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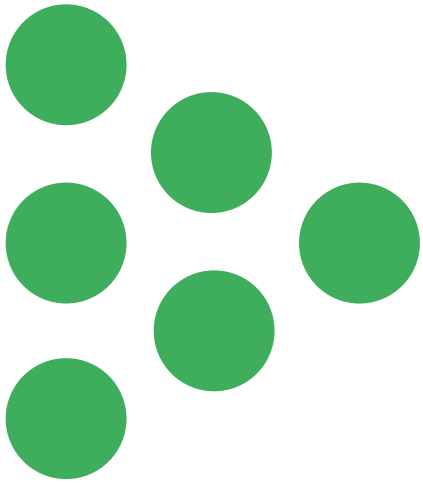
Evaluation

# Evaluation of the ‘PEAS-DES Inspect & Improve’ project

## Baseline report

National Foundation for Educational Research (NFER)



# Evaluation of the 'PEAS-DES Inspect & Improve' project Baseline Report

Jessica Chu
Anila Channa

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By the National Foundation for Educational Research,
The Mere, Upton Park, Slough, Berkshire SL1 2DQ

www.nfer.ac.uk

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# Executive summary

The purpose of this report is to present the results of the baseline evaluation of the 'PEAS-DES Inspect & Improve' project, henceforth referred to as Inspect and Improve. The intervention aims to improve the quality of leadership and management in ten government schools in Eastern Uganda by adapting and implementing the PEAS school inspections and improvement model. Inspect and Improve was launched in February 2019 and will run for approximately one year.

Our evaluation employs a pre-post design that incorporates a survey in all ten intervention schools at baseline and endline, combined with comparative case studies across four intervention schools at endline. Data for the baseline was collected between February and March 2019 from all school head teachers using an adapted version of the World Management Survey (WMS), which captures pre-intervention statistics in areas such as operations, monitoring, target setting, people management, and leadership. Our main findings are summarised below.

## Has the intervention targeted the appropriate schools?

We find that the project has successfully targeted the types of schools as set out in the project aims, although intervention schools appear to be quite diverse in terms of size.

- Intervention schools contain on average a similar number of pupils to the national average, but vary widely in size with ranges from 213 to 1162.
- Intervention schools appear to have a slightly lower proportion of girls at 43.7 per cent (range: 30 – 56 per cent) against the national average of 47.7 per cent.
- Intervention schools had a comparable pass rate in the Uganda Certificate of Education (UCE) to the national average, but a lower proportion of high scorers in the Division 1 and 2 categories as compared to the national results.
- Based on head teacher responses, the socio-economic status of students in schools was considered 'average' in two schools and 'poor' or 'very poor' in the remaining schools.

## What are baseline measures of leadership and management?

We find that baseline measures of quality of leadership and management are low, indicating there may be room for improvement through Inspect and Improve. The intervention schools however appear to have different areas of management practice strengths and weaknesses.

- Intervention schools scored an average aggregate score of 2.33 against a maximum score of 5.0 on the WMS, with 5.0 indicating excellent leadership and management. Comparable studies show that government schools score 2.04 while PEAS schools score 3.04.
- Intervention schools had a variety of aggregate WMS scores, ranging from 1.90 to 2.80, with a standard deviation of 0.25.

- Intervention schools had the weakest scores in the areas of Target Setting (7 schools) and People Management (3 schools).
- Eight of the ten head teachers responded that they supplement their income with other activities, with the average labour spent on these activities at 11 hours per week.
- All head teachers believed some areas of management practice required improvement, and listed issues such as teacher supervision, classroom inspections and increasing participation of students as priority areas for support.

### What factors may limit intervention effectiveness?

We find that levels of autonomy over decision-making, external factors influencing teaching and learning, and the presence of other programming in schools may not only limit project effectiveness, but may also limit our ability to draw firm causal inferences at endline.

- Using a scale of 1 to 10, with 10 being full autonomy, head teachers reported having higher levels of authority in areas of subject content (7.7), admissions criteria (7.5) and on budget allocations (7.5), than in choosing textbooks (5.9) or in hiring or firing teachers (4.4). Inspect and Improve may have limited impact in areas where schools do not have control. However, it should be noted that perceptions of autonomy varied widely.
- Head teachers identified the socio-economic status of pupils as the largest challenge to the quality of teaching and learning, followed by the lack of school resources. This confirms that it is likely beyond the scope of the intervention to achieve improvements in student test scores, and of the evaluation to attribute such changes to the intervention.
- Five head teachers reported that they receive support from other organisations, although this did not appear to be linked to school WMS scores. Given this prevalence of other programming in schools, attributing any improvements solely to Inspect and Improve may prove challenging at endline.

These findings have a number of implications for the design of the Inspect and Improve project, as well as for the design of the endline. The main implication for the project is that tailoring of school level support may be required in order to ensure that the quality of leadership and management improves. The main implication for the endline is that detailed case study information will need to be collected to ensure that the diversity of intervention schools is adequately captured. This should allow us to draw firmer causal claims about Inspect and Improve.

# 1 Introduction

The purpose of this report is to summarise findings of the baseline evaluation of the 'PEAS-DES Inspect & Improve' project, henceforth referred to as Inspect and Improve. The project is being implemented through a partnership between Promoting Equality in African Schools (PEAS) and the Directorate of Education Standards (DES) in Uganda. It aims to improve the quality of leadership and management in government schools by adapting and implementing the PEAS' school inspections and improvement model. Inspect and Improve was launched in February 2019 and will run for one year in ten secondary schools in the districts of Amuria, Katakwi, and Kumi in Uganda's Eastern Region.

Our evaluation of this intervention employs a mixed methods pre-post design with the aim of providing evidence to help understand if and how the PEAS model of school inspections and improvement can be successfully implemented in other settings. To guide our evaluation, we will seek to answer the following research questions:

1. What impact, if any, did the intervention have on the quality of leadership and management in intervention schools?
2. Why did the intervention demonstrate the observed impact?
3. What other areas of the school's operations, such as – for example – staff management or planning practices – if any, did the intervention affect?
4. How much did the intervention cost to deliver? Did it represent value for money?

In this baseline report, we focus on interrogating Inspect and Improve's Theory of Change (TOC) and examining the context in which the project is situated. Importantly, we also analyse data collected at the baseline, providing pre-intervention statistics for the quality of leadership and management in intervention schools. We will conduct an endline evaluation in 2020 in order to track progress against these benchmark statistics and draw firm conclusions about the impact and efficacy of the Inspect and Improve project.

This report proceeds as follows. Chapter 2 summarises the project's context and the relevant literature around school governance and inspections. Chapter 3 interrogates the intervention's TOC. Chapter 4 summarises our methodology, while Chapter 5 presents our baseline findings. Chapter 6 concludes and provides some implications of our findings for the project and evaluation design.

# 2 Context

This section serves to provide context for understanding the Inspect and Improve project. It provides an overview of the Ugandan education system and examines what is currently known about the efficacy of school inspections and management interventions to improve learning outcomes. This review reveals that not only is there evidence that Inspect and Improve is relevant to the current Ugandan policy context, but also that there is strong evidence that school inspections can contribute to improved school accountability and management.

