Leadership development in secondary school teachers in Rwanda: Evidence from a census of Rwandan secondary schools

Leaders in Teaching Research and Policy Series

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Acronyms

MINEDUC	Ministry of Education
PTA	Parent Teacher Association
REAL	Research for Equitable Access and Learning
STEM	Science, Technology, Engineering and Mathematics

Introduction

The context

As part of its push to improve the quality of education in the country, the Rwandan government's Ministry of Education (MINEDUC) is working to improve leadership across schools. For schools to be successful in providing good learning opportunities for students, effective leadership and management are crucial (World Bank, 2018). MINEDUC's Education Sector Strategic Policy for 2018/19 – 2023/24 (MINEDUC, 2019) highlights the effect of good school leadership, as well as continuous professional development of teachers at the school, on student outcomes and equity. School leaders therefore have a key role to play in upgrading the quality and efficiency of education in the country.

The Rwandan government and its international partners are investing in and implementing several initiatives to improve school leadership[1] in the country with these objectives in mind. Examples include the Mastercard Foundation's Leaders in Teaching initiative in Rwanda, a suite of programmes which aim to respond to the barriers to quality teaching and learning that are preventing Africa's youth from realising their full potential. Leaders in Teaching includes continuous professional development programs for teachers and school leaders organised by VVOB and University of Rwanda College of Education. Other initiatives include work done by the school leadership management unit of the Rwanda Education Board.

This brief aims to inform these efforts by providing a background on the state of school leadership in Rwanda, using self-reported data from a 2017 study of school leaders across the country.

The study

The data for this note were collected by Laterite in the context of a study commissioned by the African Institute of Mathematics and Science and the Mastercard Foundation, focusing on ICT education in secondary schools in Rwanda (Laterite, 2017; and see methodology). The study was a survey of 1,391 STEM and ICT subject leaders, and 1,499 school leaders (head teachers or in case of their absence, the deputy head teacher, dean of studies or dean of teachers) from all secondary schools across Rwanda, collected in 2017.

This note has been prepared as part of the Mastercard Foundation's Leaders in Teaching initiative. Together with the Research for Equitable Access and Learning (REAL) Centre at the University of Cambridge, Laterite is a learning partner on this initiative, working with selected education organisations in Rwanda to generate robust quantitative evidence to improve teacher quality across the country.

- **In 2017, 80% school leaders in Rwanda had a Bachelor's degree, and most were male**. There was one female school leader for every four male school leaders in the country. This was also reflected in teacher ratios in schools.
- **87% of school leaders received training specifically designed for their role**. Those who received this training demonstrated better leadership practices, like providing frequent feedback and conducting evaluations of teachers at their school.
- **Smaller schools were often at a disadvantage when it comes to school leader training**. School leaders in smaller schools had fewer qualifications and were less likely to have received training specific to their roles. Small schools, especially rural ones, also faced more resource shortages and teachers at such schools often reported not being given additional responsibilities around the school that could help them develop their leadership skills.
- **The majority of school leaders shared a similar vision for their schools with other teachers in the school**. 83% of teacher-head teacher pairs we interviewed had perfect or high agreement on what factors of a nearby school they aspired to work towards.

Methodology

The analysis is derived from a 2017 Laterite study on the state of delivery of STEM and ICT in all general education secondary schools in Rwanda that offer STEM subjects (Laterite, 2017). The study, which also included qualitative research with students, teachers, and school leaders, was carried out with funding and support from the African Institute of Mathematics and Science and the Mastercard Foundation. The quantitative study consisted of interviews with school leaders, STEM and ICT subject leaders, and a sample of students from all secondary schools in Rwanda.

