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Seeking Quality in Education: The Growth of National Learning Assessments, 1990-2013

Aaron Benavot and Nihan Köseleci

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Seeking Quality in Education: The Growth of National Learning Assessments, 1990-2013

Aaron Benavot¹ and Nihan Köseleci²

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¹ Director, UNESCO Education for All Global Monitoring Report, a.benavot@unesco.org

² Researcher, UNESCO Education for All Global Monitoring Report, n.koseleci-blanchy@unesco.org

Abstract

This study examines key trends and characteristics of national learning assessments (NLAs), which have been conducted with increasing frequency worldwide since the 1990s. Generally, national assessments constitute a ‘low stakes’ examination whose purpose is to evaluate student learning outcomes on the basis of criteria and expectations set by national education authorities. Unlike international assessments the results of NLAs are not comparative. This paper provides an overview of NLAs by describing the curricular subject areas and grade levels assessed, and how these have changed over time and varied across regions. In addition, it presents results from select national learning assessments to illustrate issues pertaining to changes in learning outcomes over time and ways country-level disparities in student achievement can be compared. The paper calls on international agencies, donors and civil society to consider ways to strengthen the capacities of national authorities and/or citizens to conduct, improve and, most importantly, utilize national learning assessments to ensure the provision of good quality education and effective teaching.

Introduction

The World Declaration on Education for All (EFA), adopted in Jomtien Thailand in 1990, committed countries to improving quality of education. It recognized that expanding access to education alone would be insufficient for realizing education’s contribution to the broad development of the individual and society. A decade later, the Dakar Framework for Action, adopted at the World Education Forum in Senegal, declared that access to an education of good quality was the right of every child. It affirmed that quality was the heart of education and a fundamental determinant of enrolment, retention and achievement. Since Jomtien, sustained investment in education and more effective policies have resulted in far fewer children being out of primary school in many countries. However, despite impressive gains in access to education, improvements in the provision of good quality education have lagged.

Approaches to and understandings of the quality of education have evolved over time. From the late 1980s to 2000s, many scholars and agencies conceived of education quality in comprehensive terms. The concept encompassed, for example, the political, socioeconomic and cultural contexts in which schools, students and their teachers are situated; the resources--human, physical, material--available to support learning; differences in the capacities and experiences that learners bring with them to the classroom; the pedagogical processes through which teaching and learning take place; and finally learning outcomes, including cognitive skills, competences, attitudes, norms, and other non-cognitive

outcomes. In recent years, good quality education has become equated, almost exclusively, with improved learning outcomes. The broader context and enabling conditions of learning have taken a back seat to a singular focus on the skills and competences learners are meant to acquire through schooling.

More complex and multifaceted definitions of education quality pose particular challenges in terms of measurement and monitoring. In international accounts of education there have been a plethora of input measures—for example, educational expenditure per student, teacher supply and qualifications, availability of learning materials, and adequate instructional time. Measures of school-based or classroom-based processes have been much more limited in number and coverage. Increasingly, attention has turned to measures of the outcomes of learning processes, often portrayed in international and regional assessment exercises, as a proxy of education quality.

The double shift in international educational discourse—from an emphasis on quantity to quality, and from broad notions of quality to a more narrow focus on select learning outcomes—is increasingly reflected in the policy documents and funding strategies of countries, international agencies and civil society organizations. The demands for accountability by national and international stakeholders have undoubtedly contributed to greater country participation in learning assessment exercises. The movement towards evidence-informed policy and practice in education and in other fields has also accelerated this shift to measuring learning mainly, but not exclusively, in school-based assessments³. As a result, there has been a pronounced increase in the number of countries participating in large-scale assessment programmes, often with the support and pressure of bilateral and multilateral donors. Thus far, most of the attention has been on country participation in international and regional assessments, which employ common metrics to compare student achievement in selected subject areas across education systems.

This paper concentrates on the frequency of and participation rates in national student learning assessments. It takes note of the work of Benavot and Kamens (2011), who show that, by 2008, national assessments constituted slightly under two-thirds of all learning assessment programmes undertaken by developing countries. It draws on an up-to-date comprehensive mapping of national learning assessments worldwide, which lists each national assessment since 1990. The first section briefly discusses data and methodology issues and the second section analyses trends and commonalities in the characteristics of national learning assessments. The third section gives several examples of how national assessments data can be used to monitor and compare learning outcomes, and the final section makes several concluding remarks.

³ In some countries, such as Singapore and Thailand, results of public examinations are used not only for selection or certification purposes, but also to evaluate the school system.

Data and methodology

National assessments evaluate learning outcomes on the basis of criteria and expectations set by national education authorities. Alternatively called “system assessments”, “assessments of learning outcomes” or “national curriculum assessments”, they can be defined as exercises designed to describe the level of achievement not of individual students but of an education system, or a clearly defined part of it (e.g. fourth graders or 11-year-olds). National assessments are generally low-stakes, and differ from high stakes public examinations that certify individual achievement, and use it as a basis for institutional tracking or selection to higher levels of the education system.

This paper builds on a previous study conducted by Benavot and Tanner (2007) for the 2008 Global Monitoring Report, which provided a global overview of national assessment activities. The earlier study sought answers to three questions: In which countries, world regions and years were national assessments most prevalent? Which official agencies or institutes carried out the national assessments? Which student populations and subject areas were countries assessing?

The current study validated and further extended the previous mapping of national learning assessments. It analyses major trends in, and key characteristics of, national assessments, over time, between regions and across grade levels. To ensure comparability between the two studies, similar operational definitions were used.

In the present study, basic information about each national assessment – namely, assessment name, date carried out, grade level of students assessed and sponsoring agency – was compiled from three sources. First, government, international agency and assessment project websites served as the primary source for finding unlisted and less well known national assessments. Second, government officials and in-country learning assessment experts were identified and asked to verify information and to contribute new information on their countries’ national assessments. Third, reports and other publications offered data and confirmation about the mapping.