### Uganda has significantly improved the availability of education in recent decades

With a population of approximately 39 million, Uganda has one of the youngest and most rapidly growing populations in the world. Historically, the Ugandan economy has been a strong performer in the region, but has experienced a recent slowdown in economic growth and poverty reduction. In the latest Uganda National Household Survey (UNHS) 2016/17, 21.4 per cent of Ugandans were considered to be poor, meaning that nearly 8 million persons are poor. Agriculture dominates the Ugandan economy, with 64.6 per cent of the total workforce working in agriculture.

The education system is governed by the Ministry of Education and Sports (MoES), who set the standards, provide technical guidance and coordinate and monitor the sector. Early childhood programming is available for children aged 3-5 years old, which is followed by seven years of compulsory primary education. Upon completion of primary education, school leavers are required to complete the Primary Leaving Examinations (PLE). Students may then proceed to six years of secondary education, with four years of lower secondary and two years of upper secondary. Lower secondary school leavers are required to take the Uganda Certificate of Education (UCE) exams and upper secondary leavers complete the Uganda Advanced Certificate of Education (UACE) in order to proceed to post-secondary education.

Education in the country is provided either by the government or through private providers, which includes community-founded schools, faith-based schools, privately owned schools, and schools run under public-private partnerships (PPPs). At the primary level, there are more government schools (64 per cent) than private (36 per cent), but the reverse is true at the secondary level with 38 per cent government and 62 per cent private (MoES, 2017). Uganda introduced Universal Primary Education in 1997 and Universal Secondary Education (USE) in 2007, encouraging the creation of public-private partnerships to help fill the gap of education provision. The policy saw early success with secondary school enrolment experiencing an increase of 47 per cent between 2002 and 2014 (UBOS, 2017).

### Enrolment has increased but challenges related to quality of education remain

Primary gross enrolment rates currently stand above 100 per cent, and net enrolment rates stand close of 90 per cent. Despite gains in enrolment levels, the primary school completion rates and primary to secondary transition rates have both recently decreased (UBOS, 2019). Lower secondary school completion rates have been relatively constant from 2013 to 2017, ranging from 35 to 38 per cent, and transition rates to upper secondary have declined from 32 per cent in 2013 to 24.8 per cent in 2017 (ibid).

The low transition rates are accompanied by low levels of learning throughout the education system. SACMEQ results (SACMEQ 2007) showed that almost 20 per cent of Ugandan Primary 6 pupils were performing below the established reading benchmarks, while 40 per cent of Primary 6 pupils were performing below the mathematics benchmark. In both subjects, Uganda appears to be lagging behind its East African counterparts. According to UWEZO (2016), the problem starts at lower grade levels. Four out of ten children in Primary 3 cannot read a word in their local language, while almost one out of five children in Primary 3 cannot recognize numbers between 10 and 99.

### In most Low and Middle Income Countries (LMIC), interventions focused on improving school governance are seen as ways to address stagnant progress on quality of learning

Several systematic reviews on what works in education confirm that, while interventions that focus on getting children *into* school can succeed in doing so, there is less evidence to demonstrate that such interventions also prompt improvements in learning outcomes (Krishnaratne et al., 2013; Snilstveit et al., 2016). Several authors have found that interventions targeting various forms of school governance, on the other hand, can be effective in improving learning (Evans and Popova, 2015; Glewwe and Muralidharan, 2015; GEC 2018). Here, governance is taken to encompass a wide set of characteristics of education systems and how they are managed, including decisions around organisation of instruction, planning and structures across the school, decisions on resources and resource allocation, and people management (GEC, 2018; Glewwe and Muralidharan, 2015).

There is strong evidence that decentralising education decisions to lower levels of government, and indeed to community and school levels can succeed in building conditions for learning (Barrera-Osorio, et al., 2009; Demas and Arcia, 2015; GEC, 2018). Moreover, there is also strong evidence of the positive relationship between strengthening school governance through management practices and improved school outcomes, both in the international and Ugandan context (Bloom et al. 2014; Crawfurd, 2017). That said, there is less literature on the mechanisms by which management quality translates to improvements in student performance. While many of these studies do not explain *how* strong management produces higher educational outcomes, they do establish the importance of management for school performance.

### In Uganda, there is growing recognition of the importance of the role of school accountability and school inspections to improve education quality

Uganda has undertaken a process of decentralising its education system and other social services as mandated by the 1995 Constitution and the Local Government Act of 1997 (Najjumba et al., 2013). In the Ugandan school system, management of schools is devolved to School Management Committees (SMCs) who hold school service providers (e.g. school leadership and staff) accountable. While these are important features of autonomy and accountability, the Ugandan education system continues to face constraints. Some of these are related to the limited capacity of SMCs to ensure and enforce strong school management (ibid) and to weaknesses in school management practices around monitoring teachers and providing them with feedback on their teaching practices and learning (Sabarwal et al., 2018; Najjumba, 2013).

The current Education Sector Strategic Plan (ESSP) sets out the Ugandan government's efforts to address some of these shortcomings. The current ESSP shifts emphasis from increasing the

*provision* of education to implementing more focused and strategic interventions to improve the quality and relevance of education (MoES, 2017). In aiming to ensure the delivery of relevant and quality education, one of the strategic focuses of the ESSP is to strengthen the current inspection system and to establish a semi-autonomous body in charge of inspection, to help improve the quality of leadership and management.

### School inspections can play a key role in building and improving management capacity

School inspections are generally regarded as a process by which an evaluation is undertaken by someone external to the school, usually with a mandate by a national or local authority. School inspections or visits are conducted in a structured way and with regular frequency to collect information on school quality and compliance, serving the purpose of both vertical accountability (compliance with laws and regulations and creating an additional means of assessment for system-wide school performance) as well as horizontal accountability (internal school accountability through shared expectations amongst head teachers, teachers, students, and other stakeholders) (Eddy-Spicer et al., 2016).

School inspections can support the process by which school management is able to support improvements to teaching and learning by providing crucial data, feedback, and support in diagnosing problems and implementing changes to improve learning outcomes. A realist synthesis of research on school inspections (Eddy-Spicer et al., 2016; Ehren et al., 2017) established a framework organised around four mechanisms by which school inspections are able to have an impact on school-level outcomes:

- setting expectations
- providing feedback information
- capacity building of educators
- capacity development of stakeholders.

### Our application of the above inspections framework to the Ugandan context suggests that the current government school inspections may need additional support

In Uganda, many of the mechanisms identified in the above framework are in action. The Directorate of Education Standards (DES) was established in 2008 to oversee school inspections and document and share best practices in the education system. The ESSP has set out several means to improve the inspections system, including by mandating an increase in the percentage of secondary schools with two inspection visits per term from 80 per cent of all schools to 100 per cent by 2020. The DES is also undergoing a process to pilot a new inspections tool, with support from the Education Partnerships Group.

However, researchers (Macharia and Kiruma, 2014; Hossain, 2017) have also identified several challenges to the inspections process in Uganda. We summarise and frame these challenges in accordance to the framework above:[1]

[1] It should be noted that in this existing research, there is little evidence or discussion on the capacity development of stakeholders.

