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**Promoting critical knowledge, skills and qualifications for
sustainable development in Africa: How to design and
implement an effective response by education and
training systems**

Sub-theme 1

**Common core skills for lifelong
learning and sustainable
development in Africa**

**Early grade literacy in African classrooms:
Lessons learned and future directions**

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Working Document

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Acronyms and abbreviations

ADLAS:	Association pour le Developpement de la Langue Saafi (Senegal)
ANTBA:	Association Nationale pour la Traduction de la Bible et l'Alphabétisation (Burkina Faso)
BTL:	Bible Translation and Literacy East Africa (Kenya)
CBO:	Community-based organization
CLSC:	Creating Literate School Communities
EFA:	Education for All
EGRA:	Early grade reading assessment
ELU:	Early Literacy Unit
MLE:	Multilingual education
NACALCO:	National Association of Cameroonian Language Committees
NGO:	Non-governmental organization
NORAD:	Norwegian Agency for Development Cooperation
OVCs:	Orphans and vulnerable children
PRAESA:	Project for the Study of Alternative Education in South Africa, University of Cape Town
PROPELCA:	Projet de Recherche Operationelle Pour L'Enseignement des Langues au Cameroun
RTI:	Research Triangle Institute International
SACMEQ:	Southern and Eastern African Consortium for Monitoring Educational Quality
SIL:	Summer Institute of Linguistics International
SMRS:	Systematic Method for Reading Success
SNNP:	Southern Nations, Nationalities and People's region (Ethiopia)
USAID:	United States Agency for International Development

Abstract

Literacy - the ability to read and write – is recognized as being one of the *most fundamental* of core skills contributing to academic achievement, lifelong learning and sustainable development. However in many African countries, literacy achievement in the formal education system has not attained the levels necessary to support any of these outcomes. Primary curriculum expectations across the continent include literacy acquisition in the early grades, and yet somehow those expectations are not being adequately met.

This transnational thematic study of early-grade literacy brings together current research findings and program outcomes in the area of early-grade literacy in African nations, to highlight lessons learned and suggest possible future direction for improving early-grade achievement in reading and writing. The research and interventions of SIL International, RTI International, Save the Children and PRAESA, represent work in literally dozens of African countries – and they are generating significant theoretical and practical knowledge on early-grade literacy. This study brings that knowledge together in a coherent fashion, in order that the experience of these very diverse education organizations may be of real use to the stakeholders and decision-makers in African education. This study provides those stakeholders and decision-makers with more and better options for promoting early-grade literacy in their counties than they have previously had access to.

Executive summary

Of all the core competencies recognized to contribute to lifelong learning and sustainable development, none is quite as central as the ability to read and write. Research from around the world demonstrates that literacy is fundamental to success in the formal education system. Literacy links closely to sustainable development as well; multiple links exist between literacy and citizenship, cultural identity, socio-economic development, human rights and equity. For these reasons, the crucial role of literacy skills in learning and development is acknowledged across Africa, in primary grade curricula and in the learning outcomes for most adult basic education and lifelong learning programs.

In most cases the principal site for learning to read and write is assumed to be the primary school, usually the early grades. But how successful is the primary school system at enabling literacy learning among African children?

This study represents some of the best current research on literacy in early primary grades in Africa, carried out by four non-government organizations that focus on literacy learning: Save the Children, RTI International, PRAESA and SIL International. These four organizations are each well known for their investigations and involvement in early grade literacy; the work that is contributing to this current study is briefly described below.

Save the Children's Literacy Boost: Save the Children has pioneered an intervention called Literacy Boost, which supports the development of reading skills in young children. Literacy Boost uses assessments to identify gaps in the core reading skills, trains teachers to teach national curriculum with an emphasis on these skills, and mobilizes communities for reading action. Literacy Boost has two school years of results from Malawi and Mozambique, showing impact and offering important lessons for improved implementation.

RTI International and the Early Grade Reading Assessment: RTI International, in collaboration with other implementing organizations, several donor organizations, and African education researchers, has been involved in the development of a tool called the Early Grade Reading Assessment (EGRA). This

tool includes a set of activities that can be undertaken one-on-one with children to more precisely identify the causes of reading difficulties. Various organizations implementing EGRA assessments in at least 50 countries (as of July 2011), with 23 of them in Africa. The results being found through EGRA indicate a widespread lack of reading skills among early grade primary school students. Given these disappointing findings, RTI has worked with Ministries of Education in several African countries to develop reading interventions, which have proven quite successful at improving student outcomes.