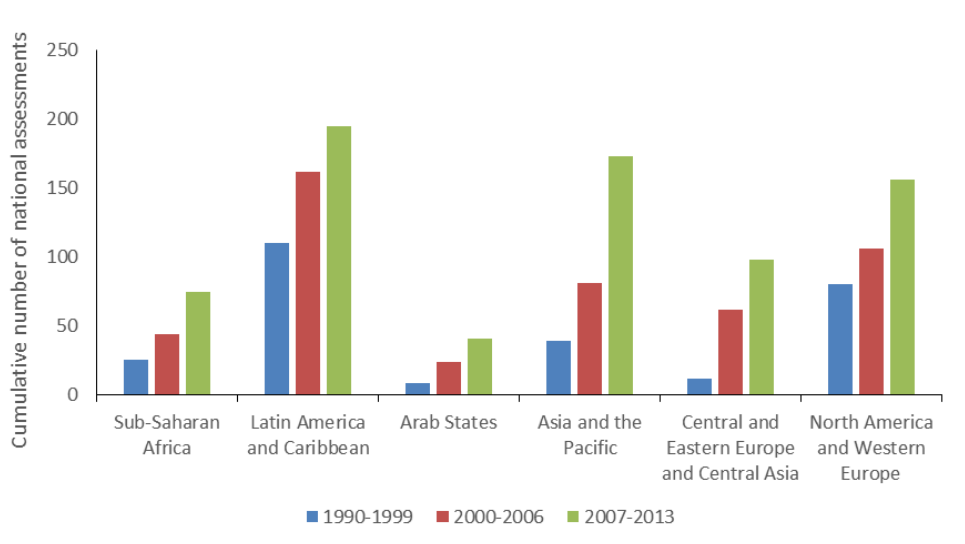
Thus far, the mapping exercise was not able to determine the scientific rigour or technical soundness of the assessments listed.

Findings

The analyses reveal a sharp increase in the total number of national assessments conducted since 1990. **Figure 1** shows the cumulative count of national assessments for three periods by region (1990–99, 2000–06 and 2007–13). The total number of assessments conducted worldwide rose from 276 in the 1990–1999 period, to 479 in 2000–2006, and to 738 in 2007–2013. Particularly rapid improvement was observed in Central and Eastern Europe and Central Asia and Asia and Pacific, a trend indicating active engagement by countries with the EFA agenda’s quality imperative. Despite

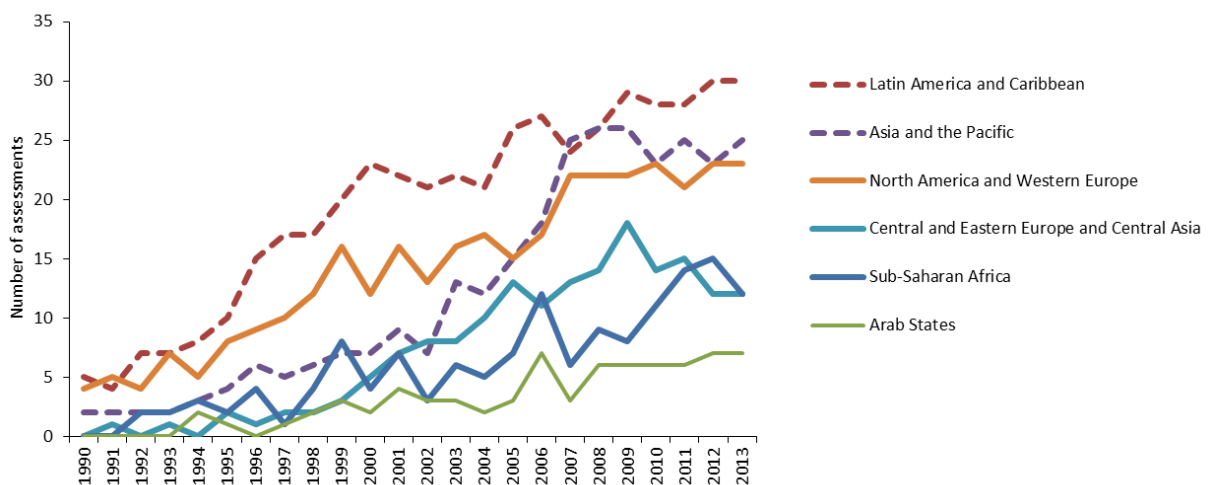
significant progress since 2008, the cumulative number of national assessments remains low in sub-Saharan Africa, standing at 75 in 2007-2013.

Figure 1: Cumulative number of national learning assessments, by region, 1990-1999, 2000-2006 and 2007-2013



Between 2007 and 2013, half of the world’s national assessments were carried out in two regions, Latin America and the Caribbean (25% of total national assessments) and Asia and the Pacific (24% of total national assessments). As **Figure 2** illustrates, different regional trends are apparent. Countries in Latin America and the Caribbean began conducting national assessments in the 1990s, the numbers rising modestly since then. Countries in Asia and the Pacific carried out fewer assessments in the 1990s, with the pace significantly accelerating in recent years.

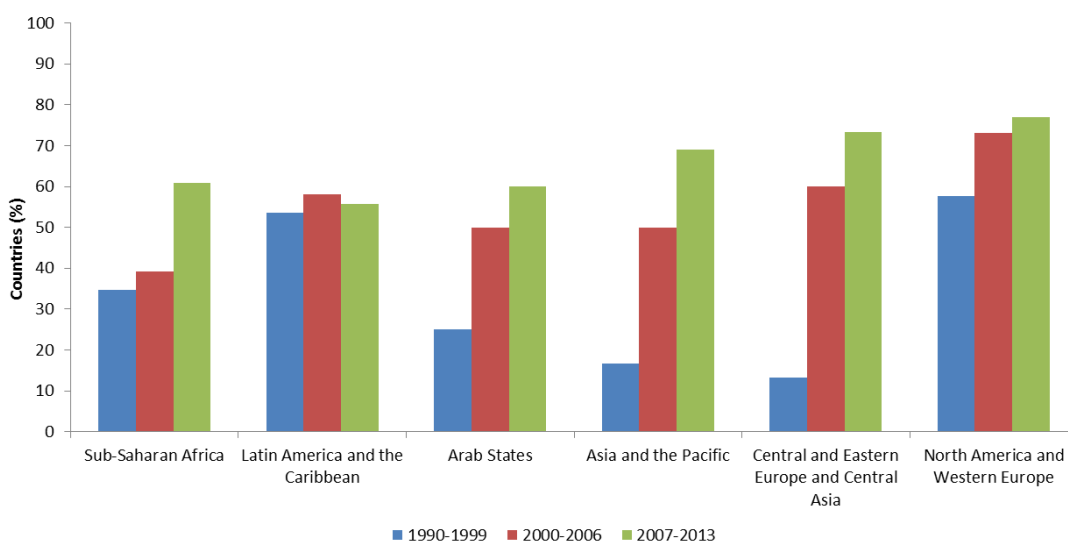
Figure 2: Number of national learning assessments, by region and year



Another way of exploring patterns of assessment participation is to take countries, not assessments, as the main unit of analysis. **Figure 3** examines what share of countries in each region that participated

in national assessments during a given time period. The total number of countries carrying out at least one national assessment has risen steadily: from 70 countries in 1990-1999, to 111 in 2000-2006, and to 135 in 2007-2013. The North America and Western Europe region had the highest percentage of countries that carried out learning assessments across all periods. Most of the growth in participation in national assessments has taken place in regions where participation was initially low. The prevalence of national assessments noticeably increased in Central and Eastern Europe and Central Asia (from 13% to 73%), Asia and the Pacific (from 17% to 69%) and the Arab States (from 25% to 60%). The percentage of countries conducting at least one national assessment rose in sub-Saharan Africa from 35% to 61%.