- **Setting expectations**: There is a the need to set expectations around inspections as phased processes that include, for instance, a pre and post phase, rather than being a one-off process. Setting this kind of expectation serves to ensure buy-in of stakeholders, which has been considered a challenge to inspections in Uganda (Macharia and Kiruma, 2014).
- **Providing feedback information**: One of the greatest challenges to inspection systems is the lack of resources to conduct inspections, which then limits the nature and quality of feedback provided from an inspection. This results in low buy-in and trust from teachers (Hossain, 2017). Furthermore, the relevance of feedback and the demeanour of feedback delivery have been identified as barriers to effectiveness of inspections in Uganda (Macharia and Kiruma, 2014).
- **Capacity building of educators**: The responsibility to act on feedback from inspections lies with head teachers, who often have limited to do so (Macharia and Kiruma, 2014).

In sum, this review suggests that although the Inspect and Improve intervention may be an innovative approach to building school management through inspections support, there are a number of challenges and barriers faced by inspection systems that may hinder impact.

# 3 Project background

In this section, we provide an explanation of the inception of Inspect and Improve and the motivations for its design. We also provide a description of our understanding of the intervention's TOC. This builds on the TOC originally conceptualised by PEAS but more clearly articulates the pathways connecting inputs, outputs, outcomes and impacts. This revised TOC will serve to further refine data collection processes and inform our analysis of the intervention's success at endline.

## 3.1 Inception

PEAS is a UK-based non-profit that aims to expand equitable and high quality secondary school education in Africa. Since 2009, PEAS has built and run a network of 28 schools in Uganda with the aim of providing affordable, high quality and sustainable secondary schools.

A previous external evaluation of PEAS schools in Uganda identified several aspects of school management that set them apart from comparable government and private schools. These include teacher support and training, accountability measures, child protection and support for learning and an emphasis on the development of strong school leaders (EPRC, 2018). An additional study conducted by Research on Improving Systems of Education (RISE) examined school management practices and public-private partnerships (PPP) in Uganda. The study confirmed that PEAS schools had higher levels of management quality than comparable government, private or other PPP schools, as measured using the World Management Survey (WMS) (Crawfurd, 2017). Importantly, the same study showed that these higher levels of management quality were associated with higher student value-added scores. PEAS has identified that a key factor contributing to the high quality of school management is PEAS' approach to school inspections and accompanying package of support and follow-up.

Concurrently, as set out in the ESSP, DES is undertaking efforts to strengthen its current inspection system. DES is in the process of planning the roll-out of a revised inspections approach. To further support schools to respond to inspection findings, DES has formed a partnership with PEAS to design a model that combines the DES inspections process with an adapted version of PEAS' inspections and school improvement support package.

As a result, the 'PEAS-DES Inspect & Improve pilot programme' was launched in February 2019 as a pilot project. The pilot project will test whether the PEAS model of support to inspections and school improvement can be adapted and transferred to non-PEAS schools. The project aims to deliver the following objectives:

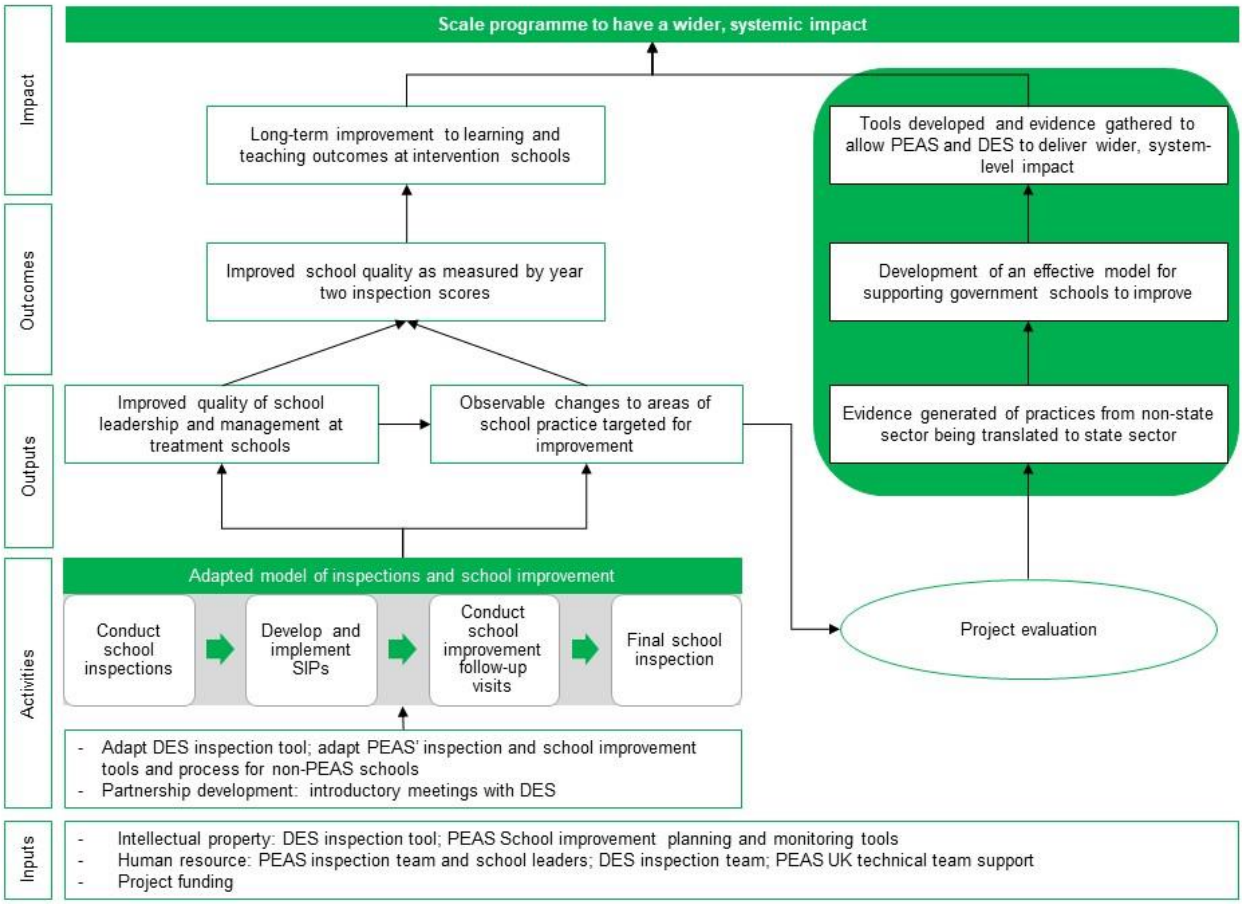
- To improve the quality of leadership and management at ten government schools that need support to improve performance through delivery of PEAS's school improvement support;
- To better understand what approaches can best improve school quality, how much these cost to deliver and how, if effective, these could be rolled out by MoES at a larger or national scale; and
- To learn about how PEAS can work effectively with non-PEAS schools to drive school- and system-level improvement.

If successful, the project will deliver improved education outcomes students in ten in government schools and will generate evidence that its model of the adapted PEAS' inspections and school improvement approach can be horizontally scaled to additional government schools.