The analysis for this brief uses data from the head teacher and teacher surveys. The subject leader survey was designed to understand motivations of teachers for entering the STEM and ICT fields; take stock of their experiences with various training and teaching practices; and understand challenges faced in the classroom, as well as interaction of teachers with students and other teachers through activities such as mentorship. The head teacher survey measured individual characteristics of the head teachers, including qualification, age and years of experience, as well as school characteristics like availability of resources and facilities, with a focus on science, teaching aids, and laboratory resources. It also identifies the budgetary allocation of the schools and consists of a roster of all STEM and ICT teachers in the school. The final dataset contained responses from one subject leader and one head teacher in ICT and STEM from all 1,499 schools in the country.

Profile of school leaders in Rwanda

The role of school leaders

School leaders in Rwanda are responsible for overseeing a variety of activities in their schools as well as engaging with external education officers and other parties. They are expected to be actively involved in helping teachers solve problems through mentorship and instructional advice, and engaged in creating an environment suitable for learning, all the while ensuring that limited resources are allocated efficiently.

MINEDUC's school administration manual outlines the key role of head teachers in secondary schools as ensuring the general administration of the school; being in charge of the good governance of all school and extra-curricular activities; being the first person in charge of the school human-resource management; and managing responsibilities at administrative, pedagogical and social levels (MINEDUC School Management, 2008). The dean of studies reports directly to the head teacher and is responsible for all academic affairs at school and overseeing the running of academic duties of the school. Their duties include assisting the head teacher by following all teaching activities, preparing a timetable for teachers and classes, and ensuring that all teachers are teaching as expected and giving them direction. In this study, we refer to both head teachers and deans of studies as school leaders.

While the head teacher role is traditionally seen to be administrative and managerial, the Education Sector Strategic Plan (MINEDUC, 2019) aims to transform their role into true leaders at schools. MINEDUC aims to employ qualified, skilled and motivated teachers to meet the demands of expanding access to education. The sector outcome indicator for 2017/18 included having 50% of school leaders and school managers trained every year in school management (MINEDUC, 2019).

The dataset used to prepare this brief includes responses of 1,499 secondary school leaders (1,069 head teachers/deputy head teachers and 430 dean of studies/dean of teachers) from all 812 government-aided schools, 452 public schools and 127 private schools[2] in the country in 2017. 80% (1,108) of schools in our sample are rural schools. Wherever necessary, we disaggregate our findings on school characteristics like school type (public, private or government-aided), school locality (urban/rural), and school size[3], and head teacher characteristics like age, gender, qualifications, and years of experience.

There was one female school leader for every four male school leaders. In private schools, the balance was skewed even more towards male teachers: only one in ten private schools had a female school leader (Figure 1). The school leader gender ratio aligned with the gender ratio among school teachers. The government's plan for the sector includes promoting women's recruitment into teaching and encouraging more female leadership in schools as one of the important steps in ensuring adoption of gender-sensitive pedagogy, and for long term gender parity in participation and achievement at all levels (MINEDUC, 2019).

Figure 1: Gender distribution across types of schools
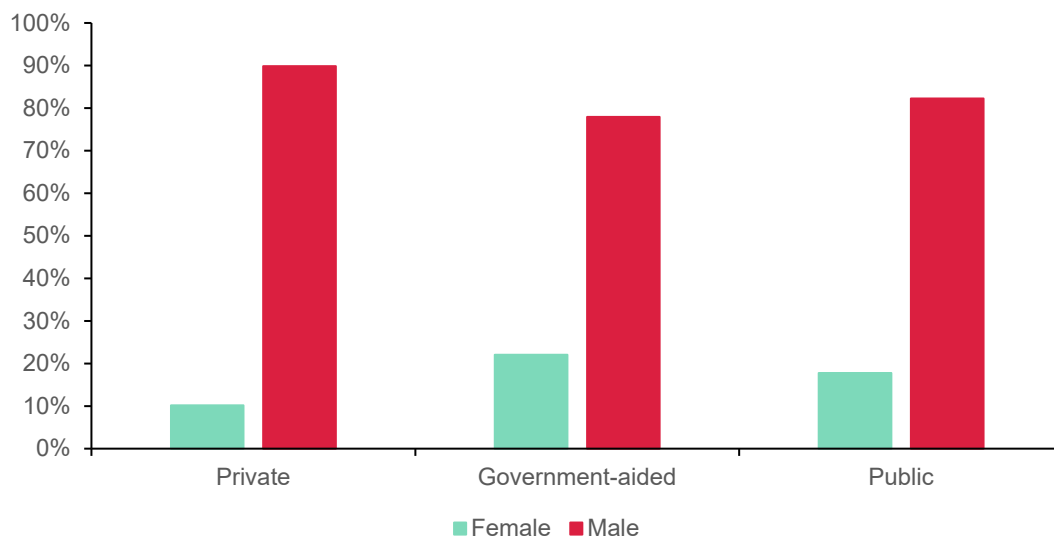
School leaders had 13 years of experience on average. Male school leaders averaged almost one more year of experience (13.6 years on average) than female school leaders (p=0.09). Male and female school leaders had differences in qualifications: 79% of male school leaders had a Bachelor's of Education degree compared to 84% of female school leaders, and the proportion of male school leaders with a Master's degree was double (7.1) that of their female counterparts (3.5). While more school leaders in private schools had a Master's degree, the proportion of school leaders in private schools with no teaching qualification was also significantly higher than public or government-aided schools (Figure 2). School leaders in larger schools were also likely to be better qualified (p<0.01).

