

# **The impact of assessment results on education policy and practice in East Africa**

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## Series description

This think piece is part of a series commissioned by the UK's Department for International Development (DFID). The purpose of the think piece series is to stimulate international debate on the future direction of education development in low income countries; provide direction for future DFID research priorities; and provide evidence products that can inform policy and programming decisions.

The other documents in the series are available to download at the following web address:

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### About the author

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## List of abbreviations

EGMA	Early Grade Mathematics Assessment
EGRA	Early Grade Reading Assessment
LARS	Learning Assessment in Rwandan Schools
MOESTS	Ministry of Education, Science, Technology and Sports (Uganda)
NAPE	National Assessment for Progress in Education
NASMLA	National Assessment for Monitoring Learning Achievements (Kenya)
PLE	Primary Leaving Examination
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SHRP	School Health and Reading Programme
TIMSS	Trends in International Mathematics and Science Study
UACE	Uganda Advanced Certificate of Education
UCE	Uganda Certificate of Education
UNEB	Uganda National Examinations Board

# 1. Executive summary

This paper reviews the evidence on the impact of learning assessments on education policy and teaching practice across East Africa. The study focuses principally on Uganda, and then considers the experience in Tanzania, Kenya and Rwanda to highlight common issues and suggest examples of best practice.

## Overview

There is a tradition of administering large-scale assessments and examinations in East Africa. These include national examinations at both primary and secondary level, national sample assessments, citizen-led assessments, donor-led assessments – particularly, the Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA) – and the regional Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ). These assessments give a wealth of data which government officials, donors and teachers could exploit.

The organisations managing these assessments explicitly aim to contribute to improved learning outcomes, for example, by stimulating action from the community, providing guidelines to teachers, or influencing government policy. This paper explores the extent to which this work to drive improvements is effective.

The research is based on a literature review, and fourteen interviews with policymakers, assessment managers, donors and teachers. Further information about the scope and methods of this study is in Section 2.

## Key findings

### i. National examinations

The continued use of national examinations at primary level is becoming increasingly controversial across the region. A range of stakeholders raised concerns that these examinations narrow the curriculum by encouraging teaching to the test. Good quality and valid examinations can limit the narrowing of the curriculum by using items that are unpredictable and cover a wide range of skills and content. It is also important that the benefits of this type of assessment are articulated. Carefully designed school accountability frameworks create the incentives for teachers to improve their work, and can drive system level improvement. Tanzania has taken a lead in developing these systems, although greater focus could be given to challenging underperforming schools.

### ii. National sample assessments

In Uganda, the National Assessment for Progress in Education (NAPE) provides information about national standards over time. Considerable resources are spent disseminating the findings to teachers and encouraging them to use the results to improve their teaching. This work appears to have had limited impact. NAPE could consider focusing on its core purpose of tracking standards, and reducing the frequency of its assessments accordingly. Other countries in the region could consider the benefits of being able to track standards over time, but should also be aware of the limitations of using this type of assessment to inform teaching practice.

### **iii. Citizen-led assessments**

UWEZO has successfully highlighted low learning levels in Uganda, Tanzania and Kenya, and helped to focus the education debate on tackling poor performance. However, UWEZO's 'theory of change', in which communities use information from the assessment to drive improvements, has not achieved systemic impact. More work is needed to support communities to translate information into positive action. UWEZO could consider focusing on this aspect of their work, rather than continuing with an annual assessment cycle – especially because learning levels are unlikely to change dramatically year on year.

### **iv. Donor-led assessments (EGRA and EGMA)**

In Uganda, donors have helped to stimulate a policy response, partly as a result of administering EGRA. Assessment managers have increased EGRA's impact by adapting the assessment to fit with government priorities (by assessing reading in local languages in line with the new curriculum), and closely engaging with policymakers. These assessments have also benefitted from the availability of funding to implement interventions based on the findings. Programmes using EGRA and EGMA results to track progress can help to improve the overall culture of use of data, including within government. Managers of further donor-led assessments could consider working closely with teachers to help them use data from short assessments to inform lesson planning.

### **v. SACMEQ**

SACMEQ has the potential to drive improvements by providing rich data to participating countries and stimulating calls for action where results slip, relative to other countries in the region. Particularly in Kenya, SACMEQ results have played this role. Producing results from the latest round of the assessments has been slow, which limits the impact of the findings. In Uganda, stakeholders would benefit from greater awareness of SACMEQ's work, which could be achieved through more effective engagement across government, and wider dissemination.

## **Overall picture**

In Uganda, a range of assessments of learning provide a detailed, national picture of the performance of the education system. The results show that many students are not reaching expected levels of learning, and this knowledge has informed the education debate.

Assessment managers have been less effective at stimulating improvements in education policy or teaching practices to influence learning outcomes. This is due to a range of reasons, including weak school accountability systems, lack of focus on follow-on interventions to act on findings, and limited political engagement. This paper highlights some successes and innovations from across East Africa and have suggested some ways forward, including:

- The purpose of each assessment needs to be clear and realistic.
- The main purpose of the assessment needs to drive its frequency and content.
- National examinations could be used more systematically for school accountability to improve learning outcomes.
- There needs to be deeper strategic engagement with governments, donors and implementing organisations to act on the findings of assessments.
- Targeted, ongoing programmes to support teachers are crucial if assessment data is to be used to influence classroom practice.

## 2. Introduction

This paper suggests a process by which a large-scale assessment can make an impact on education policy or teaching practice. This process has three stages:

- A good **quality assessment tool** should be used, which produces accurate results data.
- The results need to be **disseminated effectively to the right stakeholders** by the assessment managers.
- The findings should be used **to stimulate appropriate actions** from policymakers, donors, researchers, teachers and parents.

Some assessments aim to have a particularly direct impact on stimulating changes to policy and teaching. However, in all cases, these three steps are necessary for an assessment to have an impact on learning outcomes. This paper will identify instances where assessments struggle to make a particular step, for example through limited dissemination, or difficulties persuading stakeholders to change their actions as a result of new information.

## Methods

This paper will look in detail at how a range of assessments have been used in Uganda to improve learning outcomes. The assessments considered are:

- **National examinations:** Primary Leaving Examination (PLE) and secondary leaving exams, the Uganda Certificate of Education (UCE)
- **National sample assessments:** NAPE
- **Citizen-led assessments:** UWEZO
- **Donor-led early grade assessments:** EGRA and EGMA
- **Regional secondary assessments:** SACMEQ

Annex A summarises each of these assessments, showing the age of students taking the assessment, sample size, frequency, administration method, and how the results are made available.

This paper will also consider at a high level how each type of assessment has been used in other East African countries to drive improved learning outcomes. Having reviewed the evidence, the paper will suggest some issues to consider, which could help to increase the impact of the assessments. Suggestions for changes are either cost-neutral or low-cost, given the amount of resources already directed towards large-scale assessments, particularly in Uganda.

Evidence has been gathered by reviewing the available literature, and conducting interviews with key stakeholders. DFID and AusAID led a joint call for reviews, leading to a systematic review of existing literature in this area: 'The impact of national and international assessment programmes on education policy' (Best et al., 2013). This showed that assessment data were used more often for policy agenda setting and policy implementation and monitoring, than for policy formulation. Sample-based assessments were particularly focused on education quality, and assessments of a whole target population were used equally to promote equity, quality and accountability. This paper considers whether these findings hold for East Africa. The paper also reviews academic research on the use of assessment data in East Africa, and reports published by assessment bodies in the region.

A total of 14 interviews were carried out for this project. This comprised 2 interviews with senior government officials, 5 with assessment managers, 3 with donors, 2 with NGO managers, and 3 with DFID advisers. A list of interviewees is included as Annex B. This work also draws on visits to a wide range of schools in all four regions of Uganda, which included discussions about use of examinations and assessments, although not specifically in relation to this project.

## Limitations

This is a short overview of this complex topic, and therefore has some limitations of scope:

- **New analysis on the reliability and validity of the assessments is out of scope.** Instead the paper points to some secondary evidence about the assessments, but avoids judgements on reliability and validity.
- The use of **formative classroom assessment is not covered** in detail. The paper focuses on the impact of large scale assessments, set externally to the school, on learning outcomes.
- **The findings are based on a limited number of interviews and desk review.** As such, this is not a comprehensive view of how all stakeholders have responded to the data from assessments to inform their work.
- **The focus is on Uganda**, where interviews have been conducted in person. For the other East African countries, evidence has been gathered from published papers, and a smaller number of telephone interviews.