## 3.2 Theory of Change

A TOC is both diagrammatic and narrative and articulates both the explicit and implicit logic of a programme by unpacking the assumed causal linkages between the specific problems in which the programme is trying to address, the interventions used to address these and the subsequent outcomes achieved. To support the evaluation, we have examined the intervention's TOC in detail. This allows us to better understand the programme logic and to elicit and test the assumptions built into the project design through our evaluation. We express our understanding of the programme logic in the form of a revised version of the TOC (Figure 1 below) and explain it in the narrative that follows.

**Figure 1 Revised Theory of Change for Inspect and Improve**




The Inspect and Improve project's TOC implies that if PEAS implements its inspections and improvement intervention in government schools, then there will be observable changes to areas

of school and leadership practice, which will ultimately result in improved school leadership quality. This improvement in school quality will result in long-term improvements in student learning that will be beyond the project and evaluation's lifetime to observe and measure.

**Inputs:**

The intervention uses the new DES school inspection tool in combination with PEAS' intellectual property to develop an adapted schools inspections and improvement programme and support package. This model will be designed so that learnings can be transferred to DES' inspections approach and process in further government schools.

**Activities:**

The inspections process involves structured visits jointly conducted by expert inspectors from PEAS and district inspectors. The inspection involves observations and data collection on key aspects of education delivery and school management, in accordance with the DES inspection template. The inspections culminate in an inspection report that highlights areas of good practice and provides recommendations to the school. The inspection report also serves as the basis for the development of a School Improvement Plan (SIP), which PEAS inspectors and support staff work closely with school leaders to develop. Finally, PEAS inspectors work with school leader mentors to monitor and support school leaders with the implementation of SIP recommendations through follow-up visits and phone calls. As the intervention is a pilot programme, it is expected that the specific activities of the inspections and support programme are subject to change and will adapt throughout the course of the project.

**Outputs:**

If the intervention develops an inspections and improvement, then this will generate measurable and observable changes in areas of school practice as identified in the SIPs. This will also concurrently allow the project's evaluation to produce evidence of the effectiveness of intervention to enable wider systemic change.

**Outcomes:**

At the outcome level, if Inspect and Improve project's improves aspects of leadership quality, then this will translate into improved school quality, as measured by inspection scores. The evaluation supports a second outcome, in which evidence is generated of the development of an effective model that can be applied to further government schools to improve and support management.

**Impacts:**

As such, if successful, the project will have a two-fold impact. The more direct impact of Inspect and Improve will be an improvement in teaching and learning outcomes for students at intervention schools. If agreed by both parties, a subsequent impact will result from applying the model and learnings developed as part of this pilot to scale to a wider set of government schools.

**Assumptions:**

There are several assumptions underlying this TOC. The most salient of these include:

- Inspect and Improve will improve the quality of leadership in intervention schools.

- Improved quality of leadership will lead to improvements in teaching and student learning.
- The inspections and improvement process will be relevant and of sufficient quality to improve leadership.
- Head teachers and teachers will have sufficient capacity and willingness to participate in and contribute to Inspect and Improve and are available throughout the duration of the project.
- One year is a sufficient period to undertake actions that improve the quality of leadership.
- Evidence of the efficacy of Inspect and Improve will allow PEAS to have a systems level impact.

# 4 Methodology

In this section, we provide an overview of our evaluation approach, our sampling strategy, and our data collection methods. We also provide information about the process of data collection for the baseline, in which we collected data for our pre-intervention measures for WMS. Finally, we provide an indication of the limitations of our approach.

## 4.1 Evaluation approach

Our evaluation employs a pre-post design incorporating a survey in all ten intervention schools combined with comparative case studies in four intervention schools to evaluate Inspect and Improve. Our case study approach allows us to draw causal claims about impact and has been employed for two reasons. First, comparative case study evaluations are particularly useful in situations when an established programme is implemented in a new setting (Balbach, 1999). This approach allows us to explore in detail what happened after the intervention was implemented, and to consider the role the context may have played in the final result. Second, comparative case studies allow us to make plausible claims around causality in instances where the creation of a control group is not feasible or desirable (Goodrick, 2014). In this study, for practical considerations around sampling and costs, PEAS and NFER have chosen to forego the use of a control group.

## 4.2 Sampling

The ten schools participating in Inspect and Improve were selected by local government officials. The selected schools are from three contiguous districts in Eastern Region and are roughly comparable to each other in terms of school performance and socio-economic profile. This comparability is meant to allow us to draw causal claims about impact.

We will administer our survey in all ten intervention schools at baseline and endline. Based on the results of the WMS endline data, we will then purposively select four schools as our case studies at endline for further qualitative data collection. We will do this by employing the “Diverse” sample selection methodology (Seawright and Gerring, 2008), in which the two schools that exemplify the largest change in quality of school leadership and the two with the smallest changes will be selected. This sampling methodology will allow us to understand the key enablers of and barriers to change in order to derive transferable lessons for future programme adaptation or scale.

## 4.3 Data collection methods

In this evaluation, we use a mix of quantitative and qualitative methods:

- Quantitative: Ten surveys implemented at baseline and endline each.
- Qualitative: Documentary analysis and 27 interviews with stakeholders conducted at endline.

**Quantitative methods**

In order to assess improvements to school management, we use an adapted WMS. The WMS is a structured 45 minute survey that involves providing scores for school leadership and management by delivering a set of probing questions around practices to head teachers. In addition to the WMS,

we also use a 15 minute basic school survey to explore aspects of the context in which the schools operate, such as school and student population characteristics, and the economic and policy environment.

The WMS was developed in 2002 as a systematic way to measure the quality of management practices, including for education management, across the world. It has successfully been applied to several country contexts to demonstrate the connection between school management and learning outcomes (Bloom et al., 2014).

The original education WMS includes 18 questions across the five areas of: operations, monitoring, target setting, people management, and leadership. The area of operations includes processes of teaching in a school; the area of monitoring includes how the school tracks and monitors performance; the area of target setting includes how targets are set and linked to learning; the area of people management includes how teachers are managed and supported; and the area of leadership includes vision and accountability. Scores are derived from the average across the questions in each area and then the aggregate average across areas.

The WMS was further adapted for use in Uganda for the 2015 RISE Management Survey (henceforth denoted RMS-2015), expanding the number of questions to 20 across the same five areas (Crawfurd, 2017). We adapted the basic education WMS for the purposes of our evaluation, combining insights offered in the RMS-2015 with practical considerations around time, potential respondent fatigue and the nature of the intervention group. This reduced the number of questions from 20 in the RMS-2015 to 12 in our survey, while maintaining the same five key areas for comparison with the RMS-2015.

Both the adapted WMS and the basic school survey were pre-tested and piloted across three government schools in Kampala ahead of baseline data collection.

**Qualitative methods**

Our qualitative design is based on three methods. First, throughout the course of the evaluation, we will conduct analysis of key project documents. This will include the inspection reports and SIPs that are developed as part of the project for each school. This documentary analysis will allow us to better understand the challenges they face, the nature of the intervention, and how implementation occurred. Documentary analysis will be carried out for all ten intervention schools.