Figure 2: School leader qualifications by school type
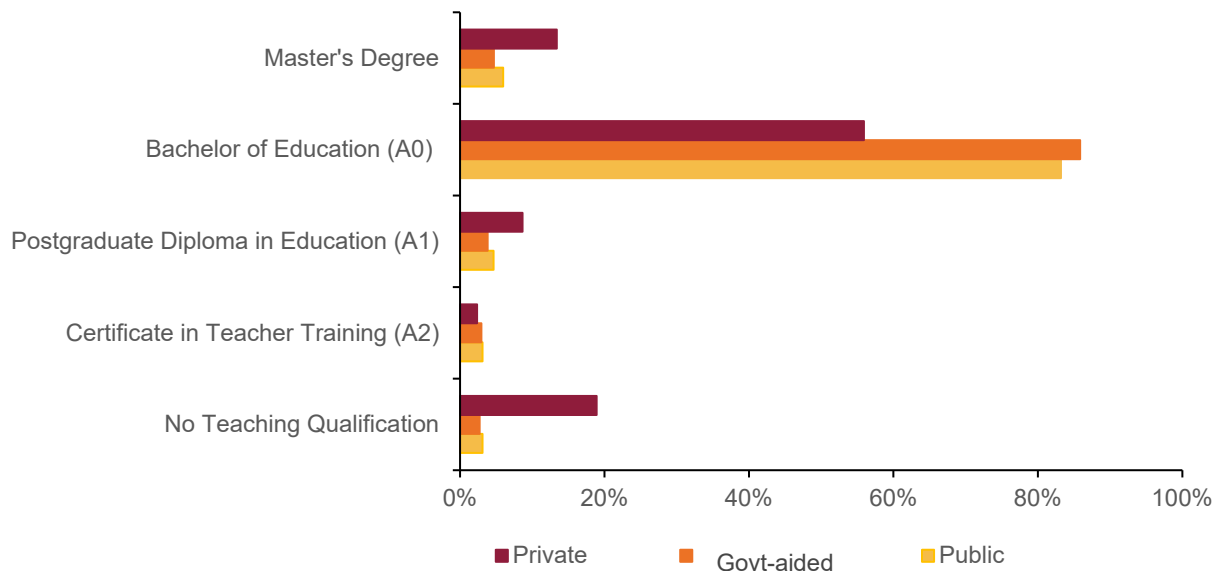
The majority (87%) of school leaders indicated that they had received some training specifically designed for their position since they started teaching. This type of continuous professional development is beneficial for both new school leaders and experienced school leaders in implementing best practices in leadership, instruction, and management (World Bank, 2018). More experienced school leaders were significantly more likely ($p<0.01$) to have participated in training. The Education Sector Strategic Plan (MINEDUC, 2019) clearly highlights the need to ensure that younger / newly recruited teachers and leaders are prioritised for training (with a focus on continuous professional development) and school-based mentoring by older, more experienced teachers wherever possible.