### 3. National examinations

National examinations at both primary and secondary level are a feature of education systems across East Africa. In most cases, the potential of these exams to form the basis of a school accountability system, and so improve performance, is not fully exploited. The experience in Tanzania suggests how the results could be used more systematically to create incentives for schools to improve.

#### 3.1 The national examinations assessment instruments

Uganda National Examinations Board (UNEB) states that the purpose of national examinations is 'to assess candidates' level of achievement'. UNEB takes responsibility for test development, administration, marking and the release of results.

There are a series of national examinations in Uganda taken by all students when they reach the end of each stage of schooling:

- Primary Leaving Examination (PLE)
- Uganda Certificate of Education (UCE) – the lower secondary leaving exam
- Uganda Advanced Certificate of Education (UACE) – the upper secondary leaving exam.

As an indication of cost, one cycle of the PLE exam costs around US\$2.2 million. A total of 585,000 students sat this examination, making the cost per pupil US\$3.75.

Isolated pieces of evidence are available about the quality of the exams, for example showing that internal consistency<sup>1</sup> is high (Bukonya, 2006), and there is strong correlation between NAPE results and PLE scores (Mugisha, et al., 2009). World Bank research under the SABER programme concludes that UNEB staff are well qualified to administer and develop the examinations (Kanjee and Acana, 2013), and overall Uganda's assessment system is rated as 'established', the third highest category on the World Bank's four point scale.

The most reported weaknesses of the system relate to the validity of the assessments, which are often seen to focus excessively on lower order knowledge recall skills, at the expense of assessing the whole curriculum (Penny et al., 2008). There is widespread anecdotal evidence that schools respond by predicting the content of the examinations, and coaching their students accordingly. This can be at the expense of a broad curriculum, and has led to some leading government officials arguing that PLE examinations should be replaced with a system of teacher assessment.

#### 3.2 Impact of national examinations on policy and teaching practice in Uganda

National examinations provide certification of achievement for students. The results are 'high stakes' for students at both primary and secondary level in Uganda. Selection into secondary schools is very common, and many schools only accept students who achieve above a certain level in the PLE exam. The impact of the Government's universal secondary education policy is also influenced by PLE results, with the Government contributing to tuition costs for those students who achieve 28 or better out of 36 in their PLE exams.

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<sup>1</sup>Internal consistency is a measure of how well the items on the test measure the same construct.



The results of national exams can be used to hold schools to account for their performance. Accountability systems can give schools an incentive to improve their results to increase demand for places, or to avoid challenge from the government or communities. Evidence from natural variations in the timing of the introduction or withdrawal of accountability systems, both in US states and in England/Wales, has shown that **well developed accountability frameworks help to create better outcomes across the school system** (Hanushek and Raymond, 2004; Burgess, 2010). Evidence from the World Bank shows that accountability systems in developing countries can also lead to improved results, for example in Pakistan. However, other accountability interventions have had little impact or have not been evaluated systematically (Bruns et al., 2011).

Uganda has some early elements of an accountability system. For example, at secondary level, **national newspapers publish 'league tables' of secondary schools, showing the percentage of students who achieve a Division 1 grade** in their UCE exam (the top grade out of 4 at the end of secondary school, achieved by just 6-8% of students nationally). These published results are very influential, particularly in determining school choice within communities. Teachers and government officials all report that schools respond by striving to improve the percentage of Division 1 scores achieved by their students. The media publish similar information about secondary schools.

**However, the focus of schools on maximising their performance on this measure has created some perverse incentives.** Officials at the Ministry of Education, Science, Technology and Sports (MoESTS) acknowledge that some schools focus more on those high-performing students who may contribute positively to their headline performance measure by achieving a Division 1. This can be at the expense of teaching at an appropriate level for lower ability students. One leader of a school network describes how their schools take time at the start of S1 to give some students literacy and numeracy boosters. However, this type of practice is not embedded across the system, and many schools do not ensure that all students secure foundation knowledge before moving onto the next topic.

Despite the impact of communities scrutinising exam results, **monitoring of schools' academic achievement by government is limited.** A system of district level oversight of schools is in place, which has the potential to be used to hold schools to account. District inspectors focus on primary education, which has a much more decentralised system than secondary education. Even at primary level, District Education Officers tend to focus their already restricted resources on analysing schools' use of finances and the availability of inputs, such as textbooks, rather than the quality of teaching and student outcomes.

The Government is increasingly monitoring district performance, particularly at primary school level, where districts have most influence. A ranking of districts is published in the education annual sector plan. Achievement of Division 1 at PLE is one of three metrics used, alongside net intake and completion rate, to create the ranking. However, some districts have limited resources to influence teaching in their schools, which may limit the impact of accountability at this level of management.

### 3.3 Impact of national examinations across East Africa

The use of national examination results for school monitoring is a contentious issue throughout the region. **In Kenya, attempts have been made to make the exams less high stakes by ending the publication of school-level results for primary schools.**

The potential for examinations to improve school accountability should be considered by governments when making decisions about the structure of their examinations system. At the moment, **the potential of using these results for accountability is not being fully realised in Uganda, Rwanda or Kenya.** This limits the strength of the case for persisting with national examinations, particularly at primary level.

Policies to reduce the availability of school performance data, like in Kenya, will need to be considered carefully. There is a large element of selection to secondary schools throughout the region. Whilst this stays in place, end of primary school assessments will remain high stakes for students, and in turn for schools, who will market themselves based on their success in securing entry for their students into prestigious secondary schools. This means that stopping the publication of exam results is unlikely to reduce significantly any ‘teaching to the test’.

Evaluating the impact of ending the publication of school rankings in Kenya would provide important evidence about school accountability systems in this region. In Wales, standards declined relative to England as a result of a similar move to stop publishing ‘league tables’ (Burgess, 2010). However, a recent study looking at the impact of providing information about school performance in Brazil found no evidence of impact on school choice. This study was conducted by comparing small schools with 9 students in the examination year and those with 10 or more students, in a system in which data was not made available for schools with less than 10 students (Lepine, 2015).

**The policy developments in Tanzania may show how the significant advantage of having reliable data on school performance can be leveraged.** In Tanzania, through the Big Results Now programme, data is available on an easily searchable website about primary and secondary school performance, which allows the public to see rankings of schools.<sup>2</sup> The rankings are based on an average point score measure of school performance, which gives schools the incentive to focus equally on all of their students. It is still too early to evaluate the impact of this initiative, but this will be an important contribution to the debate around the benefits of having transparent assessment data in the region.

The Government of Tanzania has also developed a plan to use this data to drive improvement. A high profile system of rewards and recognition for high performing schools has been put in place. This creates an incentive for schools to improve, and can help to raise the status of the teaching profession. Careful evaluation of the impact of this approach will be crucial.

Across the region, **there is a reluctance to introduce an element of sanction from government as part of the accountability system.** Sanctions could include terminating the contracts of head teachers whose schools perform poorly. In Rwanda, head teachers have a performance contract, but these tend to be focused on providing inputs rather than achieving good outcomes. The Tanzanian Government has focused on reward, and similarly officials at the MOESTS in Uganda say that they favour an approach of empowering and training head

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<sup>2</sup> [www.necta.go.tz/opendata/brn/](http://www.necta.go.tz/opendata/brn/)

teachers. Whilst motivated professionals will indeed seek rewards and benefits, this type of system leaves scope for less engaged school managers to continue with their current practice.

Despite the political difficulties of introducing a system of sanctions, governments should carefully consider this element of accountability. Hanushek and Raymond (2004) show how in America, system improvements were only significant when accountability systems had consequences.

Governments in the region could start slowly – only tackling a very few schools, which are clearly unacceptable. Research has shown that a system of sanctions only needs to be implemented in a small number of schools to create the incentives for all to improve (Figlio and Loeb, 2011). Evidence around the benefits of government sanctions is predominantly from high income countries, which further suggests the benefit of introducing such sanctions incrementally in these different contexts.