Second, a key component of the comparative case study approach is 20 Key Informant Interviews (KIIs) which will be conducted at endline with head teachers, deputy head teachers, heads of studies, and teachers from four case study schools. We will interview approximately five staff members from each of our four case study schools to better understand school context, views on changes to school leadership and emerging changes to school performance as a result. We will also ask them to feedback on the implementation, utility, and perceived impact (or lack thereof) of the project, as well as the internal and external barriers and enablers of change.

Finally, we will conduct a further seven KIIs with key project stakeholders such as government partners and PEAS staff at endline. We will purposively select key informants based on their understanding of project implementation, in order to elicit transferable lessons about the nature

and fidelity of implementation. We will also ask them to consider internal and external critical success factors and barriers, as well as unintended consequences.

## 4.4 Baseline data collection

Data collection for the baseline wave of surveys was conducted from 27 February to 16 March 2019. Our survey was adapted to suit the format of the project launch event, which was a one-day event that took place on 27 February. Two enumerators from our local data collection partner conducted the 15 minute basic school survey face-to-face at the event, using the opportunity to build rapport and arrange for telephone follow-up appointments to conduct the WMS. Telephone surveys were then conducted in the following two weeks to solicit data for the adapted WMS. To quality assure the process, two of the interviews were double scored by enumerators to ensure consistency, and a random selection of questions were further spot checked by the evaluation project lead by listening to the recorded interviews. Scores appeared consistent and no further issues were identified.

## 4.5 Limitations

Our selected evaluation strategy has limitations related to the areas of causal attribution, use of WMS, external validity, and sustainability that the reader should be aware of:

- Causal attribution: while comparative case study evaluations are often used to infer causality in cases where randomised controlled trials cannot be used, these trials do nonetheless remain the gold standard of causal attribution. Plausible attribution in this evaluation will depend heavily on the quality of the in-depth qualitative data we are able to gather, as this data will allow us to persuasively rule out alternative explanations.
- Use of WMS: WMS scores are calculated by interviewers. They determine scores by asking probing questions around certain areas of school management. To prevent bias in score calculation, we ensured that the same enumerator conducted all interviews and also provided extended training and clear rubrics for scoring. Nonetheless, some subjectivity in judgement is inherent in the nature of the WMS.
- External validity: the results of the evaluation will be generalizable to similar interventions implemented in similar schools only. Readers will have to exercise due caution when extrapolating results to other settings.
- Sustainability and long-term impacts: the evaluation will consider the intervention's impact after 12 months of implementation, but cannot comment on whether the intervention is sustainable or whether it will have an impact on longer-term outcomes such as changes to wider school practices, teaching practices, or learning outcomes. A follow-up study may have to be designed to consider any changes to student outcomes using, for example, UCE scores.

# 5 Findings

This section presents a summary of the results from our baseline. We organise the data and our analysis to respond to three questions:

1. Has the intervention targeted the right schools?
2. What are baseline measures of leadership and management in targeted schools?
3. What factors may limit intervention effectiveness?

Where possible, we compare the results from the baseline data collection with two sources:

- National-level data on education statistics from the 2018 Uganda Statistical Abstract (reporting education data from the Annual School Census from 2017) and further data from the Uganda National Examinations Board (UNEB) and the Uganda Education Management Information System (EMIS). Further data from the 2016-2017 Uganda National Household Survey (UNHS) from the Uganda Bureau of Statistics (UBOS) was used. In this instance, the survey is representative at the sub-regional level, for which our intervention schools are all located in districts within Teso sub-region.
- The 2015/16 Ark School Survey and RMS-2015. The School Survey was conducted with a nationally representative sample, stratified against Uganda's four regions and by school type (private and public), in which a total of 2813 schools were sampled. Data for the WMS portion of the survey involved a random stratified sub-sample of 223 schools from the wider 2015 Ark sample. The survey disaggregates schools by school type, including government schools, elite government schools, private and international PPP schools (including schools run by PEAS). Where possible, we have provided comparisons against government schools and PEAS schools.

Additionally, we use data provided by PEAS and DES on school characteristics (such as 2017 UCE scores and pass rates) to support our analysis.

## 5.1 Has the intervention targeted the appropriate schools?

This section provides information on the schools selected to participate in the project. The project aimed to target ten government schools, focusing on schools that are within geographic proximity to limit substantial disparities between schools. Additionally, the project aimed to support schools whose performance was categorised as below average. The ten schools selected for the programme were nominated by the DES for participation.

Each of the ten government schools selected for participation in the project have previously participated in the Uganda USE programme. Three schools are located in Kumi district, four in Katakwi district and three in Amuria district. Table 1 provides further characteristics of the schools.

**Intervention schools range widely in size, are smaller than the average government school, and have a slightly lower proportion of girls**

The government schools selected for Inspect and Improve contain on average a similar number of pupils to the national average from the Annual School Census, but fewer than average in

comparison to the government schools sampled for the RMS-2015. PEAS schools surveyed by RMS-2015 contain the fewest number of students on average. However, amongst intervention schools, the size ranges from 213 – 1162 students, indicating a large difference within the sample set. Without one outlier, the average size of the intervention schools is 398. This diversity in size may result in heterogeneous intervention effects that must be taken into account at endline.

Intervention schools in general contain a comparable percentage of female students. Within the sample of intervention schools, the average proportion of female pupils ranges from 30 – 56 per cent, with half of the schools clustered within the range of 41 – 44 per cent. This proportion is similar to both the government schools and PEAS schools from the RMS-2015 sample, but lower than the national average of girls enrolled in schools. A lower proportion of girls enrolled in intervention schools may indicate that schools are located in slightly more traditional areas, or at a larger distance from communities.

**Table 1 Characteristics of sample schools**

| | n (number of schools) | Average school size (# of pupils) | Average per cent pupils girls |
|---|---|---|---|
| **Intervention schools** | 10 | 474 | 43.8% |
| **UBOS Annual School Census, 2017** | 2995 | 458 | 47.7% |
| **RMS-2015 – Government schools** | 886 | 583 | 46.0% |
| **RMS-2015 – PEAS schools** | 28 | 362 | 45.0% |

### Intervention schools cater mostly for disadvantaged children and are located in a region which is poorer than the national average

In Table 2 we provide a comparison of poverty and basic education indicators of Teso sub-region against the national average. By targeting the Teso sub-region within Eastern Region of Uganda, Inspect and Improve is targeting schools in a region in which the 2017 poverty rate is higher than the national average (25.1 per cent as compared to the national 21.4 per cent) (UBOS, 2018). However, Teso sub-region performs higher than the national average in terms of primary gross and net enrolment, equivalent at the secondary school GER but lower NER, suggesting that secondary enrolment rate in Teso is lower than the national average. Finally, Teso has a lower literacy rate (for those over ten years old) than the national average.