PRAESA's Early Literacy Unit: For 20 years, PRAESA's Early Literacy Unit (ELU) has worked to help transform the way young children are taught how to read and write in the multilingual school and community settings of South Africa as well as in other Sub Saharan countries. PRAESA promotes emergent biliteracy with a focus on the value of using stories for learning. The ELU has co-ordinated the Stories Across Africa project, a core project of the Academy of African Languages (ACALAN), supporting reading habits by creating common collections of stories for adults and children to share in African languages as well as English, French and Portuguese. Their research programs have included the Battswood Biliteracy Project and the Free Reading in Schools project (Bloch 2009 pp 27-31). The ELU's most recent research was carried out with young children in grades R¹-3. This 4-year study, called *Creating Literate School Communities*, included investigating and documenting early biliteracy development across home, community and school settings.

SIL and Multilingual Education (MLE): Over the last 30 years SIL, along with its partner agencies, has done significant work in piloting bilingual and multilingual education projects around the African continent. Collaborating with a range of partners in government, national NGOs and CBOs, and national universities, SIL contributes to MLE programs in Senegal, Cameroon, Ethiopia, Kenya and Burkina Faso. Most of these programs focus on smaller language communities, and include the development of their languages for use in education.

The four initiatives described above provide a rich source of knowledge regarding the conditions and the potential surrounding early-grade literacy in Africa. This knowledge, gained through numerous research and pilot programs, confirms that early-grade literacy *can* provide a solid and reliable base for lifelong learning. These specific recommendations are offered regarding early-grade literacy:

1. Literacy – specifically, learning to read and write - must be central to the primary education curriculum. Teachers must be trained specifically to teach reading and writing, along with the other language skills of speaking and listening. The time allotted to reading and writing instruction in the curriculum must reflect this priority.
2. Children learn to read and write successfully when they engage regularly with authentic and enjoyable reading and writing activities, and when they master the building blocks of text (letters, syllables, words) within a context of meaningful use of reading and writing. Ignoring either of these two crucial components of literacy makes literacy learning extremely difficult for most children.
3. Regular assessment of students' literacy learning is essential, in order to ensure that learning is taking place as planned. Continuous assessment should be done in the classroom itself, as part of the ongoing teaching and learning experience; in addition, broader national-level assessments are important for keeping all the stakeholders aware of program outcomes and student achievement.
4. Teacher capacity is central to the entire endeavor of early-grade literacy learning. When they are well trained, mentored and supported, teachers can help make the difference between failure and success for the early-grade student's literacy acquisition. Particularly when the

teaching methods are new to the teachers, careful and ongoing support of those teachers is critical to ensure effective implementation.

5. Reading materials of sufficient quantity, quality and variety serve a significant role in successful early grade literacy acquisition – including appropriate materials for reading aloud to the learner. Such materials not only guide students through learning of essential reading and writing skills, they also provide them with a crucial link between skills acquisition and meaningful use of literacy throughout the student’s life.
6. Since reading and writing are meaning-filled activities, learning to read and write must also be meaning-based; this means, among other things, that it must be done in a language the student understands. Use of the child’s language as the medium of instruction and the language of reading accelerates learning, and allows the child to develop the skills and knowledge that will enhance his or her potential for lifelong learning.
7. Multilingualism must be seen as a resource, and used intentionally to strengthen the child’s ability to learn curricular content. Language learning and literacy learning must be seen as distinct but symbiotic processes, each requiring careful instruction. Care must be taken during the early years of mother-tongue medium instruction to support the systematic introduction and consolidation of the additional language, so that it can eventually become a teaching medium along with the mother tongue.
8. Moving from pilot projects for reading and writing to national-level systems is crucially necessary in order for the knowledge that is gained in local contexts to be beneficial to the entire nation. Scale-up, if it is going to be successful, requires alignment of a range of policy, systems and financial components. The challenges involved in scaled-up programs are different from those encountered in small-scale projects, and they must be boldly and wisely confronted by government and other stakeholders. Where new pedagogical methods are being introduced on a broad scale, training and support for the teachers is particularly important.
9. Change of the magnitude required for African nations to attain success in early grade literacy does not come quickly or without significant attention. Improvement in reading and writing scores, and improvement in learning in general, could take some years to become obvious. For this reason, success in early-grade literacy must not be tied to short-term projects or strategies, but must be an education and development priority for the long term. It must also be recognized that the sustained and generalized use of literacy practices in a community depends not only on effective pedagogical methods; it also depends on the development of cultural habits that include regular, meaningful reading and writing among adults and children both in school and in the wider community.