School leaders in larger schools were more likely ($p<0.05$) to have received continuous professional development. There were no significant differences in training among school leaders at different types of schools, or location of school (rural / urban). However, school leaders in 89% of large schools reported receiving this training, compared to 84% of school leaders in small schools. School leaders who received training were more likely to organise and provide evaluations for other teachers in the schools, as well as do this more frequently.

Management practices of school leaders

Carrying out teacher evaluations

**Teacher evaluations are an important tool to improve teaching and learning.** School leaders can promote effective leadership by providing meaningful teacher evaluations including an accurate appraisal of teacher effectiveness, followed by feedback, coaching, support and opportunities for professional development (Henard, 2010). Frequent evaluation helps teachers implement best teaching practices learned in training (Danielson, 2010). Evaluation methods teachers report include classroom observations, reviewing teaching materials, and reviewing student performance.

> **Case study: Teacher performance and Imihigo contracts in Rwanda**
>
> The Imihigo, a performance contract introduced in 2006 as part of efforts to reconstruct Rwanda, can encourage head teachers to provide more frequent evaluations. Head teachers are more likely to evaluate teachers weekly or daily in schools where the Imihigo is signed. Among the 80% of head teachers who indicated that a contract had been signed, 87% said that the Imihigo included a National Examination pass rate and 31% indicated that the contract included targets specifically related to STEM education. We found that head teachers in schools that have an Imihigo contract were also better qualified.

In order to understand whether head teachers provided useful feedback, we asked teachers at these schools about the effectiveness and frequency of evaluation (Figure 3). Almost all surveyed teachers indicated that their teaching was evaluated by the head teacher or director of studies, and that the feedback was useful. When asked about how often their teaching skills were evaluated, 42% of subject teachers reported that they were evaluated monthly. Frequent evaluation was more common in rural schools compared to urban schools (p<0.01). Younger teachers also reported being evaluated more often (p<0.01).

## Figure 2: Frequency of evaluation by school leader

Rural   Urban
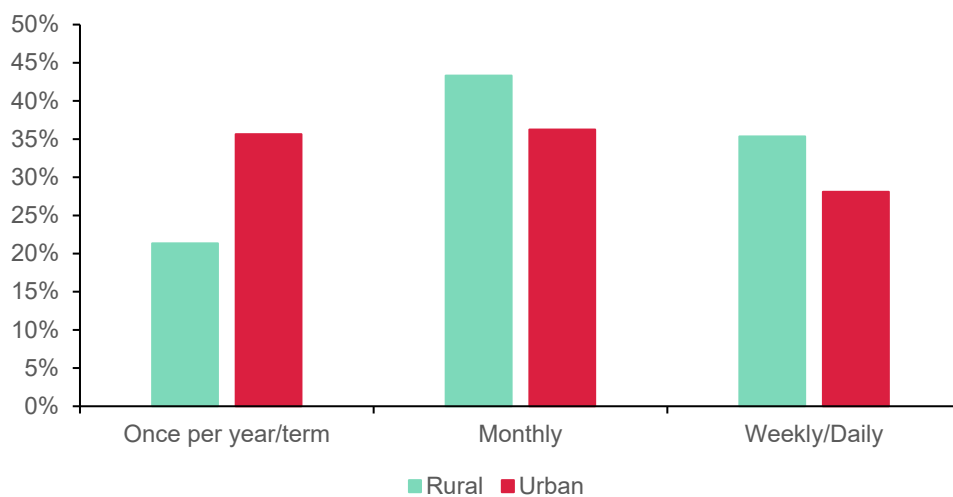
Sharing their vision for the school

Majority of the school leaders shared a similar vision for their schools with other teachers in the school. The ability of school leaders to share their school vision with their teachers could be a valuable indicator of whether they are an effective leader.