**Table 2 Performance of Teso sub-region against national average**

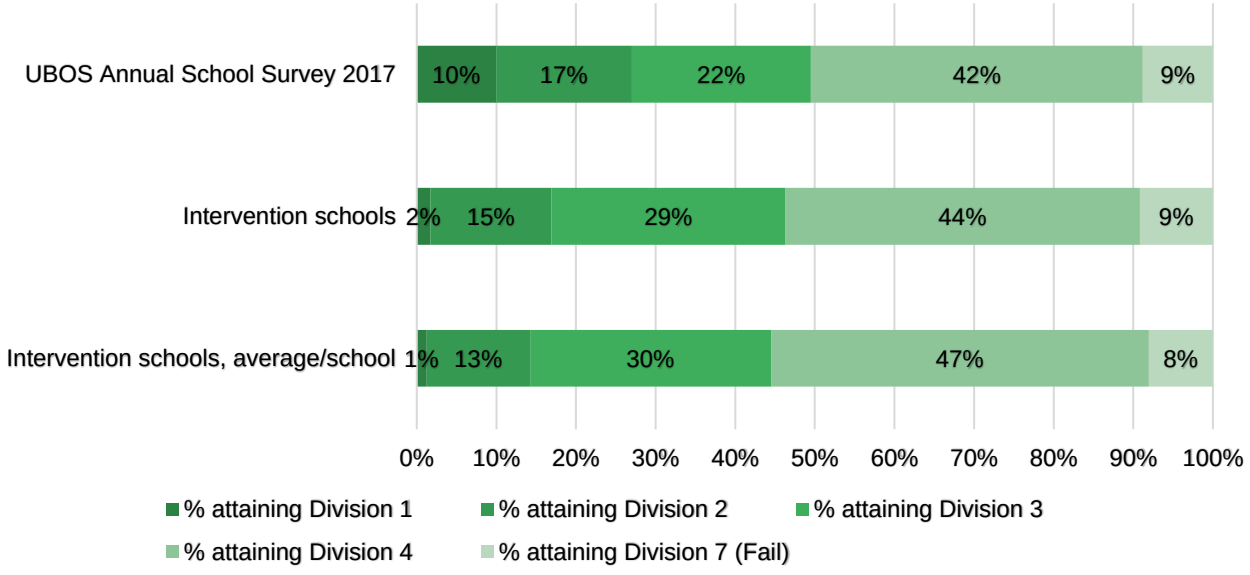
| Indicator | Teso Sub-Region | Uganda Average |
|---|---|---|
| **Proportion of those impoverished** | 25.1 | 21.4 |
| **Primary Gross Enrolment Rate** | 138.60 | 116.80 |
| **Primary Net Enrolment Rate** | 87.00 | 79.50 |
| **Secondary Gross Enrolment Rate** | 37.00 | 37.90 |
| **Secondary Net Enrolment Rate** | 22.90 | 27.80 |
| **Literacy Rates, 10+** | 67.10 | 73.50 |

We did not collect individual data on the characteristics of the students in intervention schools. Head teachers of the intervention schools were nonetheless asked to categorise the socio-economic status of their students. Two head teachers reported that they believed the socio-economic status of their students to be 'average', the remaining reported that they believed the status of their average student to be either 'poor' or 'very poor'. Given the targeted districts for the project and through head teacher observations, the project appears to be targeting areas in which students are poorer and have less access to education. This is to be expected given this is a sub-region in which PEAS has already targeted for programming.

### The intervention appears to be successfully targeting lower performing schools; however, within the sample there is a wide range of school performance

Figure 2 provides a comparison of school performance, as indicated by UCE results from 2017, comparing intervention schools (cumulative and average) against the Annual School Survey results. UCE results for intervention schools are taken from data provided by PEAS and DES.

**Figure 2 School performance in UCE in intervention schools versus national results**



Intervention schools had a comparable pass rate in the UCE, but a lower proportion of high scorers in the Division 1 and 2 categories as compared to the national results, suggesting that Inspect and Improve is targeting schools that are historically lower performing schools than the national average. However, it is important to note that it is unlikely that the project will be able to affect a change in test scores within the duration of the project, as this will be a longer-term outcome.

Within our sample, the average UCE pass rate ranges from 80 per cent to 100 per cent. Three schools can be categorised as higher performing (average pass rates of 98 – 100 per cent), while five can be categorised as strong performing (89 to 95 per cent, against the national average of 91 per cent), the remaining two may be considered lower performing (at 80 per cent UCE pass rate). Although UCE scores and pass rates are not necessarily a precise indicator for school performance, an examination of the scores suggests that within the project sample there is a range of school performance levels.

**Considerations from targeting:**

- PEAS may want to consider the effect that school size may have for the inspections and improvement process, given the wide range of sizes of intervention schools. However, aside from one outlier, the remaining schools appear to be of comparable size to PEAS schools, while being on average smaller than most government schools.
- PEAS may also want to consider if there are elements of management capacity building that can target barriers that have contributed to the lower percentage of female pupils in intervention schools than the national average.
- The intervention appears to be successfully targeting schools with poorer students. Although the project will unlikely see a change in test scores within the project's lifetime, PEAS should consider the fact that there is a range of performance within the project's sample (roughly: low, strong and high performing) which may have a bearing on how they tailor inspections and improvement support.

## 5.2 What are baseline measures of leadership and management?

In this section, we provide an overview of the baseline data collected on different measures of leadership and management quality. We collected data on the characteristics of school leaders from our intervention schools, our baseline of the WMS, as well as the perceptions of challenges to management from our intervention school leaders. For the first two areas, where possible, we provide comparisons against the results from RMS-2015.

### Intervention school head teachers have a comparable level of experience, but appear to be engaged in a greater degree of supplementary income-generating activities

A key consideration for the quality of management and leadership is the capacity of school leaders. We examine this by looking at the years of position experience of head teachers as well as head teachers' income generating activities outside of their position as a proxy for head teacher absenteeism. Both these indicators also allow for comparison against the RMS-2015.

We found that the intervention school head teachers had an average of 18.6 years of experience working in the school system, with an average of 8.3 years in their current post of school leader. This compares well with the RMS-2015 sample, where the average number of years of head teacher experience was 9 years, and 10 years more specifically in sampled government schools. In sum, the experience level of intervention school head teachers is comparable to that of the RMS-2015.

Eight of the ten head teachers responded that they supplement their income with other activities, and all eight reported that this involved agricultural activities. The overall average time spent on these activities is 11 hours per week, with a range from zero to 48 hours per week. Aside from the two outliers of zero hours (for growing cocoa) and 48 hours, the average hours spent is 6.7 hours per week, which suggests that several head teachers may not have the capacity to effectively engage in the Inspect and Improve intervention or school improvement initiatives more generally.

The RMS-2015 did not measure the amount of time spent on supplementary income generating activities, but reported that 13 per cent of head teachers reported having a second job. The wide difference of the RMS-2015 sample (13 per cent) versus our sample of 80 per cent suggests either a different interpretation of what might constitute a 'second job' (as agricultural activities are not always considered to be 'jobs') or implies that a significantly higher proportion of head teachers in our sample are active in other income generating activities. A high proportion of engagement in supplementary agriculture may also be indicative of the characteristics of where the intervention is located, as both rural and poorer. Although this is not something that the project can control for, this may be a factor in building the capacity of head teachers, if they have additional external pressures which occupy their time and efforts. The evaluation will explore this further at endline.