Increased attention to early-grade literacy achievement in African classrooms is critical to the attainment of lifelong learning, sustainable development, and all manner of economic and social goods. Refusal to acknowledge this crucial component of learning and development will severely handicap efforts to improve the technical, scientific and vocational skills of Africa’s citizens; but embracing the importance of early-grade literacy learning can help to turn the corner in educational achievement and provide a foundation for successful learning in both the school and the community.

Introduction to the study

Of all the core competencies recognized to contribute to lifelong learning and sustainable development, none is quite as central as the ability to read and write. The 2006 Education for All (EFA) Global Monitoring Report (2005:17), dedicated to the topic of literacy, notes that literacy is:

- essential to achieving each of the EFA goals;
- crucial for economic, social and political participation and development, especially in today's knowledge societies; and
- key to enhancing human capabilities, with wide-ranging benefits including critical thinking, improved health and family planning, HIV/AIDS prevention, children's education, poverty reduction and active citizenship.

Research from around the world has confirmed that literacy is fundamental to success in the formal education system. As Good *et al* (2001: 679) have noted, learning research shows that “children who develop good reading skills are more likely to succeed at school and become productive members of our society.” The World Bank's education strategy statement for 2020 also notes that “in the primary years, quality teaching is critical for giving students the foundational literacy and numeracy on which lifelong learning depends” (p. viii).² In an even stronger statement on the centrality of literacy to learning, the United States Agency for International Development (USAID) has recently established three key education goals: the first goal is “improved reading skills for 100 million children in primary grades by 2015”.³

Literacy links closely to sustainable development as well. Odora-Hoppers, in an important ADEA work on literacy and effective learning, describes literacy as “a key element of lifelong learning in its lived context” (Odora-Hoppers, 2009: 73). Odora-Hoppers affirms the multiple links between literacy and citizenship, cultural identity, socio-economic development, human rights and equity. And indeed, wherever the goal of development is transformation among the target population, literacy enables that population to understand, assess and ultimately act on the new information and ideas being provided to them (Trudell, 2009).

For these reasons, the crucial role of literacy in learning and development is acknowledged across Africa, in primary grade curricula and in the learning outcomes for most adult basic education and lifelong learning programs. Any serious attempt to reach the EFA goals, or indeed to attain significant development gains, must include attention to literacy learning among the target population.

In most cases the principal site for learning to read and write is assumed to be the primary school, usually the early grades. How successful is the primary school system for teaching literacy in Africa? Certainly *access* to primary education has increased across the continent, but *quality* of education (including learning to read and write fluently and with comprehension) lags far behind. The EFA 2006 report notes that the literacy challenge can only be met when countries explicitly act to expand quality primary and lower-secondary education (p. 16).

Multi-country studies of Western nations also indicate that the literate environment outside of school influences learning in the early grades (Mullis *et al.*, 2007). Reading at home, parental attitudes towards reading and access to books lead to better reading outcomes in almost all the countries studied (Park, 2010). Studies are still needed on the impact of these factors in less print-rich environments, but initial investigation indicates that the home and community environment do have an influence on reading achievement in the classroom.

This study represents some of the best current research on literacy in early primary grades in Africa. The four organizations that have collaborated on this work are each well known for their investigation and involvement in early grade literacy. What can their work tell us about the state of early grade literacy in Africa today? What lessons are being learned about the teaching of reading and writing? What does the future look like for enhancing African children's learning outcomes through support for early grade literacy?

Save the Children: The Literacy Boost program

Save the Children works to create lasting change in the lives of children in need around the world. In 2010, Save the Children reached more than 73 million children in 120 countries worldwide with programs in health, education, child protection and family livelihoods.