If governments take forward this type of ‘high stakes’ accountability, particular care will need to be taken to avoid creating perverse incentives. For example, if only final examination data are used to make judgements, then those schools with a low performing cohort on intake will be disadvantaged, and schools may be incentivised to adopt additional selection policies. Carefully designed performance measures can alleviate some of these risks. For example, value-added performance measures can be used to take account for the ability of each school’s intake (see Annex C for a summary of recent research into how this type of performance measure could be developed in Uganda). Inspection evidence can also be considered alongside results data to recognise the achievements of schools working in challenging circumstances.

In addition to accountability, the systematic review of the impact of assessments shows that nationwide assessments and examinations are often used to promote equity. This could be a useful area for greater focus in East Africa. For example, in Tanzania, examination results are made available broken down by gender, which allows researchers and policymakers to understand relative performance in a wide range of subjects. Uganda’s new electronic registration system for UCE candidates will allow them to analyse the results of students with special educational needs in different schools. This data could be used to provide schools with benchmark information about the performance of different student groups, allowing them to identify areas for improvement.

### **3.4 Considerations and recommendations to improve national examinations**

- **Verifying the reliability and validity of national examinations:**  
Dramatic shifts in results in Tanzania suggest that some students may have been unfairly disadvantaged by the 2011 round of assessments. In Uganda, the system of national examination is being challenged, largely because national examinations are perceived to narrow the curriculum. Robust analysis of the reliability and validity of examinations could help to alleviate these concerns. If weaknesses are found, then broader examinations, assessing the whole curriculum and with less predictable focus, may be beneficial.
- **Ensuring the main examination performance measure is fair:**

The excessive focus on students on the borderline of achieving a Division 1 in Uganda has clear disadvantages. Focusing on the average aggregate grade in a school would encourage more equitable teaching practices. Governments could also consider new metrics of school performance, drawing on international best practice, such as value-added performance measures.

- **Improving accountability systems:**

Governments should also consider creating more structured accountability systems. The use of data by communities when making school choices provides an important incentive for schools to improve. However, the ‘school choice’ element of accountability does not operate in the same way in all places – for example it is likely to be less influential in rural areas, where school options are limited. The government could take a number of steps to improve the accountability system, for example:

- **Publishing transparent data about the results of all schools.**
- **Acting to address underperformance.** The government could work directly with the weak schools, and could create stronger incentives for all schools to improve by putting in place sanctions for the very lowest performing schools.
- **Providing mechanisms for communities to seek improvement** in schools, such as empowering school management boards.

These policies have some cost, but this is low, particularly considering that accountability systems can have a system-wide impact on results.

## 4. National sample assessment

Uganda has a well embedded national sample assessment (NAPE), and other countries in the region are also starting to use this type of assessment. These assessments can be valuable to track national standards, if this purpose is clearly prioritised. There is less evidence that these assessments can successfully achieve other objectives, such as providing guidelines to teachers to help them improve, or to influence new policy initiatives.

### 4.1 NAPE as an assessment tool

The main purpose of NAPE is to have ‘an objective means of monitoring changes in learners’ educational achievement at the national level’.

The other stated purposes of NAPE are to:

- generate comprehensive information on what students know and can do in various curricular areas
- evaluate the effectiveness of reforms that get introduced into the education system
- provide guidelines for the improvement of instruction and learning
- provide guidelines on variables that affect learning achievement
- provide data that can be used in planning and research.<sup>3</sup>

NAPE is an annual assessment in Uganda of a sample of students in P3, P6 and S2. Sometimes the assessment does not take place for all intended year groups in each year because of funding constraints.

NAPE has steps in place at every stage of their assessment process to promote reliability and validity. For example, they use a wide body of experts to ensure that items accurately assess the curriculum, and research has shown that the items perform appropriately in terms of difficulty and discrimination (Najjumba and Marshall, 2013).

The main criticism of NAPE assessments is that there is limited information on how standards are maintained over time. Particularly between 2006 and 2010 there were changes to the content assessed (related to the introduction of a new primary curriculum), and the type of items used. NAPE also does not use anchor items, which limits its ability to ensure standards are maintained year on year (Najjumba and Marshall, 2013). Given the main purpose of the assessment is to track national performance over time, this element of the assessment is clearly of central importance.

One MoESTS official highlighted that some donor-led assessments provide greater published information, which gives reassurance around reliability and validity. This helps these assessments to motivate actions, particularly from donors. For this reason, it would be helpful if an external analysis was conducted into the validity and reliability of NAPE assessments, with the results easily accessible to this audience.

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<sup>3</sup> [www.uneb.ac.ug/index.php?link=Departments&&Key=NAPE](http://www.uneb.ac.ug/index.php?link=Departments&&Key=NAPE)

## 4.2 The impact of NAPE assessments on education policy and teaching practice in Uganda

### Tracking national performance

The **MoESTS relies on NAPE findings for tracking national performance** in their published documents. For example, the most recent annual 'Education Performance Report' shows that: 'there has been a decline in the percentage of primary three pupils rated proficient<sup>4</sup> in literacy from 57.6% in 2010 to 56.21% in 2013. In essence, 43.8% of the pupils enrolled in P3 in Uganda cannot read and write simple sentences as per their curriculum.' (MoESTS, 2014). Officials at the MoESTS confirmed that the Ministry uses NAPE results extensively to track standards over time.

Officials in the MoESTS also cited using NAPE results to set targets for improvement related to individual programmes. However, the current sector plan and annual performance reports do not make these outcome based targets clear. This means that they are not used to track progress transparently against realistic goals, or to galvanise action across the sector to improve outcomes. The published information for particular programmes tends to focus on inputs, such as the number of teachers trained in early reading methods, and does not seek to demonstrate whether these teachers are more effective as a result.

### Further aims of NAPE

The multiple purposes of NAPE are listed above, and represent a very challenging range of aims for any one assessment. NAPE does perform functions related to all of its aims, but with a varying degree of success.

NAPE generates comprehensive information about students' knowledge. For example, in relation to maths, NAPE (2012) provides a breakdown of the percentage of students able to find the lowest common multiple, use percentages and fill in missing numbers in a sequence, among other skills. The variables affecting achievement are also set out, for example, showing that teacher content knowledge is statistically significantly associated with better performance, whereas teacher experience is not (Uganda National Examinations Board, 2010a). NAPE uses this type of information to produce guidelines and recommendations for both teachers and the Government.

In relation to providing guidelines to teachers, the data in the report are of interest. As one example, NAPE's report about Senior 2 education shows that less than 20% of students could round to a set number of decimal places, whereas the majority could find the lowest common multiple (Uganda National Examinations Board, 2010b). This could be useful for teachers, but only to a limited extent. **Teachers are likely to gain more from understanding areas of weakness within their class, rather than inferring from an overall national or district picture.** This requires teachers to develop their own formative assessment skills. Whilst this is a challenging task in Uganda, greater focus on this aspect of assessment has the potential to create a more significant improvement in teaching practice.

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<sup>4</sup> A set of criteria are set out to define 'proficiency'. For example, in maths at P3, students should be able to 'divide a one digit number by a one digit number, add money up to 1000 shillings', and so on. A percentage score is then given on the assessment that shows students have learnt these skills.

**The dissemination methods employed by NAPE limit the impact this type of finding has on teaching.** NAPE's reports are disseminated through a workshop in each region. These workshops are often poorly attended, partly because NAPE lack the resources to pay for transport costs. NAPE then relies on a cascade model, which tends to be seen as ineffectual by teachers. NAPE acknowledges that they only have a limited number of officers who are trained and skilled enough to help teachers interpret the findings. In other cases the data in the reports are simply presented to the workshop attendees.

NAPE does publish some recommendations about how teachers could act on the findings in its reports, but these are too vague to stimulate action. For example, schools are advised to: 'instill the culture of reading among teachers and students' and 'use a practical approach in the teaching of biology' (Uganda National Examinations Board, 2010b). Officials at the MoESTS emphasise that dissemination methods should be designed with the end user in mind, but this type of recommendation provides limited practical assistance to a teacher seeking to improve her work.

NAPE has started to consider how to have a more direct influence on teaching practice, describing a new initiative to help each district identify the five recommendations of most relevance to them, which can be delivered in a cost neutral way. This is a positive development, but is unlikely to be sufficient by itself. Ongoing support is needed to ensure the agreed agenda does not lapse over time.