### Intervention schools have higher WMS scores than government schools but lower than PEAS schools, indicating that they have room for improvement

Table 3 below provides a comparison of WMS scores from our baseline to the scores reported in the RMS-2015, as well as an indication of the range of scores within intervention schools. Intervention schools scored an average aggregate score of 2.33 against a maximum score of 5.00 on the WMS, with 5.00 indicating excellent leadership and management. Government schools in the RMS-2015 scored 2.04 while PEAS schools scored 3.04. This implies that our intervention schools may be better managed than an average government school, but can still improve their scores if the intervention is able to raise quality to the level of PEAS schools.

Looking at the breakdown of scores by the five target areas explored in the WMS (operations, monitoring, target setting, people management, and leadership and vision), intervention schools scored higher than government schools in all areas except in people management, where the score is only slightly lower. Interestingly, PEAS schools scored higher in all areas than government schools and intervention schools.

**Table 3 Comparing WMS results**

| Area | Intervention schools (range of scores) | RMS-2015 – Government schools | RMS-2015 – PEAS schools |
|---|---|---|---|
| **n** | 10 | 82 | 24 |
| **Aggregate score** | 2.33 (1.90 – 2.80) | 2.04 | 3.04 |
| **Operations (OPS)** | 2.38 (1.50 – 3.25) | 2.00 | 3.30 |
| **Monitoring (MON)** | 2.85 (2.00 – 3.50) | 2.10 | 3.05 |
| **Target Setting (TAR)** | 1.63 (1.00 – 2.33) | 1.70 | 2.73 |
| **People Management (PMT)** | 2.00 (1.00 – 3.00) | 2.08 | 3.12 |
| **Leadership and Vision (LSV)** | 2.80 (2.50 – 3.50) | 2.30 | 3.00 |
| **Standard Deviation** | 0.25 | 0.32 | 0.59 |

### Aggregate WMS scores for intervention schools are within a similar range; however, intervention schools demonstrated a wide variety of strengths and weaknesses

The range of WMS scores within our sample is smaller than for either government or PEAS schools from the RMS-2015, with a standard deviation of 0.25 versus 0.32 and 0.59 respectively (see Table 5). The WMS aggregate scores in our sample ranged from 1.90 to 2.80, again with five schools clustered between 2.20 and 2.40.

Across the intervention schools, high scores were achieved in the areas of operations (2 schools), monitoring (5 schools), and leadership and vision (5 schools).[2] The weakest scores were in target setting (7 schools) and people management (3 schools). The range of scores for each area can also be found in Table 3, where the largest range of scores was in the area of people management and the smallest in leadership and vision. This suggests that aside from room for improvement in target setting for all schools, each of the intervention schools have different strengths and face different challenges. This suggests that a tailored approach to supporting these schools may be required.

### Amongst intervention schools, those who scored the lowest on WMS included those that not only had the lowest UCE pass rates but also had capacity constraints

The schools that had the lowest scores in the WMS included the largest school (in terms of student population) in our sample, the school with the lowest UCE pass rate, and the school where the head teacher reported spending the most time in income generating activities outside of their role as head teacher. Conversely, the schools that had the two highest WMS scores included two of the

[2] Several schools had the same score in multiple areas, so these are not intended to add up.

three schools with the highest UCE pass rates. Aside from head teachers who reported having zero experience and received the lowest WMS score, there does not appear to be any relationship between head teacher experience and WMS scores.

### All head teachers believed some areas of management practice required improvement, although these were not always related to the weaknesses identified in WMS scores

Head teachers were asked to self-assess if, and in what areas, management practices needed improvement in their schools. All head teachers believed their schools had a need for improvement in leadership and management quality. The areas for improvement they identified can be categorised according to the following areas of the WMS:

- Operations, such as: classroom inspection, teacher supervision.
- Leadership and vision, such as: leadership in general; general opportunity for reflection on how to address poor student performance; increasing the participation of parents and Board of Governors.
- People management, such as: increasing motivation of teachers or providing incentives to teachers, hiring more teachers.

There does not appear to be any particular relationship between the areas head teachers identified as areas for improvement and areas in which they scored lower in their WMS scores. While those who identified areas of leadership and vision as areas for improvement scored weaker in that area, those who identified areas of operations as weaknesses generally scored higher in the WMS in that area.

### When asked about management from the perspective of teachers, head teachers identified a number of teacher management issues

Similarly, head teachers were asked to assess school management practices, but from the perspective of the teachers in their schools. Head teachers gave themselves an average score of 6.2 out of 10, with a range of scores between 4 and 8. With regard to self-assessed perceptions of management from teachers, the head teachers who were most critical about management included those who performed both lowest *and* highest on WMS, indicating that being self-critical can also be a strong indicator of good management.

When asked why they thought teachers would assign the given score, those who provided higher scores reported that teachers and head teachers had a strong relationship, as well as with other school management groups (such as Parent and Teacher Associations and Boards of Governors). Others also mentioned that teachers are involved in decision-making. Those reporting lower scores mentioned issues with teacher remuneration and late payments, low motivation or incentives for teachers, and low teacher involvement in decision-making. This helps to identify the importance of people management as part of leadership and some potential barriers to improved school practices and teaching outcomes that may be beyond the control of the intervention.

**Considerations from WMS scores**

- PEAS should consider that implementation schools have a wide range of baseline WMS scores, as well as different strengths and challenges and will required tailored support.
- Government schools have the most to learn from PEAS schools in the areas of target setting, people management, and operations. Intervention schools scored lowest in the area of Target Setting, which is be an area on which PEAS may consider focusing.
- Head teachers self-assessed areas of operations, leadership and vision, and people management as areas for improvement. This includes relationships with and management of teachers and teaching practices.

## 5.3 What factors may limit intervention effectiveness?

In this final section, we consider three factors beyond the scope of the Inspect and Improve project that have the potential to limit the efficacy and impact of the intervention. Carefully considering the role of all three through detailed case studies will be critical to making any causal claims at endline.

### There is a relationship between perceived levels of autonomy in budget allocation, hiring and firing of teachers and WMS scores

When head teachers were asked about their perceived decision-making authority in different areas[3], head teachers reported having higher levels of authority in areas of subject content (average of 7.7), admissions criteria (7.5) and on budget allocations (7.5), with a small proportion (three head teachers) reporting having full autonomy in the latter two areas. Two head teachers who reported having full autonomy over budgets were also amongst those who scored the highest on the WMS question on budgets, although one head teacher reported having full autonomy over the area but scored less well in the WMS. However, head teachers reported having less autonomy choosing textbooks (5.9) and in hiring or firing teachers (4.4). The latter generally corresponds to the relatively low performance of all schools in the area of People Management.

In the areas of admissions criteria, choosing textbooks and budget allocations, there was a large discrepancy in responses with head teachers reporting a range from 1 to 10. The discrepancy was less for subject content (where responses ranged from 5 to 9, indicating fairly consistent levels of medium to high authority) and for hiring or firing teachers (where scores ranged from 1 to 7, indicating a lower level of authority). It is uncertain as to whether this relates to a high degree of variation of autonomy between schools or whether the variation is due to perception instead. This is a key area that may need to be unpacked at endline as it may affect intervention impact.