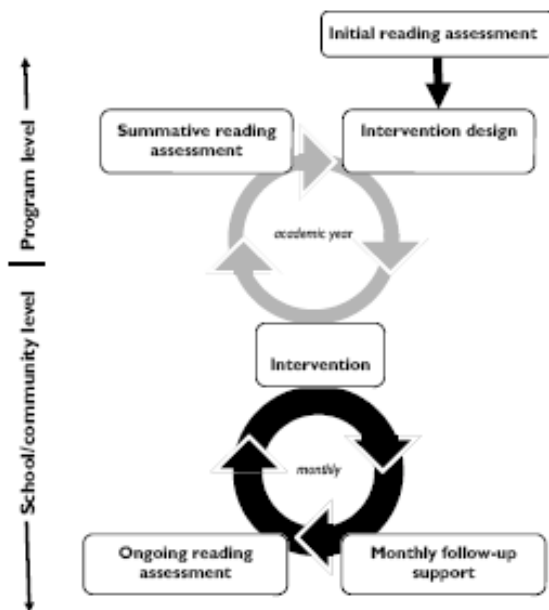
In the education area, an intervention called Literacy Boost supports the development of reading skills in young children. Literacy Boost uses assessments to identify gaps in the five core reading skills (letter knowledge, phonemic awareness, vocabulary, reading fluency and comprehension; Snow *et al.*, 1998), trains teachers to teach national curriculum with an emphasis on these skills, and mobilizes communities for reading action. Core to Literacy Boost is Save the Children’s belief in relevance for effective learning: more children will learn to read with comprehension if teacher training, materials and opportunities to practice are combined with the use of reading skills in daily life that elicits both motivation and enjoyment.

Literacy Boost: Components in a program cycle

Literacy Boost adapts to each country curriculum and language(s). Assessment, teacher training and community action are used in a cycle of intervention across each academic year (see Figure 1).

Country adaptation begins with a baseline assessment of children’s reading skills, backgrounds and literacy environments. This data enables Save the Children staff and Ministry of Education partners to adjust the nine monthly teacher training sessions and weekly/monthly community reading interventions to address the most challenging skills and/or to ensure support for groups of children struggling most such as girls, OVCs or linguistic minorities. End-of-year assessments compare the progress of Literacy Boost students to the progress of students who are not receiving Literacy Boost support to demonstrate impact and inform action in the next school year. Literacy Boost is a system of effective and iterative response to learning challenges, intended to ensure children gain critical skills essential for sustainable personal and national development.

Figure 1. Literacy Boost Program Cycle



Literacy Boost’s monthly teacher training sessions aim to equip primary school teachers with tools and techniques to effectively teach children the five key reading skills via the national curriculum, so that they will become independent readers. Ministries of Education support the teacher training sessions for both continuous professional development and pre-service training.

Addressing the community side of reading skills development – what children read outside of school, with whom, how, and how often – sets Save the Children apart from many other actors that are focused more narrowly on teacher training and/or curricula. This component has been more challenging for Ministries and donors alike, because the literacy environment surrounding the school is not a common focus area for policy or investment. Nonetheless, this attention to the community reading environment has been productive. The provision of a variety of locally developed, local-language materials, combined with opportunities to read them, has successfully harnessed the energy,

attention and motivation needed for successful literacy acquisition – qualities which are not often achieved through reading textbooks alone. Community-focused reading awareness and activities make reading progress relevant, and reinforce the message that reading can enhance development.

This has not been a traditional area of investment or action for Ministries of Education or donors, nor an arena for policymaking. Prioritizing reading materials and activities for children at greater scale has meant trying innovative partnerships with not only governments and donors, but with communities, newspapers, library systems, local and international NGOS, and publishers. In each country we learn about more options and ideas for developing rich literacy environments for children and their families.