Following the initial dissemination activity, responsibility for supporting schools to implement NAPE's recommendations shifts to the Directorate of Education Standards within the MoESTS. There are a wide range of responsibilities falling under this directorate, including training of district officials and head teachers, and inspection of schools. This means that officials in this directorate have only limited capacity to support schools to act on the NAPE findings.

**In terms of influencing education policy, officials interviewed for this research were sceptical of the value of NAPE's work.** NAPE's policy recommendations at the end of each report are seen to reiterate well known points, and to propose solutions that are not deliverable, mostly on cost grounds. For example, a recommendation to 'provide adequate teaching-learning facilities and materials in Universal Secondary Education (USE) schools' may be valid, but it is not helpful if the funding is not available, particularly when decision-makers in the Ministry are already persuaded of the benefits of providing instructional materials. With a sense of prioritisation this could be a useful recommendation to channel funding decisions, but the same report also recommends improving the student-teacher ratio and providing a series of workshops for teachers on various aspects of the curriculum, all of which are costly (Uganda National Examinations Board, 2010b).

One of NAPE's successes points towards a better way for the assessment process to lead to policy change. NAPE has also conducted assessments of teachers' subject knowledge (Uganda National Examinations Board, 2010b), which showed significant gaps. NAPE research shows that improved teacher subject knowledge has a significant impact on student outcomes. This provided new and robust information to the MoESTS. It also stimulated a no-cost policy response: raising the subject knowledge requirements for entry into teacher training college.

This example of success shows that the analysis showing the variables that affect achievement is useful for policymakers, (as well as researchers, shown by the analysis in Najjumba and Marshall, 2013). Alongside tracking national standards, NAPE could continue to make this type of data available.

Officials at the MoESTS indicate that they would favour greater strategic engagement with assessment managers, which is in line with recent research into the most effective ways of assessments improving outcomes. Fox (2014) has argued that ongoing engagement with government is important to complete the process of assessment results influencing policy. NAPE may benefit from spending more time ensuring its evidence is embedded within government policymaking and programme evaluation. This would help the Government to develop a data-driven culture, and help NAPE to focus their work to supplement the efforts of policymakers.

### 4.3 The impact of other national sample assessments across East Africa

National sample assessments are being developed across the region, although NAPE in Uganda is the most established.

Kenya has previously administered a national sample assessment, the National Assessment for Monitoring Learning Achievements (NASMLA). This was administered to P3 students in 2009. This assessment was seen to provide a solid foundation for understanding students' achievement, and has the advantage of including some detail about the standards of reliability in their main report (National Assessment Centre, 2010). However, **NASMLA also experienced many of the issues that limit NAPE's impact**. The dissemination strategy was limited, and there was a lack of follow up to ensure that the recommendations were translated into action (UNESCO, 2015a).

The Rwandan Examinations Board is currently working on introducing a similar type of assessment. In 2011, the Learning Assessment in Rwandan Schools (LARS) was introduced for P3 and P6. The intention of the LARS is to identify learning gaps, and then develop strategies to allow for early remedial action. However, the second round of the LARS assessment has shifted to assessing at P2 and P5 to 'enrich the data available for future decision-making' (UNESCO, 2015b). This change in focus may not be the best use of a sample assessment because it is longitudinal data which can show whether interventions are making a positive impact. In addition, in 2014, Rwanda conducted a national assessment of reading fluency and maths, which has been used to inform a renewed focus on teacher training and providing instructional materials for early literacy.

Tanzania is currently in the process of developing national sample assessments at P2 and P4. The exact purpose of this assessment is not yet clear, and the Government has not yet decided whether it should be a sample assessment of national standards, or whether it should be rolled out across all schools.

The experience in Rwanda and Tanzania reinforces the importance of purpose of all assessments being very clearly defined at the start of the test development process. It is helpful to consult with the widest possible range of stakeholders at an early point in the process, so that agreement is secured.



## 4.4 Considerations and suggestions to improve national sample assessments

- In Uganda, **it would be useful to review the purpose of NAPE**. Given that NAPE's results are mostly used for its core purpose of tracking national performance over time, consideration should be given to focusing on this aspect. **The assessment tool could be refined accordingly**, for example, administered less frequently and with less items looking at students' ability in sub-sections of the curriculum. Some information could still be made available about performance of different student groups and the variables affecting achievement. This could significantly reduce the funding required for NAPE's assessment administration.
- For national sample assessments to have an impact, strategic engagement with policymakers is essential. In Uganda, **NAPE should focus further on working with policymakers to make use of data on outcomes a stronger part of the culture in the MoESTS**. For example, NAPE could work with the Ministry to set and publish an anticipated trajectory for improvement in learning outcomes, allowing officials to track their delivery of key programmes, and take early action where necessary.
- **Any high level policy recommendations from sample assessments must be realistic and deliverable**. NAPE could work with the MoESTS to cost any recommendations before they are included in a report.
- **National sample assessments are unlikely to provide teachers with the best information to shape their teaching**. If NAPE continues their work to influence teaching practice based on their findings, then consideration should be given to narrowing their focus to a smaller number of districts, but devoting greater resources to ongoing support for teachers in each district.

## 5. Citizen-led assessment – UWEZO

UWEZO manages citizen-led assessments across Uganda, Tanzania and Kenya. These assessments have helped to promote understanding of the low levels of learning in schools, and helped to focus the education debate on academic performance. However, citizens have only rarely been able to act on this information to drive improvement in their communities. Greater focus is needed on supporting communities to improve their local schools.

### 5.1 UWEZO as an assessment tool

UWEZO is a programme managed by the organisation Twaweza. The purpose of UWEZO is to measure actual levels of literacy and numeracy across Uganda, Kenya and Tanzania. UWEZO states that its goal is contributing towards a 10% increase in basic literacy and numeracy competencies among 6-16 year olds across these countries. Initially, the goal was to achieve this improvement between 2010 and 2014, and now the goal has rolled forward into new annual plans, but with no defined timeframe. UWEZO publishes a theory of change about how this will be achieved, a diagram of which is included at Annex D.

UWEZO conducts an annual household assessment investigating whether children of different ages have secured the foundations of literacy and numeracy. Children of ages 6-16 are assessed against the standards expected of students at P2. The assessment is administered by volunteers, who visit households to conduct the assessment. The 2014-15 UWEZO annual plan shows the annual budget for UWEZO Uganda is US\$970,000. This equates to a cost of US\$9.70 per student assessed.

Although UWEZO publishes little technical information about its assessments, the quality of the assessment tools has been evaluated by comparison with other assessments. In particular, there is a high degree of correlation between EGRA and UWEZO Kenya results (ACER, 2014). UWEZO assessments also have a high degree of inter-rater reliability, indicating that their model of using volunteers to conduct assessments can create accurate results.

UWEZO assessments are less useful in distinguishing between the lowest and highest performers. This is because UWEZO's assessments are designed specifically to assess students' understanding at P2 level, and items are written accordingly. UWEZO is currently piloting new assessment tools so that older students can demonstrate whether they are working at an age appropriate level.

### 5.2 Impact of citizen-led assessments on education policy and teaching practice in Uganda

#### Community impact

UWEZO's theory of change in communities is that: *“Having become aware of the crisis, engaged citizens (parents, children, local leaders and activists) will take concrete steps to improve learning, either through private actions (e.g. pay more attention to homework, follow up with a teacher, pay for a tutor, change schools) or mount collective action. We do not expect all*

*people reached to act, in most cases actions start with a few, courageous outliers first and then start to catch on.*<sup>5</sup>

UWEZO has been able to raise awareness of learning outcomes within the community, for example through successful media dissemination campaigns. There is anecdotal evidence of some people acting on the UWEZO findings to drive improvements, either by providing greater support in the home, or challenging schools to improve. However, a recent review has shown that there is no systematic evidence of UWEZO making a direct impact on improving outcomes (Results for Development Institute, 2015).

**Information-based initiatives seeking to foster improvements in learning outcomes have proven more effective when implemented alongside a direct intervention.** For example, in Liberia, information about reading standards alone had a very limited impact, but when it came linked with a reading intervention, then improvements were made (Piper and Korda, 2010).