[3] Head teachers were asked to provide a score on a scale of 1 – 10, 1 being 'no authority over the area' and 10 being full authority over making decisions in the area'

### Head teachers identified the socio-economic status of pupils as the largest challenge to the quality of teaching and learning, followed by the lack of school resources

Head teachers were asked to identify the top challenges to the quality of teaching and learning faced by their schools from a pre-defined list. Each of these challenges may limit the efficacy of the Inspect and Improve project in achieving its ultimate aim of improving student learning. The responses for head teachers can be generally grouped into the following categories:

- **Contextual problems external to the school**, including students' socio-economic status. This includes that students are absent, parental support is missing, families are poor, poor access to schools and the status of students as refugee students.
- **Problems within the school**. This includes that teachers are absent, teachers were not on government payroll and lack of teacher motivation.
- **Problems with school resources**: This includes that there was a lack of teaching materials, class sizes are too big, budgets are inadequate or late, school facilities are poor and lack of accommodation for teachers.

The most frequent response was that 'families are poor' (6 responses), followed by 'class sizes are too big' (4). Student absence, lack of motivation of teachers and inadequate or late budget remits each had three responses. No head teacher identified the lack of teacher training or the limited control of head teachers as challenges.

Twelve responses concerned problems external to the school, which is the highest number of responses by group. Eleven responses concerned problems with resources. When asked more specifically about school facilities, three schools reported not having enough desks, six reported not having enough chairs and six reported not having enough textbooks.

Finally, only six responses concerned problems from within classrooms. Head teachers were also asked about teacher retention. Seven schools reported having lost teachers in the past year. Of those that lost teachers, there was an average of 2.9 teachers per school lost, or a loss of 14 per cent of teaching staff on average.

### There does not appear to be any relationship between schools who receive external financial and capacity building support and baseline WMS scores

Five head teachers reported that they receive support from other organisations. This includes NGOs such as The Aids Support for Orphans (TASO) the Child Development Centre, Forum for African Women Educationalists (FAWE), Action Aid, Baylor Uganda, and Cap Anamur (German Emergency Doctors). They provide either financial support (such as paying for fees for vulnerable children and orphans) or conduct workshops with teachers.

Extra support or partnerships can be construed as the result of strong management, in which school leadership is able to solicit partnerships, or as a product of a school's particular vulnerability. In the baseline, there does not appear to be any relationship between schools that receive external support and WMS scores. Schools at the top, bottom, and middle of WMS score distribution receive external support. However, the experience of working with partners and

receiving external support may factor into the capacity of head teachers to take up further capacity building support; this will be explored further at endline.

**Considerations from possible limiting factors**

- The relationship between autonomy in areas such as budgeting, hiring and firing and WMS scores suggests that it may be difficult to improve WMS scores in areas where head teachers have less autonomy.
- Head teachers identified a number of challenges to the quality of teaching and learning that extend beyond the school, including student absenteeism and poverty. Teacher management and practices factored the least in head teachers' responses, suggesting that although people management and operations remain areas for improvement, the translation of improved management scores to the improved quality of learning may be more difficult to realise. However, this would be a longer-term change outside the scope of the project.
- There does not appear to be a relationship between schools that receive external support and WMS scores, although experience with working with partners or with capacity building support may be an enabler for the uptake of further support.

# 6 Conclusion

The main findings of this report and the implications for the design of the Inspect and Improve intervention, as well as for the design of its endline evaluation, are summarised below.

**Has the intervention targeted the appropriate schools?**

- **Intervention schools range widely in size and have a lower proportion of girls**

  Inspect and Improve may want to consider the effect that school size may have for the inspections process. In addition, it may be worthwhile to consider if there are elements of management capacity building that can target barriers that have contributed to the lower percentage of female pupils in intervention schools. On the evaluation front, the sheer diversity in the size of schools may serve to make comparative case studies more difficult. School size is thus a key school characteristic that must be considered at endline.

- **The intervention is targeting schools which are likely to need support to improve performance; however, within the sample there is a wide range of school performance as measured by UCE scores**

  Inspect and Improve may want to consider if the range of performance may have a bearing on how inspections support is tailored for schools. On the evaluation front, the low levels of school performance imply that improving student test scores may be harder, and thus more difficult to see at endline, which is one reason measuring student learning is beyond the scope of this evaluation. Moreover, the diversity in performance may have an impact on the sampling strategy for endline comparative case studies - these have to be reassessed once endline WMS scores are collected.

**What are baseline measures of leadership and management?**

- **Intervention school head teachers appear to be engaged in a greater degree of supplementary income-generating activities than those in comparable studies**

  This implies that the capacity of head teachers to engage with Inspect and Improve may be limited. Although this is not something that the project can control for, Inspect and Improve may want to consider introducing incentives or additional support to head teachers to mitigate for this challenge.

- **Intervention schools have low WMS scores, and demonstrate a wide variety of strengths and weaknesses, with target setting needing the most support**

  On one hand, this finding suggests that there is room to improve the quality of leadership and management in intervention schools. On the other, the diversity in strengths and weaknesses implies that Inspect and Improve may want to consider tailoring support for the intervention schools. One area that likely requires support in all schools is target setting, an area PEAS schools excel in but which is generally weaker in non-PEAS schools. On the evaluation front, this diversity suggests that a more thorough understanding of the baseline of individual cases

will be key at endline as it will enable us to best explain how and why the project may or may not yield an impact in certain schools.

- **All head teachers believed areas of management practice required improvement, although these were not always related to weaknesses identified in WMS scores**

  The lack of consistency between head teacher identified areas of management practice and WMS identified areas implies that perceptions and definitions of management may differ. Practically, this may also imply that some head teachers may be more responsive to improvements being suggested in their SIPs that are consistent with their own beliefs about challenges. This buy-in from head teachers may ultimately dictate intervention impact.

**What factors may limit intervention effectiveness?**

- **Perceived levels of autonomy in budget allocation and hiring and firing of teachers were associated with WMS scores**

  The relationship between autonomy in areas such as budgeting and hiring and firing and WMS scores suggests that it may be difficult to improve WMS scores in areas over which head teachers have less autonomy. This fact may affect project rollout, as well as the impact witnessed in these areas at endline.

- **When asked about the largest challenges to the quality of teaching and learning, head teachers identified issues such as the socio-economic status of pupils followed by the lack of school resources**

  This finding implies that even if Inspect and Improve succeeds in enhancing the quality of leadership and management, factors beyond school management control may continue to hamper student learning. One way to address this may be to upskill head teachers in compensating for these challenges in some way as part of the project. Of course, on the evaluation front, improvements in test scores are a longer-term change outside the scope of the project timelines.

- **There does not appear to be any relationship between schools who receive external financial and capacity building support and baseline WMS scores**

  The fact that intervention schools are receiving outside support implies that conclusively attributing improvements in the quality of leadership and management to Inspect and Improve may be challenging at endline. The main approach to addressing this challenge would be to explore the nature of other support in more detail at endline and use qualitative contribution analysis to consider its contribution to any impact seen.

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**T:** +44 (0)1753 574123 • **F:** +44 (0)1753 691632 • enquiries@nfer.ac.uk

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