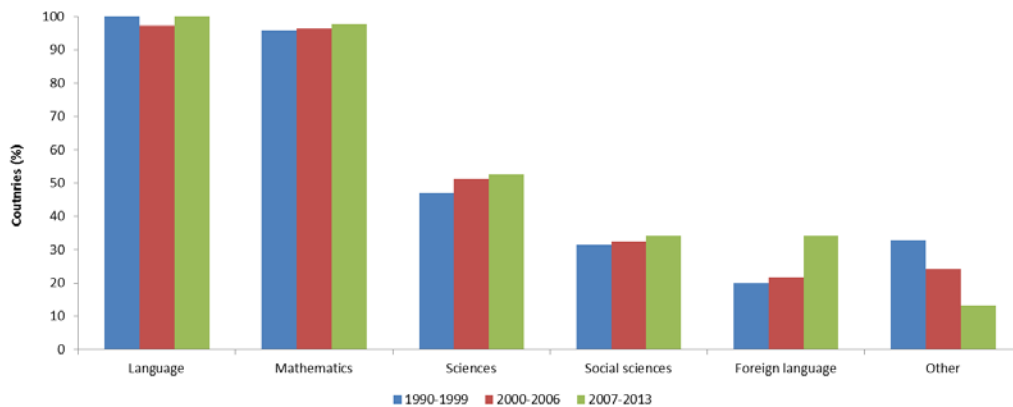
Figure 3: Percentage of countries that have carried out at least one national learning assessment, by region, 1990-1999, 2000-2006 and 2007-2013



National assessments are predominantly curriculum-based and subject-oriented in contrast to the international assessments of cross-curricular knowledge, skills and competencies such as PISA. **Figure 4** shows that mathematics (98%) and languages (100%) are by far the predominant subjects,

followed by sciences (53%), social sciences (34%) and foreign language (34%). This does reflect both the strong emphasis on language and mathematics worldwide and the centrality of these subjects in educational discourse on assessments.

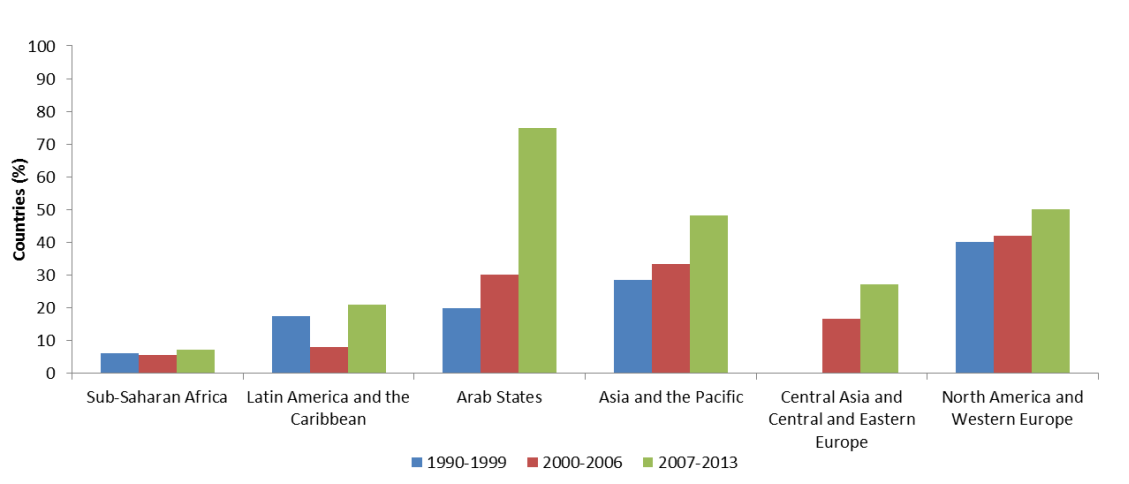
Figure 4: Of the countries that have carried out at least one assessment, the percentage of countries that have carried out an assessment in each subject, 1990-1999, 2000-2006 and 2007-2013



Note: “Language” refers to multiple official state language(s) instruction, local language(s) instruction, reading comprehension, literature and writing. “Sciences” refer to natural, earth, physical, general, integrated, environmental, ICT and health sciences. “Social sciences” refer to social studies, geography, history, civics and citizenship. “Other” refers to art, physical education, problem solving, life skills, visual literacy, cognitive behaviour and music.

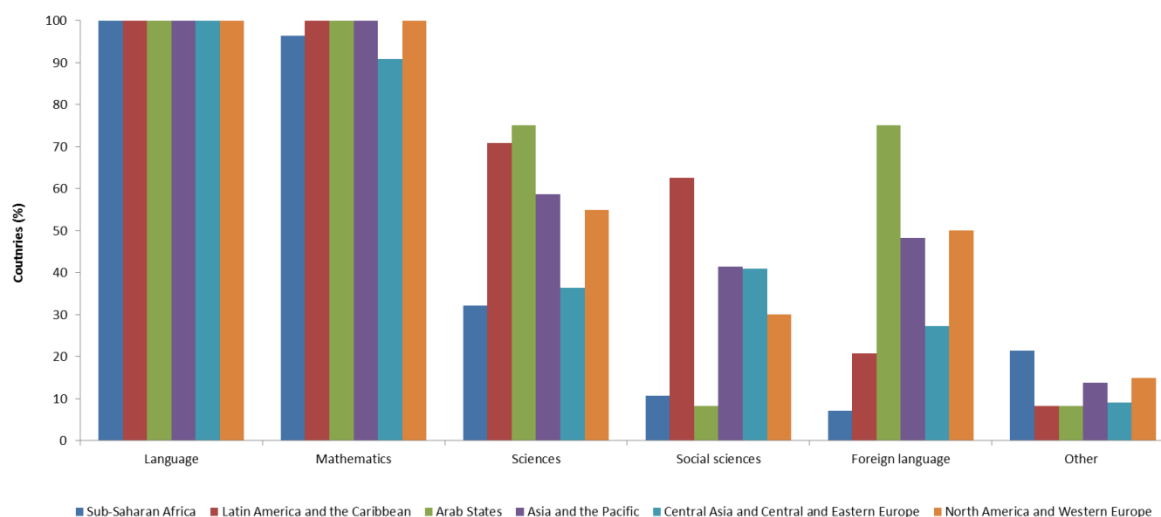
In general, there has been little change in the prevalence of assessed subjects with the exception of foreign languages, which have gained prominence from 20% in 1990-1999 to 34% in 2007-2013. Interest in foreign languages has been especially growing in Asia and the Pacific and the Arab States (Figure 5). The rise of foreign language in national learning assessments indicates an increased focus in whether students are prepared for international labour markets and to the presumed demands of globalization on national economies.