Such a structured (and costly) intervention is not always required to create an impact. Evidence from India suggests that ‘in order for action to take place, there needed to be an entity available to provide suggestions for what those actions might look like’ (Results for Development Institute, 2015). For example, a ‘Village Information Campaign’ generated awareness about dormant school oversight committees and gave citizens a clearly defined way of creating change. This approach had a positive impact on reading outcomes (Pandey et al., 2008). UWEZO could continue to build stronger links with education delivery partners to create mechanisms for communities to influence teaching in East Africa.

UWEZO is also considering how to involve teachers more directly in their work. Teachers are often not surprised by UWEZO’s findings, and so the results do not act as a direct motivation to change. However, UWEZO has identified that its work in communities could motivate parents to work more closely with teachers, and so influence teaching practice in this way. This idea is in line with evidence which suggests that transparency and accountability interventions are most successful when providers are linked with consumers of services (Björkman-Nyqvist et al., 2014).

## Policy impact

**UWEZO has contributed to a change in the terms of the education debate, and an increasing focus on learning outcomes.** Officials in the Uganda MoESTS suggest that they were previously aware of the low levels of learning, for example through the work of NAPE. However, **UWEZO’s effective dissemination activities through the media have widened the knowledge base about the low levels of learning**, and there is some evidence that this knowledge has stimulated a response in the public sphere. For example, UWEZO findings contributed to the creation of a Parliamentary Forum for Quality Education.

UWEZO describes an initially defensive response from the Government, and this still persists to an extent. For example, senior officials highlighted that some children who are not in school are included in the UWEZO assessment, which makes it an unfair commentary of the state of the school system (this argument is repeatedly made, despite its limitations – that schools are partly responsible for the rate of drop-out, and in any case, students should have learnt and retained foundational literacy and numeracy skills even with limited time in school). UWEZO reported a

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<sup>5</sup> [www.uwezo.net/about-us/theory-of-change/](http://www.uwezo.net/about-us/theory-of-change/)

recent change in attitude from central Government, and that their results now tend to be accepted, rather than challenged. There is some evidence that the MoESTS is now deploying the striking UWEZO findings to push forward their education agenda. UWEZO results were cited by the Government in an open letter refuting teaching unions' claims that their members deserved higher pay. Senior officials also indicate that UWEZO findings can provide useful 'shock value', when they want to stimulate changes.

This still represents a limited use of the data, and there is some evidence that the results are not otherwise used to inform policymaking. A senior official asked: "What is the value of showing that children are not learning for a fourth year in a row?"

UWEZO has taken some steps to engage more strategically with Government to increase impact, for example, appointing the Commissioner for Basic Education onto the board.

Officials at the Ministry say that they would welcome further opportunities to help shape the research, so that UWEZO can contribute more clearly towards driving improvements. They cite an example of an UWEZO finding – that the level of engagement of the parents in children's learning has a significant influence on results – which was helpful for policy development. This was seen as strong new evidence, which can in turn stimulate a policy response. UWEZO could focus further on using its rich data set to generate and highlight this type of insight into how performance could be improved.

### 5.3 Impact of UWEZO assessments across East Africa

UWEZO citizen-led assessments are also conducted across Kenya and Tanzania. Similarly to the Uganda context, these assessments have strongly contributed to raising awareness about the low levels of learning, but this has not consistently translated into actions to make the necessary improvements (Results for Development Institute, 2015).

Research based on UWEZO's work in Kenya has looked in particular at the impact of providing assessment data to parents (Lieberman et al., 2011). It finds that there is a high level of engagement with UWEZO, shown for example by UWEZO materials being displayed in homes. However, there is not a significant impact in terms of greater involvement in education from parents in UWEZO treatment areas. The importance of the home environment in affecting learning outcomes is well documented, but this finding suggests that **further research into how to stimulate parents to play a more active role would be valuable, and that dissemination of materials alone may not be sufficient.**

Some new approaches are being considered by Twaweza, which uses different assessment tools to the main UWEZO study, but leverages the expertise in carrying out assessments within the organisation to try to improve outcomes. In Tanzania, Twaweza is offering financial rewards to teachers who support their students to improve their reading fluency. This approach creates a clear incentive mechanism, which has the potential to realise improvements. As with any reward offered, care must be taken to avoid 'gaming' behaviour, by which teachers would seek to perform well on the chosen performance measure, at the expense of teaching all students well. In this case an average point score measure is being used, which encourages equitable teaching, but does not necessarily shine a light on some students who are not able to read at all (Rawle and Attfield, 2015). UWEZO could consider further experiments, which create a clear mechanism for improving outcomes at the local level.

Twaweza is also considering using a ‘positive deviance’ approach to drive improvements. This involves using its assessment data to identify schools or communities where learning outcomes are high, despite having the same resources as other areas which are struggling. The learning from these positive outliers would then be captured and disseminated. The approach will need to be developed rigorously to ensure impact, particularly in identifying the best performers accurately, and isolating the essential elements that drive the success of these schools.

## 5.4 Considerations and recommendations to improve citizen-led assessments

- **UWEZO could consider reducing the frequency of its assessments.** Continually reporting on low results creates friction with government, potentially impeding UWEZO’s impact on policy. Regular reporting at community level has also not been shown to drive improvement. Communities are more informed as a consequence of the administration of an UWEZO assessment, but until they have a clear avenue for pursuing concerns, the impact of this new information will be limited. Reducing the frequency of assessments would free up resources for other uses.
- **UWEZO could develop and trial a number of ways of enabling communities and schools to act on its assessment findings.**
  - **UWEZO’s network of volunteers is well placed to drive education support.** Many of the volunteers are amongst the most educated members of their communities and so their activities in relation to schooling are respected.
  - **UWEZO could consider different ways of working with other NGOs** to conduct interventions in priority areas. Successful approaches could be embedded into UWEZO’s work during the next full assessment round.
- **UWEZO should consider not expanding the number of assessment instruments –** for example assessments targeting learners at higher grades – **until it can evidence the impact of its theory of change.**

## 6. Donor-led assessments – EGRA and EGMA

The Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA) are the most used donor-led assessments across the region. These early grade assessments have informed the design of large scale programmes, and are being used to monitor performance. Kenya is currently using these assessments to provide 'real-time' information to policymakers, which is starting to improve the culture of data use within the Ministry of Education, and so creating an impact beyond one specific programme.

### 6.1 Quality of EGRA and EGMA as assessment tools

The purpose of EGRA and EGMA is to measure the most basic foundation skills for literacy and mathematics acquisition in the early grades.

EGRA is the assessment most used by donors in Uganda, particularly in relation to tracking the USAID School Health and Reading Programme (SHRP), the Global Partnership for Education's School and Teacher Effectiveness Project, and DFID's Girls' Education Challenge, which also uses EGMA to track progress.

There is published information about the reliability and validity of EGRA and EGMA.<sup>6</sup> EGRA uses a common framework, the assessment is then adapted according to local context. In Uganda, they have been developed to assess reading ability in a range of local languages (Piper and Korda, 2010), and these reports include information on the reliability of these adapted assessments.

The range of tasks available as part of EGRA means that the assessment is designed to provide valid results across many elements of early grade reading instruction (Gove and Wetterberg, 2011), including phonic decoding, word reading and comprehension. There are some concerns about how EGRA tools are used in practice. In some cases, decoding tasks are given to older students who have moved on from phonics to focusing on comprehension, or decoding tasks can be given to primary school age students who are not taught using phonics.

### 6.2 Impact of EGRA and EGMA on education policy and teaching practice

The impact of EGRA on influencing policy is hard to isolate. A greater policy focus on early reading quickly followed from the first administration of EGRA in Uganda. This was largely because of availability of funding for the SHRP programme from USAID, which provided teaching materials and training to schools. Identifying funding channels is clearly a challenge for the managers of other assessments. Government officials compare this experience to the challenge of finding money to respond to areas of improvement highlighted by NAPE.

However, there is also some evidence that the design and administration of the assessment itself contributed to this focus on improving early reading. **Officials at the MoESTS particularly cite EGRA data as having an impact in changing policy.** They suggest that a crucial aspect was that EGRA used mother tongue reading assessments, as well as English. In this way it was aligned with the move to mother tongue teaching in P1-P3 in the Ugandan primary curriculum, and provided the MoESTS with new information. EGRA managers also involved the Ministry at

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<sup>6</sup> See [www.eddataglobal.org](http://www.eddataglobal.org)

an early stage, for example, in the selection of districts to be included in the sample. These two factors, **conducting specific assessments in areas of interest to the Government and close engagement with policymakers, appear to be important aspects of conducting an influential assessment.**

The timing of the Government's focus on early literacy may also be a result of the cumulative impact of different assessments. In 2010, both EGRA and UWEZO published data showing low levels of reading performance, which helped to create the recognition of a very significant issue in this area.

