motivating those who participate, establishing a close relationship with teachers to understand their problems and advise on solutions, classroom observation for early grade Kinyarwanda teachers, and working with parents to encourage them to support reading at home.

SBM: SBMs describe their leadership role to improve foundational literacy outcomes as focused on teacher training, classroom observation and feedback, and establishment of teacher communities of practice.

ANNEX L: Informed Consent Form

Below is an example of the informed consent form that was used for respondents. Certain aspects of the form were adapted for each respondent type.

"Consent title": CONSENT FORM FOR VICE MAYOR FOR SOCIAL AFFAIRS SEMI-STRUCTURED INTERVIEWS

"Study title": LEADING FROM THE MIDDLE: LEADERSHIP FOR FOUNDATIONAL LITERACY IN RWANDA

"Research company":

Research Company: *Laterite Ltd.*
Affiliated Organization: *RTI International*
Affiliate Government Institution: *Rwandan Education Board*

"Introduction"

Hi, my name is [Name.....] and I work for Laterite Ltd., a research and consulting firm based in Kigali. Laterite has been selected to conduct the study Leading from the Middle: Leadership for Foundational Literacy in Rwanda, supported by RTI International. With funding support from the Bill and Melinda Gates Foundation, RTI International manages the Science of Teaching initiative—a research program focused on improving foundational literacy and numeracy in sub-Saharan Africa.

This study is about improving foundational literacy outcomes in Rwanda. We know the government is very committed to this goal and to support the government's plans, we are visiting districts that have made improvements in foundational literacy outcomes. We are talking to different officials within the district and sector and also visiting schools to speak with head teachers and teachers.

"Study procedures"

We are speaking with you individually today because we recognize the importance of the vice mayor for social affairs in improving learning outcomes. Your district has been chosen because of its focus on and achievements in improving early grade Kinyarwanda reading outcomes. We want to learn more about your strategies and actions and also get recommendations from you about how we can improve foundational literacy outcomes even more in your district. We will use a structured questionnaire to ask you questions. The interview will take approximately 45 minutes.

I would also like to request your permission to audio-record the interview to ensure accurate transcription and translation of the data. The audio-recorded will not capture any sensitive or personally identifiable information about you.

"Voluntary participation and right to withdraw"

Your participation is entirely voluntary. You do not have to agree to take part in this study and there will be no consequences to you, your household, or the community if you refuse to participate. You also have the right to withdraw from the study at any time, for any reason, if you so decide. You

may also choose not to answer certain questions that you do not want to answer. Your participation decision will not affect your relationship with MINEDUC, REB, or any other local institutions.

If you would like to withdraw your consent or to ask for the erasure, alteration, or update of your personal data, please feel free to contact Laterite's data protection officer, Denis KAMUGISHA, at dpo@laterite.com or on +250 790 134 401.

"Risks"

There is no risk of harm to you or your household during your participation in the research.

"Benefits"

There are no direct benefits for participating in this study, but the benefits that may reasonably be expected to result from this study are to help the education system and its partners in Rwanda provide better support to schools, teachers and students.

"Confidentiality and data protection"

Laterite prioritizes the protection of your personal data and respects your privacy. To respect your privacy and keep your answers confidential, no information that can identify you personally, or information that can be linked to your personal responses, will be published. Your name will not be used in reporting. We will seek prior approval from you if we would like to include a direct quotation from this interview in the study. The information you provide in the interview will be aggregated and analyzed with other interviews, surveys and documents to give an overall picture of district work. However, it is important to know that the district and sector names will be identified in the report and given the nature of your position, there is a possibility that the information you provide in the interview may be identifiable. School names will not be identified in the report. The information you will share will be safely stored on Laterite's secure server and protected from unauthorized access, loss, or alteration. Only professional research staff from Laterite Ltd will have access to raw data. Anonymized data will be shared with RTI International for analysis. Only these two organizations will have access to this information for research purposes.

The final reports will be made available to study participants, organizations who have a need to see the data including the RTI International, Rwanda Education Board (REB) and Ministry of Education and potentially other entities.

"Right to be forgotten"

You are free to choose to withdraw your participation at a later point in time. You can request Laterite – in writing or electronically – for the erasure of your personal data. If you no longer want the information you provided to be used in this research you can reach out to Laterite and we will delete the information we hold on you.

Should you decide to withdraw your participation at a later point in time and wish to have information removed or updated, or altered, please contact Laterite. The contact details are provided below.

"Audio recording"

We take your consent to participate in the interview seriously. We would like to record the interview for transcription and translation purposes. This information will be kept confidential and anonymized

similar to your other answers to questions and information you provide. You are free to choose not to participate in the audio recordings.

"Data retention"

Your data will be retained for the duration of this research project until 31st December 2025. After this period, all personally identifiable information will be securely deleted or anonymized, ensuring your privacy. The anonymized data may be retained for future research purposes or archival purposes, in compliance with legal requirements.

"Who to contact"

If you have questions about the research in general, about your role in the study, or if you have questions about the field operation, please feel free to contact Laterite's Country Data Manager Amani Ntakirutimana, on +250 788863246 or at antakirutimana@laterite.com.

For questions about your rights as a subject please call the Chair Person of Rwanda National Ethics Committee Dr. Vedaste Ndahindwa on +250 788 454 613, or Rwanda National Ethics Committee Secretary Dr. Francoise Mukanyangezi on +250 788 672 666.

"Participant acknowledgment and consent"

I, [Participant's Name.....], hereby acknowledge that I have been provided with and have had the opportunity to read and understand the Consent Form for Research Participation for this study.

I have had the opportunity to ask questions, and the researcher has explained the contents of the consent form to my satisfaction. I understand the purpose of the research, the procedures involved, the measures taken to protect my data, and my rights as a participant to delete my personal data and the right to withdraw my consent at any time.

I voluntarily give my informed consent to participate in this research study, understanding that my participation is entirely voluntary and that I have the right to withdraw at any time without any negative consequences. I also acknowledge that a copy of this consent form has been provided to me for my records.

Yes No

I voluntarily consent to participate in this study.

I voluntarily agree for the audio-record of a segment of the interview.

Participant Print Name:
Participant Signature:
Date (Day/month/year):

My signature below indicates that the participant has agreed to participate in the research conducted by Laterite Ltd. for this study.

Enumerator's Name:

Enumerators' Signature:

Date (Day/month/year)

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