Figure 5: Of the countries that have carried out at least one assessment, the percentage of countries that have carried out an assessment in foreign language, 1990-1999, 2000-2006 and 2007-2013



As **Figure 6** illustrates, the focus on different subject areas varies by region. In 2007-2013, the emphasis on sciences is strongest in Latin America and the Caribbean (71%) and the Arab States (75%). Assessments of social studies are found in every region but are less common than national assessments in sciences, language, and mathematics, except in Latin America and the Caribbean, Central Asia and Central and Eastern Europe, where the two are almost equally emphasized.

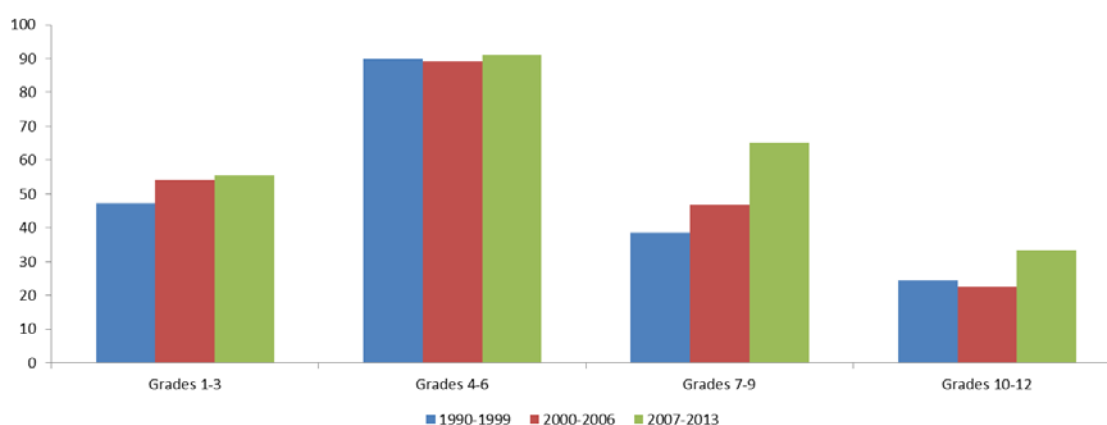
Figure 6: Of the countries that have carried out at least one assessment, the percentage of countries that have carried out an assessment in each subject, by region, 2007-2013



Note: “Language” refers to multiple official state language(s) instruction, local language(s) instruction, reading comprehension, literature and writing. “Sciences” refer to natural, earth, physical, general, integrated, environmental, ICT and health sciences. “Social sciences” refer to social studies, geography, history, civics and citizenship. “Other” refers to art, physical education, problem solving, life skills, visual literacy, cognitive behaviour and music.

Figure 7 indicates that national assessments focus on grades 4-6 than grades 1-3 or 7-9. Between 2007 and 2013, 123 countries conducted at least one national assessment of learning outcomes in grades 4-6; 75 countries did so in grades 1-3, 88 countries in grades 7-9 and 45 in grades 10-12. There has been a significant increase in the percentage of countries running at least one national learning assessment at the lower secondary level of education (7-9), from 39% in 1990-1999 to 47% in 2000-2006 and 65% in 2007-2013.

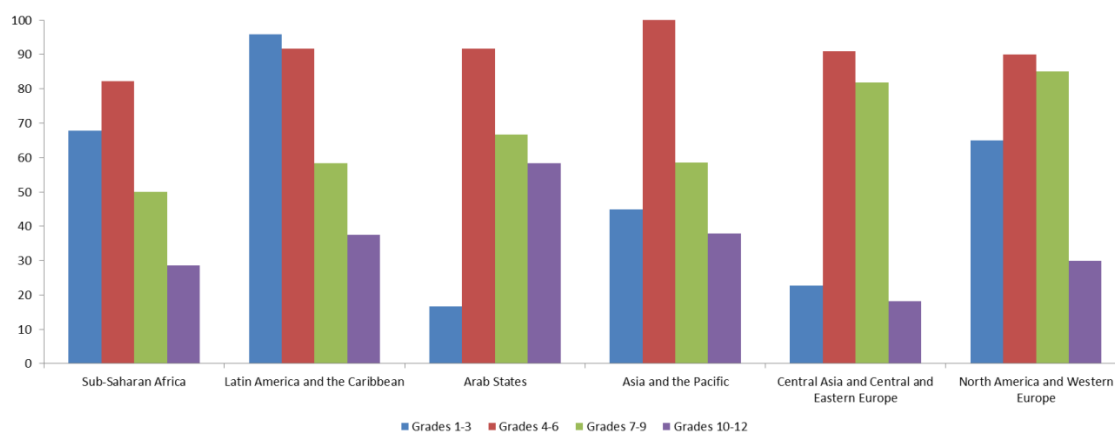
Figure 7: Of the countries that have carried out at least one assessment, the percentage of countries that have carried out an assessment in each grade level, 1990-1999, 2000-2006 and 2007-2013



As highlighted in **Figure 8**, the target age of national assessments varies, to some extent, across regions. National learning assessments in the primary grades (1-6) are more prevalent in sub-Saharan Africa, Latin America and the Caribbean and Asia and the Pacific. National learning assessments in

lower and upper secondary grades are more prevalent in Central Asia and Central and Eastern Europe and North America and Western Europe.

Figure 8: Of the countries that have carried out at least one assessment, the percentage of countries that have carried out an assessment in each grade level, by region, 2007-2013



Monitoring learning outcomes through national assessments

In many countries, national learning assessments underscore the scale of the challenge in providing good quality education. Despite differences in assessment methods and scales, sample designs and methodological rigor, as will show the following examples, national assessments uniformly point to pockets of low achievement and the need for authorities to find ways to improve student knowledge and competences.

Since 2000, Ethiopia, for instance, has carried out four national assessments to determine the overall achievement levels in grades 4 and 8 in core subjects. The most recent assessment conducted in 2012 found that 55% of grade 8 students did not reach the basic achievement level in English, 61% in mathematics, 56% in biology, 58% in chemistry, and 54% in physics. In 2010, Uganda assessed students' achievements in English and numeracy in grades 3 and 6. The results showed that 58% of grade 3 students achieved proficiency levels in English and 73% in numeracy.