Results and lessons learned

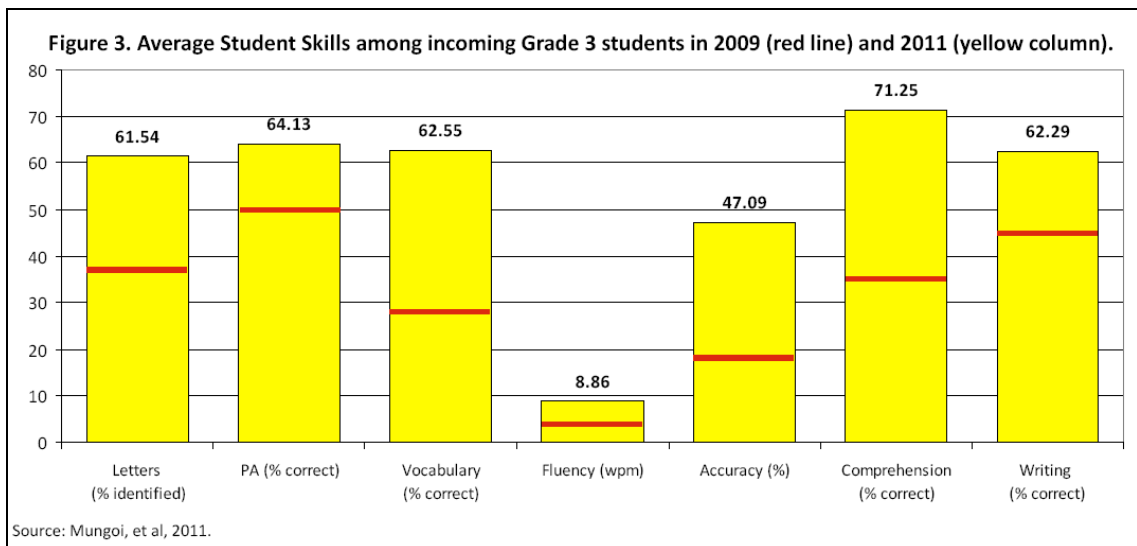
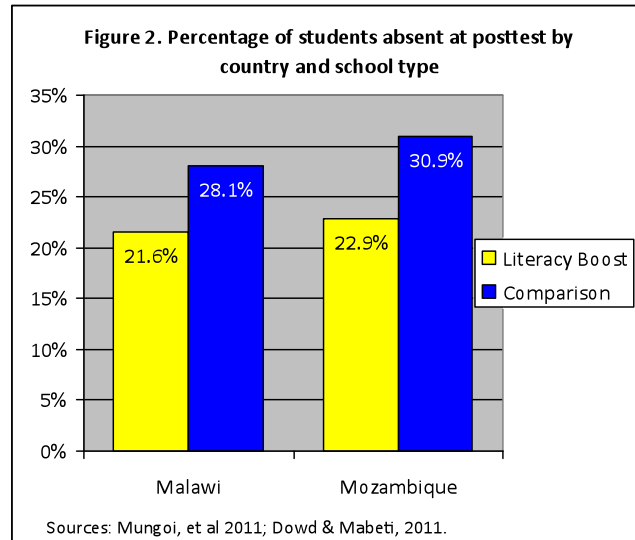
Literacy Boost has two school years of results from Malawi and Mozambique, showing impact and offering important lessons for improved implementation. In each setting, the results have led to implementation at greater scale and involving more partners. In addition, the leadership of these two countries has led teams in Mali, Ethiopia and Uganda to implement a field test, while Zimbabwe will begin its baseline assessment shortly. These countries and others around the globe take from Malawi and Mozambique four key lessons; these four lessons, and the evidence from Africa that underpins them, are summarized below.

1. Progress can be demonstrated in a single school year of intervention; however this progress may not show across all skills. In addition, the transfer of reading skills from the mother tongue to another language of instruction is not evident among students of all ages and skill levels in just one year. At the close of the first school year of implementation in Malawi, significantly fewer Grade 2 Literacy Boost students had zero scores in Chichewa reading skills than their peers in comparison schools; however the scores in more advanced reading skills, like reading fluency and comprehension, remained extremely low (Dowd *et al.*, 2010). Grade 4 Literacy Boost students, on the other hand, made greater gains and had higher average end-of-year scores in Chichewa and English fluency, accuracy, and comprehension. Grade 4 pupils were able to demonstrate significant reading progress in both Chichewa and English. Thus, acquisition of reading skills, and their transfer from one language to a second language, may differ from one grade to another. For that reason, the expectation that Grade 2 students will read with fluency and comprehension immediately – especially in a language that they do not speak at home – may be unrealistic in many African contexts.
2. Increasing the amount of reading done outside of school, and raising parents' awareness of the importance of reading, are positively related to improved literacy skills; in fact, children with the fewest resources available benefited the most from enhancing their literacy environment. The Grade 2 Malawian children who borrowed Literacy Boost Book Bank materials showed higher average vocabulary gains (16.98 percentage points) than those who did not. Furthermore, children whose parent attended a Literacy Boost workshop demonstrated significantly greater average vocabulary gains (18.99 percentage points) than those who did not have a parent attend; the effect was slightly greater for those children whose parents were illiterate (Dowd *et al.*, 2010). This shows that creating an environment where learning continues outside of the classroom, and where reading is accessible to all, benefits learning. This is especially true for those children living in an environment with the fewest readers and reading materials.
3. Children who are successful in gaining skills, and teachers who see their students learning, are engaged and empowered to continue learning together. This can both enhance systemic efficiency and accelerate progress in the early grades of primary school. According to one third-year teacher in Mozambique, integrating Literacy Boost methods in the classroom