Early indications are for significant, but not transformational, improvements in reading performance in treatment compared to control groups, as a result of the SHRP.<sup>7</sup> Early reading programmes are being scaled up rapidly in Uganda, including another USAID-funded programme, Learning Achievement and Retention Activity (LARA), which takes a similar approach into new districts. EGRA has been valuable in creating evidence about programme implementation, and suggesting areas for improvement.

It is instructive to consider the experience of other countries in which the EGRA assessments have led quickly towards successful implementation, such as Kenya, Liberia and South Africa (Crouch, 2011). Crouch identifies three reasons why these countries were successful in using donor funding effectively, and embracing early reading interventions based on EGRA:

- a curriculum that was conducive or receptive to the introduction of both EGRA type assessments and instructional changes
- a predisposition to use data and assessments to assist with instruction
- a sense of national concern, which may already have existed, but at least was easily made obvious by the baseline application of EGRA.

In Uganda, there is a national sense of concern about reading levels. In the case of other characteristics, Uganda has some positive traits, but does not meet the description fully. The new primary curriculum provides for a daily literacy hour. This gives teachers a time in which to focus on these foundation skills. However, the thematic curriculum, gives indications of how many words students should learn to read under a theme of say 'health' or 'the community', but gives teachers limited scaffolding in terms of how to teach the building blocks of reading.

In terms of disposition to using data and assessments, Crouch (2011) cites Kenya's history of national exams as a factor promoting this attitude. At national level, Uganda benefits from the same structure of assessments. However, the culture of policymakers rigorously tracking the data and responding quickly to the findings could be developed further.

**The disposition to use data to improve classroom instruction is very limited in Uganda.**

NAPE research (Uganda National Examinations Board, 2010b) shows that many teachers have relatively low skills in continuous assessment. The experience of the SHRP reinforces this view. It indicates that teachers do not know their students' ability in the component parts of reading such as letter-sound correspondences or blending, and so cannot adapt their lessons accordingly.

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<sup>7</sup> The effect size at the end of P3 varies from 0.13 to 0.42, depending on the language used.



In his report, Crouch (2011) also highlights that in South Africa, politicians showed a clear frustration with ‘vague over-ambitiousness’ and ‘over complexity’ in education policy. As a result, they were keen to operationalise practical ways of improving reading. Uganda does not yet display this sense of prioritisation. For example, the 2014 education sector review (MoESTS, 2014) focused on improving the music, dance and drama aspects of the curriculum. The Ugandan Government is starting a process to develop a new sector plan to replace the current 2004-15 version. **A clear focus on central aspects of education policy, and the building blocks of learning, could help policymakers to target their resources effectively, and use the results of all assessments more strategically.**

### 6.3 Impact of EGRA and EGMA across East Africa

EGRA and EGMA have been used to create a national benchmark for the 3Rs programme in Tanzania (RTI International, 2014). This report highlights areas of weakness from a national representative sample of schools. For example, relatively few children scored zero on assessments of word reading, but there was often a lack of fluency in word reading, meaning that children were still focusing much of their attention on word reading, rather than comprehension. The Government and other stakeholders have agreed policy responses to these issues. The data have been used to set a baseline and then targets for improvements in different areas of Kiswahili, English and mathematics over the next five years, for example, that zero scores in non-word reading will fall from 28% to 14%. In Rwanda, EGRA and EGMA assessments were first administered in 2011. They showed a weakness in phonic decoding, and the assessment has been followed by a USAID literacy initiative.

In Kenya, EGRA assessments are being used to monitor the Tusome programme.<sup>8</sup> This programme is based on providing support to teachers through tutors visiting schools. These tutors assess three students in every school they visit, and use tablets to provide instant information about performance in different schools and districts to government officials. **This provides real-time, detailed data to policymakers.** Policymakers use an information tool to see which areas are performing best, in terms of the level of activity of teacher trainers and results in EGRA. It is possible to use this information to see scores aggregated by district, or at school-level. This tool has stimulated the culture of data use within government, which is starting to see the value of monitoring system performance in this way. The next challenge is for policymakers to use this high quality data to create improvements, for example, by intervening in districts with low performance.

### 6.4 Next steps for donor-led assessments

The experience in Kenya shows that EGRA data are now being used in a sophisticated way to track programme performance. A further challenge is to determine how different types of donor-led assessment can be used most effectively, and how the work of international donors can be adapted to raise capacity within East Africa.

In terms of how different types of donor-led assessments could be used, **greater use of data from EGRA and other similar assessments could help to build capacity in formative assessment in the teaching profession.** EGRA Plus in Liberia shows the potential value of using information generated from reading assessments in this way. SHRP engages teachers to

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<sup>8</sup> [www.education.go.ke/home/images/Project-KPED/Brief%20on%20TUSOME%20.pdf](http://www.education.go.ke/home/images/Project-KPED/Brief%20on%20TUSOME%20.pdf)



use an EGRA-like student assessment in the classroom. Some NGOs in Uganda are also developing this type of approach. They are using their own reading assessments, often adapted from EGRA materials, with an emphasis on quick and straightforward administration and marking. For example, Mango Tree is working to develop assessment specialists within schools, and they have regular contact with classroom teachers to support them to plan next steps based on comprehension assessments.

The challenges in translating this use of data into the classroom are significant. Teachers often have very limited experience of using data to inform their next steps in teaching and adapt lessons plans, and there is little space in the curriculum to allow for re-teaching of content which students have not yet mastered. However, given the importance of this type of formative assessment, encouraging the development of these skills amongst teachers is a crucial area of work.

**Donors could also consider how they can move towards using locally produced assessments to track programme performance**, rather than administering their own assessments. This would allow national ministries of education to set the appropriate standards for their system, reduce the expense of administering multiple assessments, and raise technical assessment capacity within the country and region.

As a first step, donors could be encouraged to review existing national assessments when starting a programme to see if they could be used for the purpose required by the donor. Current national assessment tools may be considered as not sufficiently reliable for use, particularly if high stakes funding and payment systems are taken as a the results of data (for example, NAPE does not use anchor items to track changes in performance over time). However, donors could set criteria for national assessments to reach, on the understanding that once set, standards of reliability and validity are met, then the donors will look to work with that assessment where possible. As an example of how criteria can be set to evaluate the suitability of multiple assessments, the English Government gives standards of reliability that 'baseline assessments' of those starting school must meet (Standards & Testing Agency, 2014).

## 6.5 Considerations and recommendations to improve the use of donor-led assessments

- The experience across the region suggests that **providing reliable and clear data on early reading ability has the potential to improve the culture of data use among policymakers.**
- To create an even wider impact, new **donor-led assessments could have an increasing focus on providing diagnostic information for teachers.** Alongside, appropriate assessment tools, practical steps need to be taken to improve teachers ability to adapt their lessons according to diagnostic information.
- Donors could be **clear about requirements for assessments suitable to track their programmes**, and seek local providers of these assessments where possible.

## 7. Regional assessment – SACMEQ

SACMEQ produces high quality results, which have the potential to provide valuable information about countries' relative performance, and stimulate action. Countries need to give sufficient resources to analysing and disseminating the results, if the potential of the assessment is to be realised. At present, slow reporting of findings and limited engagement with stakeholders significantly reduces the impact.

### 7.1 SACMEQ as an assessment tool

The purpose of SACMEQ is to:

- provide educational officials and researchers with training in the technical skills required to monitor, evaluate, and compare the general conditions of schooling and the quality of basic education
- generate information that can be used by decision-makers to formulate plans for improving the quality of education
- widely disseminate and use SACMEQ research results as the basis for policy and practice.