In 2008, Morocco assessed student knowledge in Arabic, French, mathematics and sciences in grades 4 and 6 of primary education, as well as grades 2 and 3 of lower secondary education. Only 34% of grade 4 and 44% of grade 6 primary students were able to master basic numeracy skills. Results of this assessment also highlighted that girls scored higher than boys in language and mathematics. In Qatar, the Supreme Education Council has administered Comprehensive Educational Assessments to students in grades 4 to 11 in core subject areas (Arabic, English, mathematics, sciences and social studies). In 2012/2013, only 20% of students in grades 4 to 11 reached the minimum standards in social studies.

Since 2000, India has carried assessments to determine the overall achievement levels in grades 3, 5, and 8 in literacy and numeracy. Only 65% of grade 3 students were able to listen to a passage with understanding, 86% were able to recognize words and 59% were able to read a passage and interpret meanings from it.

With certain caveats it is possible to assess changes over time in student achievement with information from national learning assessments. **Table 1** reports the percentage change in mean achievement, in different core subjects between earlier and most recent assessments available for selected countries. In South Africa, the Philippines, Turkey, and Uganda the overtime trends in average achievement are generally upwards, with some fluctuation by subject area and grade level. In the Philippines, for example, test results at primary education level have shown progress in all subjects. Yet, at secondary level, test results have shown progress in mathematics, Filipino and social sciences with some declines in English and sciences. In Australia, mean achievement levels are relatively stable. In Burkina Faso and Ethiopia, a negative trend is observed.

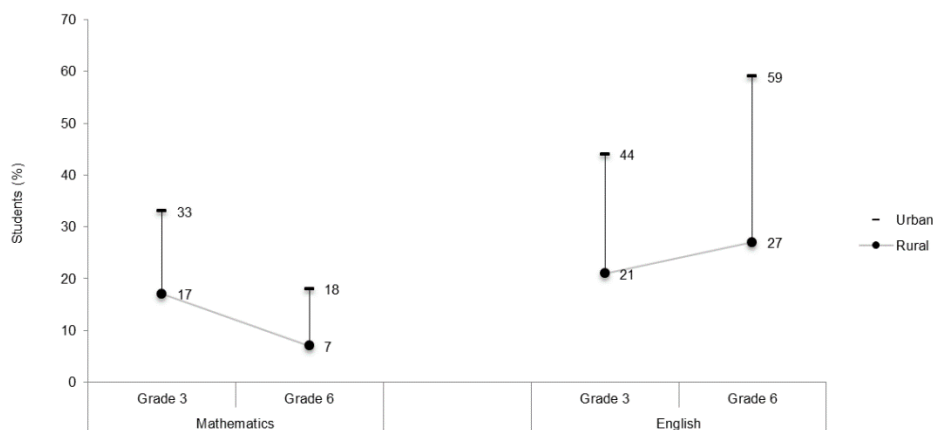
Table 1: Over time changes in learning outcomes based on national assessments, selected countries, and years

| Country | Grade | Initial year | Most recent year | Subject | Change in the achievement level since initial year | | | |
|--------------|-------|-----------------------|------------------|---------------------------|--|------------------------------------|-------------------------|-----|
| | | | | | Increase (more than 5%) | Little or no change (less than 5%) | Decrease (more than 5%) | |
| | | | | | (%) | | | |
| Burkina Faso | 3 | 2007 | 2012 | French | 10 | | | |
| | | | | Mathematics | | 4 | | |
| | 5 | 2007 | 2012 | French | | | -7 | |
| | | | | Mathematics | | 3 | | |
| | | | | Sciences | | | -20 | |
| Ethiopia | 4 | 2004 | 2012 | Reading | | | -33 | |
| | | | | English | | 1 | | |
| | | | | Mathematics | | | -7 | |
| | | | | Environmental science | | | -20 | |
| | 8 | 2004 | 2012 | English | | 3 | | |
| | | | | Mathematics | | | -11 | |
| | | | | Biology | | | -11 | |
| | | | | Chemistry | | | -36 | |
| | | | | Physics | | 3 | | |
| South Africa | 3 | 2012 | 2014 | Home Language | 8 | | | |
| | | | | Mathematics | 37 | | | |
| | 6 | 2012 | 2014 | Home Language | 47 | | | |
| | | | | First additional language | 25 | | | |
| | | | | Mathematics | 59 | | | |
| | 9 | 2012 | 2014 | Home Language | 12 | | | |
| | | | | First additional language | | 3 | | |
| | | | | Mathematics | | | -15 | |
| Uganda | 3 | 2006 | 2010 | English | 26 | | | |
| | | | | Numeracy | 71 | | | |
| | 6 | 2006 | 2010 | English | 79 | | | |
| | | | | Numeracy | 48 | | | |
| Philippines | | 2003/04 | 2011/12 | Mathematics | 23 | | | |
| | | | | Filipino | 12 | | | |
| | 6 | | | English | 22 | | | |
| | | | | Sciences | 41 | | | |
| | | | | Social studies | 10 | | | |
| | | Year 2 of high school | 2006/07 | 2010/11 | Mathematics | 7 | | |
| | | | | | Filipino | 19 | | |
| | | | | | English | | | -11 |
| | | | | Sciences | | | -7 | |
| | | | | Social studies | | 1 | | |
| Australia | 3 | 2008 | 2014 | Reading | | | 4 | |
| | | | | Mathematics | | | 1 | |
| | 5 | 2008 | 2014 | Reading | | | 3 | |
| | | | | Mathematics | | | 2 | |
| | 6 | 2004 | 2013 | Civics and citizenship | | | 1 | |
| | 7 | 2008 | 2014 | Reading | | | 2 | |
| | | | | Mathematics | | | 0 | |
| | 9 | 2008 | 2014 | Reading | | | 0 | |
| | | | | Mathematics | | | 1 | |
| | 10 | 2004 | 2013 | Civics and citizenship | | | 3 | |
| Turkey | 4 | 2002 | 2008 | Turkish | 16 | | | |
| | | | | Mathematics | 33 | | | |
| | | | | Sciences and technology | 58 | | | |
| | | | | Social sciences | 20 | | | |
| | | 8 | 2002 | 2008 | Turkish | 19 | | |
| | | | | | Mathematics | 12 | | |
| | | | | Sciences and technology | 20 | | | |
| | | | | Social sciences | 9 | | | |

Note: The actual achievement levels compared in each country over time are based on different levels. In Australia, Burkina Faso, Ethiopia, the Philippines, South Africa, and Turkey, the comparison is between mean achievement scores. In Uganda, the percentage of students achieving proficiency level is compared.