means that her students “pick up one book and read. They pick up another and read.” The teacher states that all of her students read and write independently, a rarity among Mozambican students. This teacher feels very proud: the children want to come to school, they want to learn, and they want to learn with her (Mungoi *et al.*, 2011).

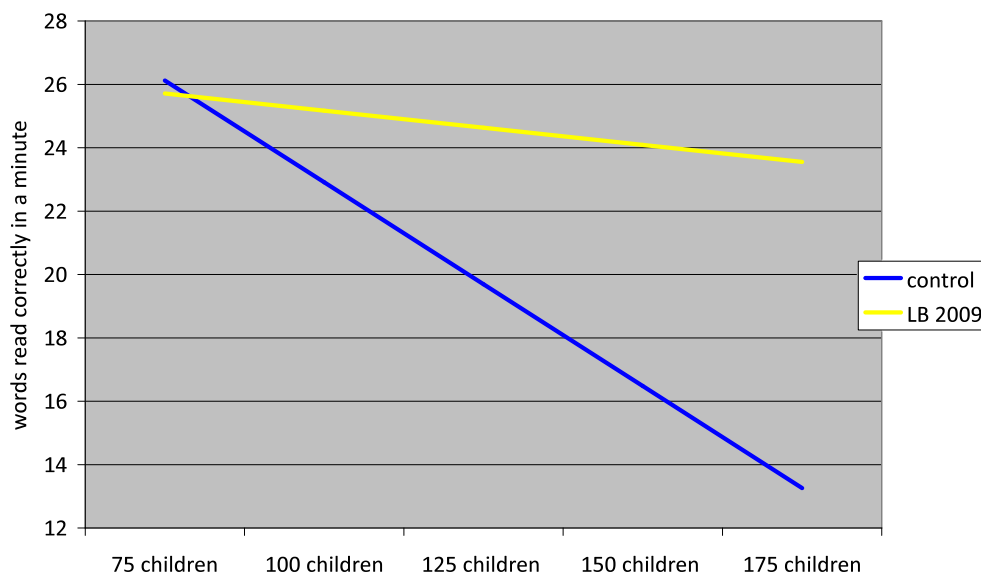
In fact, data collection in each Literacy Boost site in Africa has shown that fewer Literacy Boost students are absent from school than students in comparison schools (Figure 2). The effective teaching and learning methods promoted by Literacy Boost can increase attendance and reduce repetition, causing the education system to become more efficient, and making Ministry of Education investments more effective.

Enhanced teaching and learning can also accelerate progress in schooling. During two years of Literacy Boost implementation in Mozambique, Grade 2 students developed reading skills that were as good as those of Grade 3 students who did not receive the Literacy Boost intervention. Further, students who were in grade 1 in 2009, entered grade 3 in 2011 with skills well ahead of the 2009 grade 3 class (Figure 3).



4. Even in some of the most challenging conditions, the combination of improved instruction and an enhanced literacy environment can produce school-wide results. In Malawi, 2010 data revealed both a school-wide effect as well as evidence that Literacy Boost effectively promoted reading skills in all class sizes. Students in Literacy Boost schools (Figure 4, red line) achieved similar results, on average, whether they were in classes of 75 students or 175 students, while students in comparison schools (yellow line) struggled in the larger classes. At the end of the school year, Grade 4 students in the Literacy Boost classes read between 23 and 26 words per minute on average, regardless of their class size. Importantly, these children also read with an average of 90 percent accuracy and 73 percent comprehension (Dowd & Mabeti, 2011). These students are clearly making progress gaining the core skills for sustained educational success.

Figure 4. Malawi. Standard 4 Oral Reading Fluency by Class Size and Group



Source: Dowd & Mabeti, 2011.