To examine whether school leader perceptions were shared by other teachers, school leaders and teachers in the survey were asked whether there was any nearby school that they would aspire their own school to be like, and to give reasons why.[4] Of the 1,138 teacher-head-teacher pairs that answered this question, 17% had perfect agreement for every item and 66% of all teachers had high agreement. School leaders and teachers in these schools almost always had the same reasons for considering a school a 'good' school. Among the listed reasons for their choice, most teacher-school leader pairs selected better science teaching facilities (86%), followed by better teaching facilities (80%) and a more active Parent-Teacher Association (PTA) (74%).

Figure 3: Agreement rate of teachers and school leaders on what makes a neighbouring school a good school

Urban   Rural
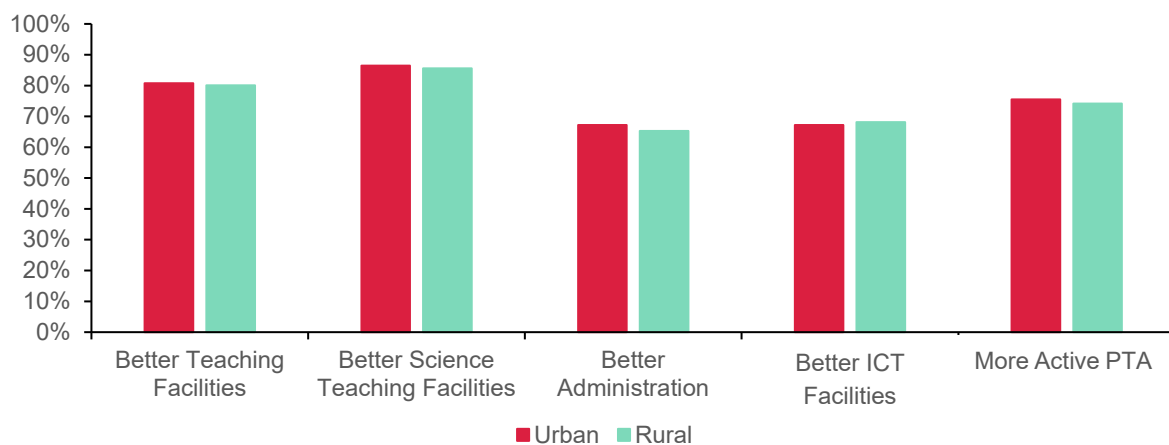
A lack of resources and poor infrastructure made it difficult for school leaders to exert leadership and perform their responsibilities. The majority of teachers in schools across the country reported that shortages of equipment (82%), internet (79%), software (74%) and computers (67%) were affecting their ability to deliver lessons as planned (Figure 5). These problems were reported more often in public or government-aided schools than private schools. In private schools, the problems reported by most teachers also included difficulties dealing with students with different academic abilities (53%). This may suggest that infrastructure and resource constraints diverted attention from teachers effectively delivering learning activities.