While average figures on learning achievement provide an overall picture of the scale of the learning crisis, they can conceal large disparities within countries. Results from national assessments typically provide evidence on pupil disparities by household residence. In many countries, rural children achieve lower levels of language and mathematics achievement than urban children. In Ghana, for instance, as shown in **Figure 9**, the percentage of grade 3 and 6 students in urban areas reaching proficiency levels in both English and mathematics in 2013 is more than twice that of students in rural areas. Results from national assessments data also suggest that progress in learning trickles down more slowly to more disadvantaged rural areas. In Peru, learning has improved in recent years on average, but has yet to reach those students in rural areas. Between 2007 and 2014, the proportion of grade 2 students reaching satisfactory levels increased from 7% to 26% in mathematics. However, while the proportion of those in urban areas who achieved the satisfactory benchmark in mathematics increased from 9% to 29%, the proportion achieving this level in rural areas increased modestly from 5% to 13%.

Figure 9: Percentage of students achieving proficiency levels in mathematics and English, by grade and school location, 2013



Source: Ghana Ministry of Education, 2014.

In addition to the rural-urban divide, regions within countries can have vastly different outcomes. In 2010, the Kenya National Examinations Council carried out an assessment of grade 3 student achievement in literacy and numeracy. According to the results of the National Assessment System for Monitoring Learner Achievement (NASMLA), around half of pupils did not reach basic levels of competency in literacy and numeracy. In addition, learning outcomes varied widely across regions. In Nairobi, over 80% of girls and boys performed at or above the basic levels of competency while 29% of girls in North Eastern province and 35% of boys in Western province were able to do so (Kenya National Examinations Council, 2010). Similarly, the 2014 Annual National Assessment in South Africa showed that learning disparities were strongly associated with geography. At national level,

77% of grade 6 students achieved acceptable levels in home language. Yet, achievement gaps between poor province of Limpopo and wealthier Western Cape exceeded 20 percentage points (South Africa Department of Basic Education, 2014).

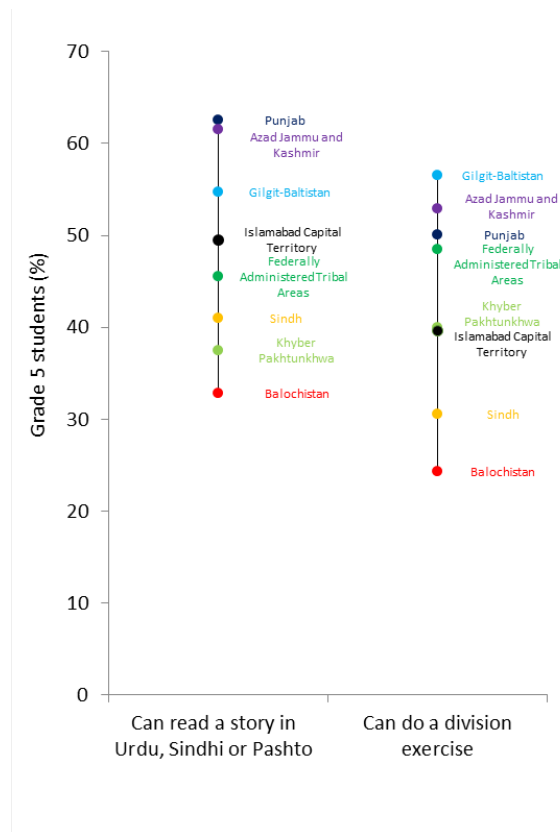
Various international and regional assessments have shown that how much a child learn is strongly influenced by the inherited disadvantage that comes with poverty and extreme inequality. This pattern also obtains in national assessments. In Brazil, analysis of data from Prova Brasil assessments show that there is vast inequality between rich and poor children. In urban public schools, while 58% of grade 8 students from rich households achieved basic or adequate levels of proficiency in Portuguese, only 21% of students from poor backgrounds did so in 2011 (Kassouf, 2015). In Bangladesh, the 2011 National Student Assessment of literacy and numeracy indicated that only 25% of grade 5 students master Bangla, and only 33% master mathematics competencies. Estimates based on this assessments found that grade 5 students from poor families were at least three-fourths of a school year behind their richer peers in Bangla, and half a school year behind in mathematics (Bangladesh Directorate of Primary Education, 2012).

Citizen-led assessments

Government action has not been the only route to an effective assessment system for informing national policy. Citizen-led, household-based assessment initiatives began in India in 2005 and were adapted for use in Pakistan (since 2008), Kenya, Uganda and the United Republic of Tanzania (2009), Mali (2011) and recently Senegal (2012). Together, they reached more than a million of children in 2012. Civil society in these countries has begun to assess children's basic reading and arithmetic abilities.

In Mali, the Beekungo citizen-led assessment provides evidence of very low levels of learning: in 2012, only 10% of grade 4 pupils could read a text designed for grade 2 students, and 35% of grade 4 pupils could perform a two-digit subtraction (ASER Centre, 2014). In a similar vein, as shown in **Figure 10**, recent Annual Status of Education Report results in rural Pakistan provide a stark illustration of how unequal opportunities to acquire basic skills are, with some provinces doing much better than others. In 2014, in Balochistan province, 33% of grade 5 students could read a story in Urdu, Sindhi or Pashto, while in the wealthier province of Punjab, 63% could do so. In Balochistan, only 24% of fifth-graders could do a division exercise, compared with 50% in Punjab.

Figure 10: Percentage of students enrolled in grade 5 able to do division and read a story in Urdu, Sindhi or Pashto, provinces of rural Pakistan, 2014



Source: Analysis by the 2014 ASER Pakistan survey team.

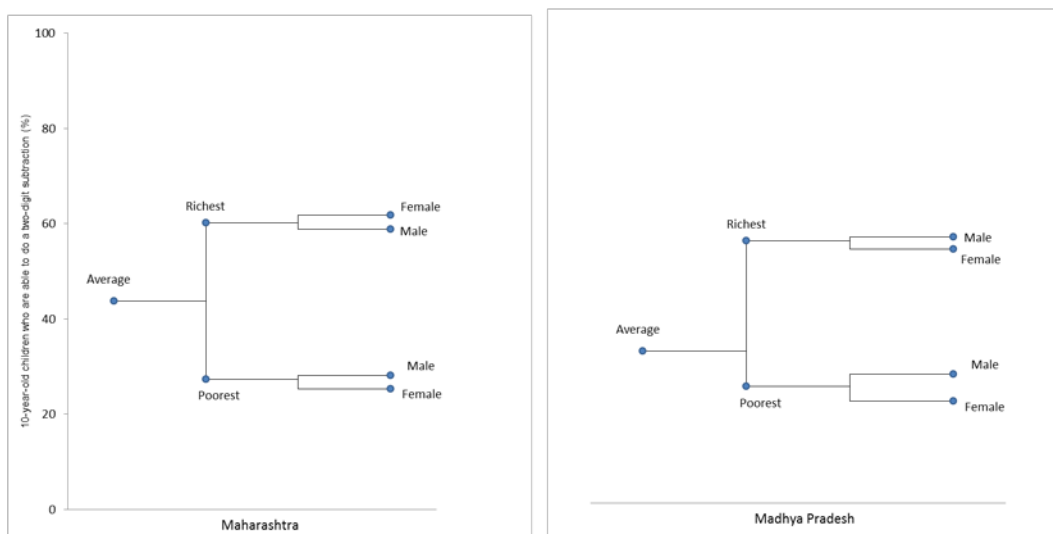
National assessments, presented so far in in this report, only report the learning outcomes of children who are in school. Thus, they are likely to overestimate the learning achievement of the relevant population, especially in poorer countries with large proportions of out-of-school children and adolescents. Citizen-led assessments have identified ways to assess the skills of children and adolescents who are not in school and raise their profile among education policy-makers.