SACMEQ is a regional assessment, administered across 15 southern and eastern African countries to students in P6. It is conducted around every five years and so far, three assessment rounds have been completed, the first in 1999. SACMEQ's mission is to assist educational planners and researchers to undertake studies of the quality of their education systems by working in a cooperative way, allowing for comparisons across the region. SACMEQ covers a wide range of issues, including literacy and numeracy, and further areas for research can be agreed by the member countries. For example, education in HIV/AIDS was assessed in SACMEQ III. The pilot, assessment and data entry element of SACMEQ IV has cost over just US\$340,000 in Uganda, or approximately US\$68.40 per student.

SACMEQ reports a range of techniques they use to promote reliability and validity (ACER, 2015). Items are pre-tested and Rasch scaling is used to place all the items in a subject on a single scale. SACMEQ II started to include linked items from other assessments including SACMEQ I and Trends in International Mathematics and Science Study (TIMSS) to allow for further analysis.

### 7.2 Impact of SACMEQ on education policy and teaching practice

The potential benefits of SACMEQ are clear:

- It provides a useful benchmark across the region, which can be used to track progress towards the new SDGs.
- It can be used to track national standards over time.
- Low results can stimulate calls for action to improve education.
- The rich data can inform specific policy responses.
- The process of taking part can improve local capacity in assessments and use of data.

**Across the countries taking part in SACMEQ, there are examples of this assessment influencing policy. In Kenya, Zanzibar and Zambia, lower than expected results led to the formation of national policy reviews or presidential commissions. More specific policies**

have also been implemented, partly as a result of SACMEQ findings. For example, in Namibia a policy was developed to share good practice and resources between clusters of schools (ACER, 2015).

In other cases, the impact of SACMEQ has not been felt in policy terms. In Malawi, involvement in SACMEQ was found to drive discussion and improve the research capacity within the Ministry of Education, but there was not a clear impact of policy or learning outcomes (Wiseman, 2010).

In Uganda, there is some recognition of the potential for SACMEQ. Following each assessment round a series of research briefs are presented to ministers. Some officials at the MoESTS clearly describe how the results can be used to benchmark standards and learn from best practice in other countries. There have also been some direct policy responses to the findings. Following the last completed SACMEQ report, a gender unit was set up in the MoESTS to address weaknesses identified by the SACMEQ report, and the findings have guided the teacher recruitment process.

However, the potential for SACMEQ to continue this influence, and expand its ability to shape policy appears to be limited. Other **senior officials at the MoESTS were unaware of SACMEQ, and so were unclear on the nature of the assessment or the data produced.**

**This limited traction may be explained by the time it takes to analyse the data and produce reports.** The data from the latest round of SACMEQ, administered in 2013, has now been cleaned, and a report is being produced by the end of this year to be presented to ministers. SACMEQ is one of the responsibilities of the department for statistics within the MoESTS, along with areas such as the resource-intensive annual school census. The competing priorities limit the resources available to process the SACMEQ results in a timely fashion.

It will be instructive to see if this report has any impact on policy. Results showing national performance from over two years ago could be seen as outdated, particularly with NAPE providing a more regular commentary on national standards, and UWEZO providing some information comparing standards across the East African region.

SACMEQ does not directly influence teaching, despite its stated purpose to improve teaching practice. Teachers are unaware of the assessment and SACMEQ acknowledges that its dissemination budget only allows it to work with senior figures in government and NGOs. This suggests that the purpose of SACMEQ may be too wide, and SACMEQ in Uganda could also benefit from refining its purpose.

### 7.3 Impact of SACMEQ across East Africa

Kenya has been involved in all iterations of the SACMEQ programme. Tanzania was initially involved, but then decided not to allocate resources to take part in the latest round of assessments. Rwanda does not participate in SACMEQ.

SACMEQ's record of influencing education policy in Kenya is seen as one of the successes of the SACMEQ programme (ACER, 2015). The findings of SACMEQ influenced the Kenyan Education Sector Support Programme, introduced in 2003. In particular, this programme allocated significant funding to the building of classrooms, providing instructional materials, and to developing non-formal education programmes for those dropping out of school. These

actions emphasise the role of SACMEQ in galvanising actions in participating countries, although the precise role of new assessment data alongside previously emerging country and donor priorities is difficult to isolate.

In Tanzania, the Government has decided not to prioritise investing resources in the latest round of SACMEQ, and so is not taking part. Whilst UWEZO tracks standards over time, Tanzania is also currently without a national-level sample assessment, and so the government does not ‘own’ a method of tracking national performance. This has created some issues for the managing policy in the country. Falling results in the national exams in 2011 led to a call for renewed efforts to tackle low standards in education. Whilst the policy result was positive, the data from that year, showing a very large drop in standards over one academic year, has been questioned.

Senegal and Zambia are both participating in PISA for Development.<sup>9</sup> PISA for Development aims ‘to increase developing countries’ use of PISA assessments for monitoring progress towards nationally-set targets for improvement, for the analysis of factors associated with student learning outcomes, particularly for poor and marginalised populations, for institutional capacity-building and for tracking international educational targets in the post-2015 framework.’

Countries in East Africa may therefore have a choice of assessments, if they wish to develop their understanding of performance benchmarked against comparable countries, and track standards over time.

## 7.4 Considerations and recommendations to improve the use of SACMEQ

- **In Uganda, SACMEQ requires greater resources to process the data quickly if the benefits of taking part in the assessment are to be realised.** If the decision is taken to participate in an exercise of this cost, then sufficient resources must also be allocated to the final stages of the process to ensure value for money. Whilst comparisons between assessment types must be treated very cautiously, SACMEQ costs twice as much as UWEZO, despite administering assessments to a very significantly smaller number of students, which suggests that the managers of SACMEQ could seek efficiencies in other areas of their operations.
- **The interaction between SACMEQ and domestic assessments needs to be carefully considered.** In Uganda, NAPE assessments also track national standards over time. Given the overall funding constraints for education, SACMEQ needs to clearly complement rather than duplicate the work of NAPE. For example, in the years SACMEQ is administered, NAPE could not conduct its own assessment, and resources from within NAPE could be used to ensure the data and reports are made available in a timely manner. A high degree of confidence in carrying forward the SACMEQ analysis process to timetable would be required for this decision to be taken.

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<sup>9</sup> [www.oecd.org/pisa/aboutpisa/pisaforddevelopment.htm](http://www.oecd.org/pisa/aboutpisa/pisaforddevelopment.htm)

## 8. Conclusion

Across East Africa, assessments are regularly conducted, creating a wide range of evidence and useful information for governments and teachers. This strength of the education system in these countries is not being exploited fully. Across the assessments, some common themes emerge, which could inform future developments.

**There should be absolute clarity on the purpose of each assessment, and the purpose should be realistic.** This is particularly relevant for NAPE in Uganda and other sample assessments, which tend to have a broad set of aims. An assessment designed to track national standards over time is unlikely to be the best vehicle for providing diagnostic information to teachers.

**The agreed purpose of an assessment then needs to drive the frequency and content.** In particular, the annual cycle of both NAPE and UWEZO could be re-considered. Significant changes in national standards are unlikely to be detected year on year. UWEZO was initially well served in its aim of raising awareness of low levels of learning through its annual assessment cycle. However, this is less useful if the primary purpose of UWEZO is to deliver its theory of change: driving community action based on the results, and securing widespread engagement to a programme of education reform in government.

**School accountability policies could be used to create the incentives for schools to improve.** Whilst transparent results are part of an accountability system, governments could be encouraged to ensure accountability systems have ‘teeth’ which create strong incentives for all to improve.

Further policy impact could be achieved if assessment managers are able to secure greater strategic engagement within government. **Organisations administering assessments should seek champions within ministries of education, who are interested in using their data to track progress on a regular basis.** These organisations could also focus on analysing data in areas of interest to policymakers, such as highlighting inequalities based on region, gender or special educational needs (SEN) status, which could help government to address areas of weakness.

**Sufficient resources need to be allocated to act on the findings of these assessments.** Greater impact could be achieved if international donors and implementing NGOs were engaged to support governments (with money and technical capacity) to implement interventions based on the findings of assessments.

If assessments are to influence teaching practice in the classroom, detailed and ongoing projects working with parents and teachers will be required. **Teachers’ current ability to use assessment results is limited. This means that carefully-targeted programmes are required to translate assessment findings into action.** Efforts could aim to develop the culture of teachers’ using data to plan their work, and improve formative assessment practices.