Figure 4: The most reported challenges faced by teachers in schools
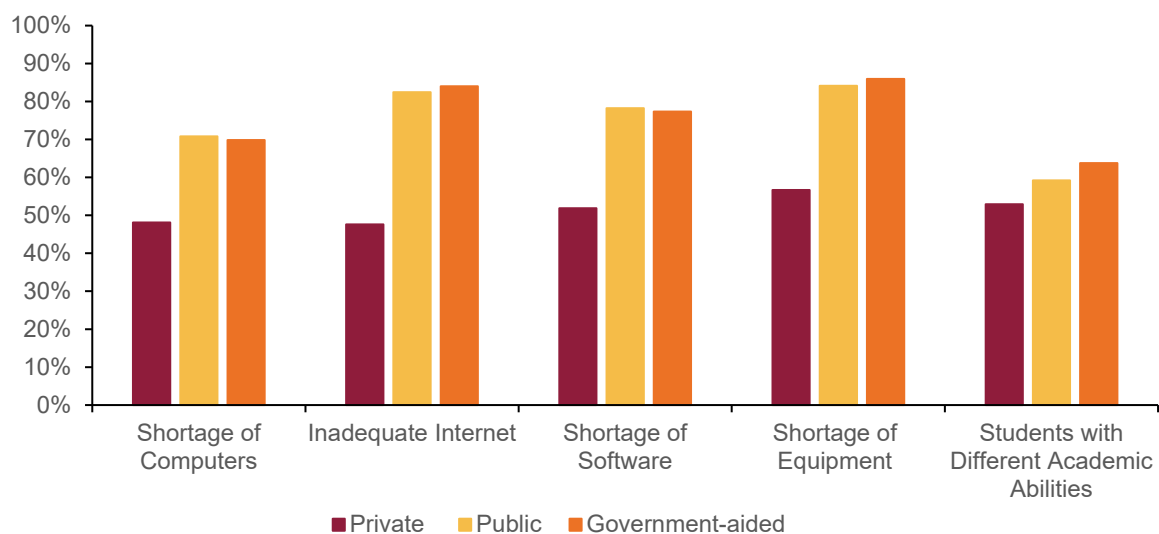
This resource problem was especially pronounced in rural schools. About half of school leaders in rural schools indicated sufficient non-teaching staff, and about 15% of school leaders reported having sufficient teaching aids, materials, and classroom furniture (Burdet and James, 2018). 18% of school leaders in rural schools reported not having access to electricity, compared to 2% in urban areas. Long distances and inadequate infrastructure meant that principals in rural areas were rarely visited by those responsible for appointing, training, and supporting them, thus increasing the sense of isolation. The shortages of teachers and material resources often exacerbated this problem (Walker et al., 2006).

During teacher interviews, urban and rural school teachers reported facing different challenges. Significantly more urban teachers reported often facing challenges working with students with disabilities and having disruptive students. For rural teachers, a more significant challenge was dealing with infrastructure shortages like lack of equipment, and inadequate electricity supply and internet availability.

Smaller schools were often at a disadvantage. School leaders in smaller schools were less likely to have been trained specifically for their job and were not as qualified as their counterparts in larger schools. During interviews with STEM teachers in these schools, around 41% of all teachers interviewed claimed that inadequate electricity was a problem for them in delivering the curriculum in an effective manner; a challenge that was reported more frequently (47%) by teachers in smaller schools. Being a small and rural school was strongly correlated ($p<0.01$) with fewer teachers being given additional responsibilities around school. Opportunities like these are avenues for teachers to develop additional skills, including leadership skills, and support their professional development. Without these opportunities, teachers in smaller schools in (especially those in rural areas) might be at a disadvantage.

Figure 5: Differences in the most reported challenges faced by teachers in rural and urban schools
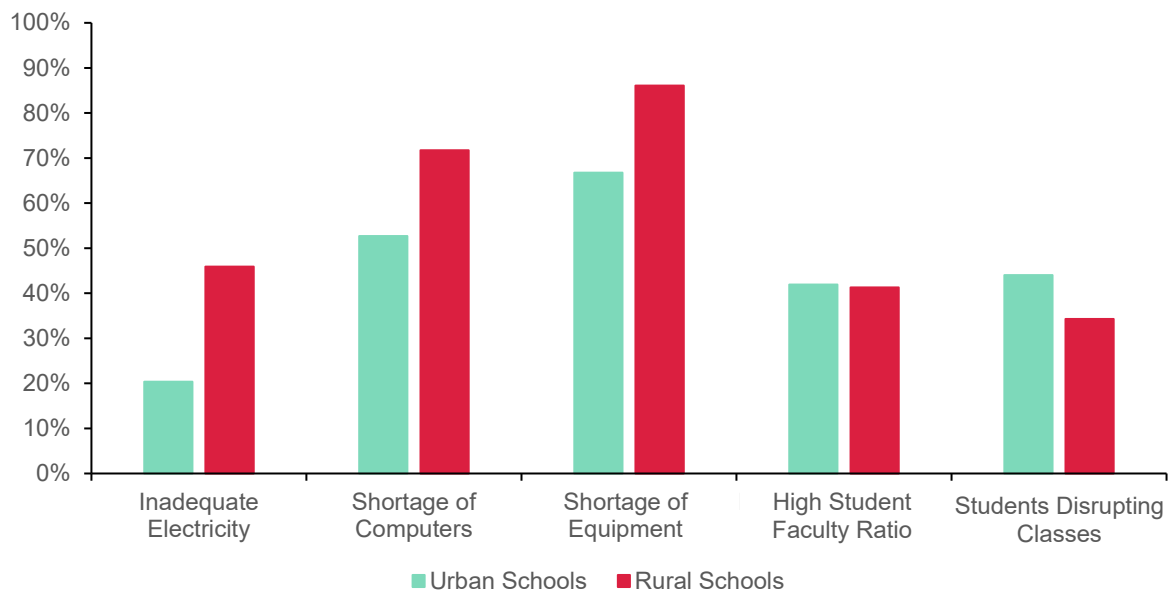
Leadership opportunities for teachers in schools