In India, for instance, the ASER surveys assess all children in the age group 5-16 in basic reading and arithmetic skills. **Figure 11** shows the performance in basic calculations of all 10-year-old children, regardless of their schooling status. This figure also puts a spotlight on how disadvantages linked to gender, wealth and region of residence interact. In the wealthier state of Maharashtra, most rural children reached grade 5 in 2012. However, only 44% of these children in the grade 5 age group could perform a two-digit subtraction. Among rich, girls performed better than boys, with around two out of three girls able to do the calculations. Yet, despite Maharashtra's relative wealth, poor and rural girls performed only slightly better than their counterparts in the poorer state of Madhya Pradesh. Widespread poverty in Madhya Pradesh affects the chance of staying in school until grade 5. In Madhya Pradesh, 85% of poor children reach grade 5, compared with 96% of rich children. Once in

school, poor girls have a lower chance of learning the basics: no more than one in five poor girls in Madhya Pradesh are able to do basic mathematics.

The ASER findings have also been used to inform policy. For example, they were cited in the education chapter of the government’s 12th five-year plan, which emphasized basic learning as an explicit objective of primary education as well as the need for regular learning assessments to make sure quality goals are met (Banerji et al., 2013).

Figure 11: Percentage of all 10-year-old children who are able to do a two-digit subtraction, by gender and wealth, selected states of rural India, 2012



Source: Analysis by the 2012 ASER India survey team.

Early grade assessments

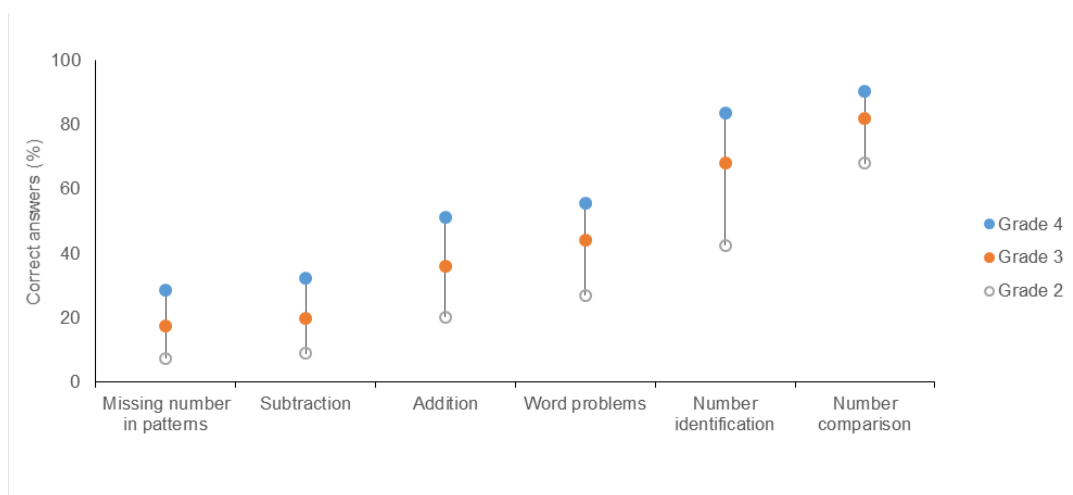
Very poor levels of learning at lower grades of primary school are resulting in millions of children leaving education before acquiring basic skills. Children who have not learned to read a text or do basic calculations at lower grades are likely to struggle throughout their school careers, their commitment to education is likely to diminish and they are more likely to drop out. USAID, with the support of UNICEF, the World Bank and several bilateral donors, promotes the conduct of early grade reading assessments (EGRA) and early grade mathematics assessments (EGMA): 60 countries have carried out one or more EGRAs from 2007 through mid-2014, and more than 20 conducted EGMAs. These assessments are not included in the global mapping but are reported in Annex 1.

EGRAs paint an alarming picture: many children spend two or three years in school without learning to read a single word. In the United Republic of Tanzania, around 30% of second-graders were unable to read a word in Kiswahili. In Ghana, 80% of grade 2 students were unable to respond correctly to

questions about a passage read aloud to them in English (RTI International, 2014). In several countries, even when the language of instruction is the same as the language most children speak at home, children perform poorly. In Malawi, 94% of children in grade 2 were unable to respond correctly to a single question about a story they read in Chichewa, the national language. In Iraq, 25% of third-graders were unable to correctly tell the sound of a letter in Arabic.

Many schools do not teach students the basics in mathematics in their early years. **Figure 12** illustrates that in Nicaragua in 2011, around 60% of second-graders and 20% of fourth-graders could not correctly identify numbers. Worse, more than 90% of grade 2 students and 70% of grade 4 students were unable to answer a subtraction question correctly.

Figure 12: Percentage of correct answers in mathematics, by grade and assessment subtask, 2011, Nicaragua



Notes: EGMA subtasks are defined as follows: ‘Missing number in patterns’ refers to identifying a missing number in a complicated pattern; ‘Subtraction’ and ‘Addition’ refer to correctly solving addition and subtraction facts with 1 and 2 digit numbers; ‘Word problems’ refer to correctly answering problems involving complicated addition, subtraction, multiplication, division; ‘Number identification’ refers to identifying numerals over 100; and ‘Number comparison’ refers to identifying which one of two number greater than 100 is larger. Source: RTI International (2014).

EGRA results have prompted governments and donors to rethink policies so that students achieve minimum learning standards in reading and mathematics. In Liberia, EGRA Plus, a two-year pilot programme, subsequently extended, included intensive training and follow-up support, backed up detailed curriculum-based lesson plans and diagnostic and formative assessment tools. The programme was born out of the poor results in Liberia’s Early Grade Reading Assessment, which found that around one-third of grade 2 students were unable to read a word. The programme accelerated children’s learning. Pupils’ receiving the full intervention increased their reading comprehension scores by 130%, with a more important impact on girls. In Egypt, the USAID-funded Girls’ Improved Learning Outcomes, a three-year research project, aimed to improve quality of teaching and learning for girls in four governorates by training teachers to teach reading in Arabic.