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## Annex A: Summary of large-scale assessments used in Uganda

Assessment	Year groups	Number of students	Regularity	Administration	Availability of results
PLE and UCE	P7 and S4	Whole cohorts	Annual	Administered at the school	Each school receives their own results.  Limited comparisons between schools through the media
NAPE	P3, P6, S2	Sample of around 20,000 students in each year group assessed	Annual, as long as funding made available	Administered at the school by NAPE officials	Detailed report published annually – district and national figures
UWEZO	Children aged 6–16, including those not in school.	Sample of around 100,000 students in Uganda	Annual	Volunteers administer assessment in the household	Detailed report published annually – some district and national figures
EGRA and EGMA	Most used at P1–P3, but also for older students through some programmes	In 2014, around 6,000 students took EGRA in February and a similar number in October through SHRP.	Dependent on programme needs	Assessments can be adapted by user.  Administered by programme managers	Data is publicly available on request, and is often published, although not always widely disseminated.
SACMEQ	P6	Samples of around 5,000 students in 250 schools	Every 4 years	Administered in school, overseen by country teams	Detailed report published following each assessment, sometimes after a long delay

## Annex B: List of interviewees

Interviewee	Role and Organisation
Godfrey Dhatwema	Commissioner for Policy and Planning, Uganda Ministry for Education, Science Technology and Sports
Daniel Nkaada	Commissioner for Basic Education, Uganda Ministry for Education, Science Technology and Sports
Dennis Magulu	Policy Officer for SACMEQ, Uganda Ministry for Education, Science, Technology and Sports
Daniel Kyagaba	Head of NAPE, Uganda National Examinations Board
Kennedy Jumanyol	Policy Officer, Uganda National Examinations Board
Tracey Brunette	Head of Monitoring and Evaluation, School Health and Reading Programme
Benjamin Piper	Chief of Party, RTI International Kenya
Goretti Nakabugo	UWEZO Manager, Uganda
Dana Schmidt	Programme Officer, Hewlett Foundation
Edison Nsubuga	Deputy Country Director, Promoting Equality in African Schools
Victoria Brown	Education Consultant, Mango Tree
Ian Attfield	DFID Education Adviser, Tanzania
Paul Atherton	DFID Education Adviser, Rwanda
Sandra Barton	DFID Education Adviser, Kenya

## Annex C: Value-added performance measures in Uganda

Ark has conducted research to develop value-added performance measures for secondary schools in Uganda. Value-added models are commonly used in developed countries for ranking schools, as they account for school intake. Ranking schools just on test scores without accounting for intake implicitly penalises schools serving students with a weak primary foundation. The potential benefits of using value-added measures are:

- **Weak schools** are no longer able to blame poor performance on having a challenging intake.
- **‘Coasting schools’**, doing just enough to achieve reasonable results with a high-performing intake are exposed.
- Schools performing well in challenging circumstances are identified, allowing best practice to be analysed and shared.
- Schools are given an incentive to **teach all students equally**: An **extra mark for any student has the same impact on a school’s performance** on these measures, **promoting equity**.

For this research, Ark collected matched PLE and UCE for individual students from a nationally-representative sample of 335 schools. A value-added model was then created for Uganda based on the UK’s ‘Progress 8’ model. The model works by calculating expected UCE scores (based on PLE scores), and then judging each student on whether they exceeded or fell short from their individual prediction. Schools are then judged on the average performance of their students on this ‘value-added’ measure.

The research shows that prior attainment explains almost half the variation in UCE scores (r-squared 0.46). This highlights the importance of controlling for prior attainment when evaluating a school’s performance. A series of robustness checks were also conducted, which suggest that the value-added model is appropriate for use in the Uganda context. For example, including a variable for socio-economic status only increased the amount of variation the model could explain by a small amount, showing that a more complex method of controlling for the student cohort in a school was unnecessary to create a fair measure of performance.

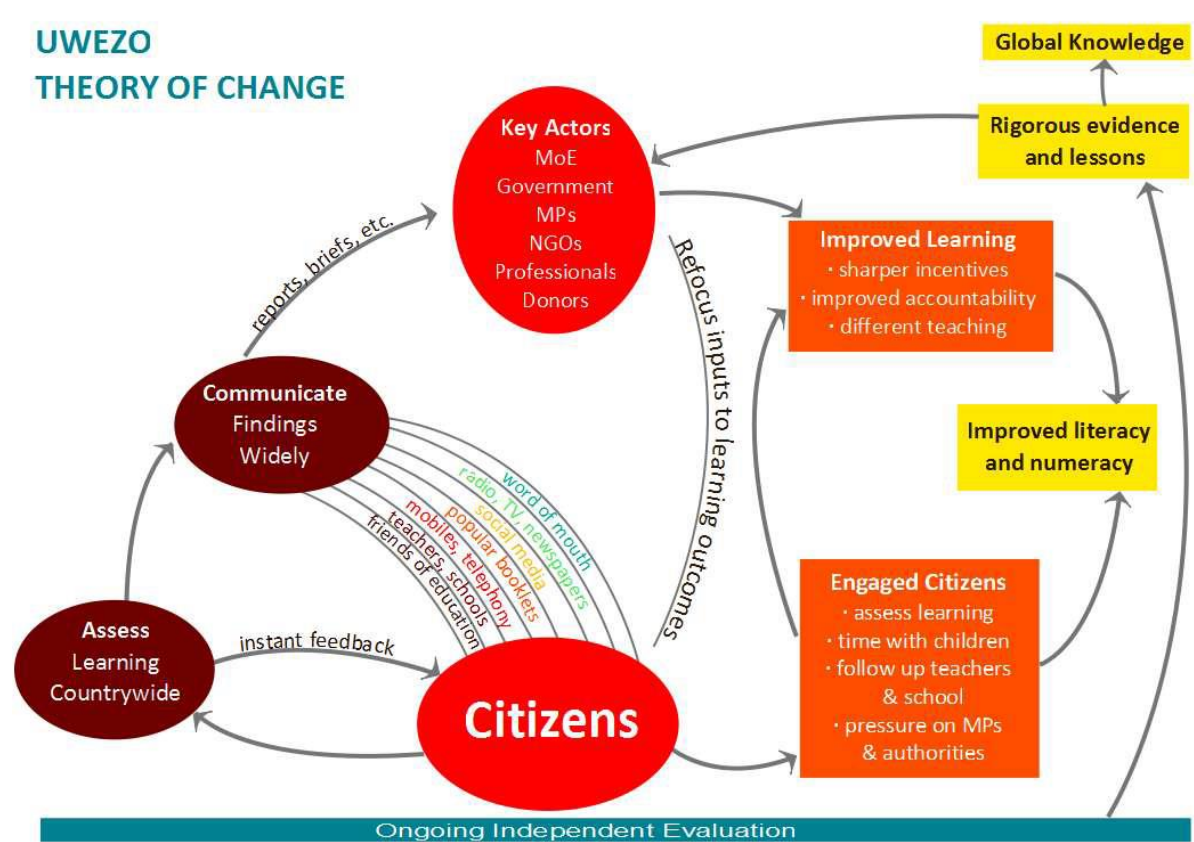
Using this method of evaluating school performance, different schools emerge as the most in need of support, compared to relying on attainment results alone. Of the bottom quartile of schools based on value-added measures, two-thirds were also in the bottom quartile based on attainment, but the remaining third of schools were newly identified as under-performing.

In 2015, UNEB used a system of electronic registration for the first time, which will allow them to match PLE and UCE data for individual students within their own databases. This creates the possibility of using value-added measures to consider the performance of schools nationally in future.

The research concludes that the value-added model for secondary school quality in Uganda, based on already existing official test score data has real potential to provide a low-cost and clearer signal to parents, teachers, schools and policymakers about how much learning is actually happening in different schools.

Further detail on the research will be available at the following link: [www.arkoline.org](http://www.arkoline.org)

## Annex D. UWEZO's theory of change



Source: [www.uwezo.net/about-us/theory-of-change/](http://www.uwezo.net/about-us/theory-of-change/)

## About

This paper is part of a series of think pieces produced by the Health & Education Advice & Resource Team (HEART), and commissioned by the UK's Department for International Development (DFID) in 2015. The purpose of the series is to stimulate debate on the future direction of education development in low income countries; provide direction for future DFID research priorities; and provide evidence products that can inform policy and programming decisions.

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