Providing teachers with additional responsibilities around the school can help them develop their leadership skills. Many teachers are involved in additional activities and have other responsibilities beyond conducting classes in their subject area. These include involvement in physical education / sports teams and leadership roles like being a club leader or the head of discipline. Similarly, becoming a school-based mentor could be a way for teachers to explore their leadership qualities and gain professional exposure in this area.

Teachers in private schools had fewer additional responsibilities at school compared to public and government-aided schools. 39% of private school teachers report having additional responsibilities, compared to almost half of the teachers in both public and government-aided schools. Teachers in schools with slightly younger head teachers were likely to have additional responsibilities around school. Mentorship opportunities available to school teachers varied: only 5% of the teachers we interviewed reported that they were the school-based mentor at their school.

Implications and areas for future research

- **Continue work to reduce the gender gap in school leadership**. The government objective to improve female participation should motivate women to pursue teaching as well as leadership roles by identifying and removing any existing barriers. While the proportion of females in school leadership matched that of teachers in secondary schools, the gender gap remained significant in both cases. The education environment is frequently identified as an agent of gender socialisation, defined as the process through which individuals learn and adopt gender roles. A more inclusive administration can promote gender-inclusive practices within the school, increase girl child school participation, and encourage girls to pursue degrees in teaching (Fulton and Schwarz, 2017).

- **Encourage school leaders to participate in continuous professional development**. Emphasising the importance of continuous professional development for improving leadership skills and updating knowledge and improving uptake could help give leaders the tools to tackle the challenges they face. While the government aims to train 50% of school leaders each year, in 2017 87% reported ever having been trained for their role. Delivering training locally and along with existing in-school initiatives like Imihigo could be a good

way to target training to those who need it. More research into the effectiveness of head teacher training may be beneficial.

- **Prioritise the resourcing of smaller schools and those in rural areas**. Supporting schools that are severely lacking in resources - including teachers, infrastructure, access to electricity and other essential materials - may help them to increase their focus on providing quality education. Identify opportunities and initiatives that can help to alleviate some of the challenges smaller and rural schools face, such as fewer opportunities for mentorship and professional development, and being further away from training opportunities.

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Endnotes

[1] See, for example, the Education Sector Strategic Plan 2013/14 - 2017/18. (MINEDUC, 2013)

[2] We disaggregate our findings by type of school because different school-types are likely to have a different socio-economic characteristics of students, sources of funding, availability of resources, as well as be covered by different government policies. Subject leaders and headteachers at these schools are likely to have differences in responsibilities as well as face different training and resource constraints.

[3] For our analysis, we define a small school as any school with less than the median number of enrolled students in secondary- level classes. The median school in our sample has 323 students enrolled in secondary-level classes.

[4] Response choices included better teaching facilities, better science teaching facilities, better students, better ICT, better or more experienced teachers, better administration, more active Parent-Teacher Association (PTA), and other reasons.

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