The baseline study in 2009 revealed that out of 2,800 pupils in 60 schools, nearly two-thirds of grade 2, 3 and 4 were unable to read a single word from a simple paragraph. This assessment recommended an intervention to strengthen phonics instruction in the Arabic alphabet to enhance overall reading performance. On the strength of this, a package was developed, combining training, support and resources for grade 1 and 2 teachers. After six months of improved phonics instruction, grade 2 pupils in intervention were, on average, correctly reading nearly three times as many syllables as pupils of the same grade in control schools.

Conclusion

Unlike international assessments like TIMMS, PISA and PIRLS or Regional assessments like SACMEQ and SERCE, national learning assessments are not designed for comparing learning outcomes across education systems. Partly for this reason, the evidence they provide on the distribution of student learning has largely been overlooked in international debates over education reform and practice, and in policy documents promoting effective teaching and improved learning. But this may be changing. There are proposals to include a limited number of common items in many national assessments to serve as a basis for anchoring a global metric of reading or mathematics proficiency. Creating global indicators of basic skill acquisition would enable cross-national or cross-system comparisons of learning outcomes.

Nevertheless, national learning assessments are more context-sensitive and have already proved to be a valuable tool for monitoring learning outcomes at the national or sub-national level. More so than international assessments NLAs can capture the impact of different educational aims and priorities in each country. They can better reflect instances of effective teaching and actual learning. Indeed, some countries have opted out from participation in international assessments and turned their attention more fully to improving existing national assessments. For instance, also partly due to the political reaction created by consistently poor results, South Africa stopped participating in TIMSS and started to conduct its National Annual Assessment (ANA) since 2011. The ANA is implemented in 12 different languages in order to meet the needs of culturally and linguistically diverse students, who are in need of tailored and appropriate instruction (South Africa Department of Basic Education, 2014).

Furthermore, if carried out with methodological rigor, national assessments can provide crucial information about the organization of schools, their governance, the quality of teaching, the qualification and preparation levels of teachers, and the strength of the curriculum and student outcomes in relation to the implemented curriculum. If utilized effectively, NLAs can provide in-depth information to curriculum developers, textbook writers, policymakers, teacher trainers who integrate assessment exercises in reform strategies. All of these are important tasks.

National learning assessments can also act as a stepping stone to improve accountability and promote reform, even if they provide a weak basis for comparing student outcomes across countries. They help governments to gauge the pace of progress and hold schools or districts to account where progress is slow and interventions are needed. If collected over time, national and subnational assessments data provide a wider laboratory on which to observe and evaluate the consequences of different educational policies and practice.

More research is undoubtedly needed to advance our knowledge on the effective use of national assessments. We should have a better understanding of the process of assessment itself: How do different stakeholders use data and how does it feed back into debates over educational policy and reforms? Have national assessments led to more effective policies in education, and, if so, what is the evidence? However, there is a lack of literature which discusses how evidence from national assessments is used for decision making at local and national levels. Often, assessment results are only in a national report, which may or may not be publicly available. In this context, informing teachers and schools about assessment results, with other accompanying policies (such as professional development or coaching), is hence essential to change the day-to-day instruction that occurs in the classroom. By highlighting the spread and importance of national learning assessments, this paper calls on education stakeholders to encourage more research, policy analyses and exchanges on the value of such assessments.

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Annex 1: Nationally representative Early Grade Reading and Mathematics Assessments

| Nationally representative Early Grade Reading and Mathematics Assessments | | | | | |
|---|---|--|-------------------|-----------------------------|------------------|
| Country | Name or description of assessment study | Organization/institution responsible for assessment | Target population | Curricular subject assessed | Year(s) |
| Egypt | Early Grade Reading Assessment | RTI, USAID/Egypt, Ministry of Education | Grade 3 | Arabic (reading) | 2013 |
| Gambia | Early Grade Reading Assessment | Ministry of Basic and Secondary Education | Grades 1, 2, 3 | Arabic, English | 2007, 2009 |
| Ghana | Early Grade Reading Assessment | Ghana Education Service, RTI, USAID | Grade 2 | English, Ghanaian language | 2013 |
| | Early Grade Mathematics Assessment | | | Mathematics | 2013 |
| Indonesia | Early Grade Reading Assessment | Ministry of Education and Culture (MOEC), the Ministry of Religious Affairs (MORA), USAID/Indonesia, RTI | Grade 2 | Language | 2014 |
| | Early Grade Reading Assessment | | | Arabic | 2012 |
| Jordan | Early Grade Mathematics Assessment | Ministry of Education, USAID/Jordan, RTI | Grades 2, 3 | Mathematics | 2012 |
| Liberia | Early Grade Reading Assessment | Ministry of Education, USAID/Liberia, RTI | Grades 2, 3 | English | 2008, 2009, 2010 |
| Malawi | Early Grade Reading Assessment | Ministry of Education, Science and Technology (MoEST) | Grades 2, 4 | Chichewa | 2010, 2011 |
| Mali | Early Grade Reading Assessment | Division de Recherche Pédagogique et Evaluation du Centre National d'Education, RTI | Grades 2, 4 | Arabic, French | 2009 |
| Nepal | Early Grade Reading Assessment | Ministry of Education, USAID/Nepal, RTI | Grades 2, 3 | Nepali | |
| Nicaragua | Early Grade Reading Assessment | Ministry of Education (MINED), Center for Education Research and Social Action (CIASES), RTI | Grades 2, 3, 4 | Miskitu, Spanish | 2008, 2009 |
| Philippines | Early Grade Reading Assessment | RTI, USAID/Philippines | Grade 3 | English, Filipino | 2013 |
| | Early Grade Reading Assessment | | | English, Kinyarwanda | 2011 |
| Rwanda | Early Grade Mathematics Assessment | RTI, USAID/Rwanda | Grades 4, 6 | Mathematics | |
| Tanzania | Early Grade Reading Assessment | Ministry of Education and Vocational Training (MoEVT), USAID/Tanzania, RTI | Grade 2 | English, Kiswahili | 2013 |
| Tanzania | Early Grade Mathematics Assessment | Ministry of Education and Vocational Training (MoEVT), USAID/Tanzania, RTI | Grade 2 | Mathematics | 2013 |
| Timor Leste | Early Grade Reading Assessment | Ministry of Education, World Bank | Grades 1, 2, 3 | Portuguese, Tetum | 2009 |
| Tonga | Early Grade Reading Assessment | Ministry of Education, Women's Affairs and Culture (MEWAC), AusAID, NZAID, EFA-FTI, World Bank | Grades 1, 2, 3 | Tongan | 2009 |
| Vanuatu | Early Grade Reading Assessment | Vanuatu Ministry of Education, World Bank | Grades 1, 2, 3 | English, French | 2010 |