Future directions

These four lessons show us that progress can be made, and that we need to have patience and keep an eye on benefits for system efficiency. Children in the earliest grades – especially those in marginalized populations – may not show progress in every skill in the first year or two. In many contexts, lack of language- and/or age- appropriate materials is holding back progress. Lack of opportunities to use reading materials as well as awareness that such practice is important also limits progress. Further, engaging children, communities and teachers with more effective learning strategies supports attendance, accelerates progress, and achieves impact in challenging situations like huge class sizes.

To continue applying and learning from these lessons, ministry partners and Save the Children will be looking at these issues at scale. A next round of key research questions might include these:

- How can pre-service and in-service systems train more teachers to highlight the five key reading skills in the national curriculum?
- How can systems that engage communities within the Ministry of Education and across partner Ministries spread important messages about and techniques for reading for children?
- What innovative investments and partnerships can support the development of language- and age-appropriate children's literature?

RTI International: From reading difficulties to reading solutions

Literacy research in Africa has a long history. The literacy research agenda on this continent has included many aspects of literacy, including adult literacy and the interaction between literacy acquisition and language, and the cultural inappropriateness of colonial languages.

Recently, that research agenda has re-opened in a much different education sub-sector, that of early primary school. Education access has boomed; this has had the effect of increasing class size, but also has broadened education to target the masses, where it was previously more the domain of elites. To take the Ethiopian case as an example, there are by some estimates five times as many children

enrolled in Grade 1 in 2011 as there were just 20 years ago (Federal Democratic Republic of Ethiopia, 2011); the rate for children entering primary education far outpaces the rate of training new teachers.

RTI International, in collaboration with other implementing organizations, several donor organizations, and African education researchers, has been involved in the development of a tool called the Early Grade Reading Assessment (EGRA). This tool includes a set of activities that can be undertaken one-on-one with children to more precisely identify the causes of reading difficulties. Most reading assessments employed in Africa before EGRA require that children read a text and then show that they understand what was read. However, this kind of testing does not allow us to discriminate between those children who do not comprehend because they do not know the sentence structure or vocabulary of the language of instruction; or whether their failure to comprehend is a result of poor decoding skills; or whether they simply do not know the alphabet. The EGRA tool allows the researcher to understand where the reading difficulties come from, providing more sophisticated information to shape interventions. There is quite a demand for this tool, with various organizations implementing EGRA assessments in at least 50 countries (as of July 2011), with 23 of them in Africa.

Sadly, the results being found through EGRA are nothing less than disastrous.⁴ For example in Kenya, when asked to read a simple Grade 1 level passage in English and answer a set of factual and inferential questions, results from Grade 3 students show that only 30% of them could answer even *one* of these questions (Piper, 2010b). In fact, Kenya is one of the highest scoring countries on international comparisons (both SACMEQ and Uwezo); so these results are truly distressing. In Ethiopia, more than 25% of children in each of the four largest and wealthiest regions of the country (Oromiya, Amhara, Tigray and SNNP) could not read a *single* word in the test story after two full years of schooling in the local language (Piper, 2010a). Even more distressing are results from elsewhere in Sub-Saharan Africa, which show that in some regions and countries, more than 80% and even 95% of children at the end of Grade 2 cannot read *one word* of a simple story (Gove & Cvelich, 2011).

Results and lessons learned

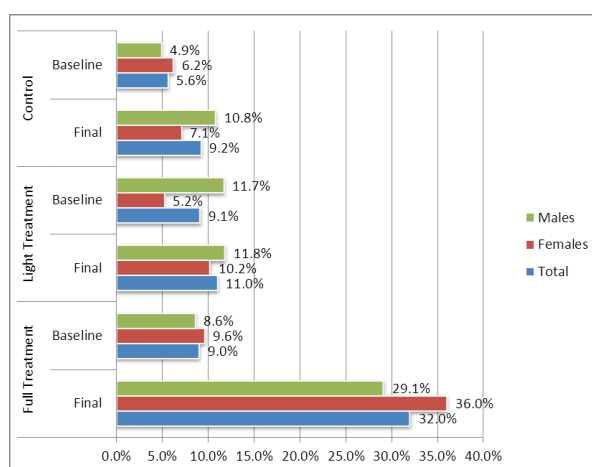
1. These results seem to suggest that the education system is inefficient with respect to student learning. The data show that many children are still learning the alphabet in Grade 3.⁵ For many children, then, Grade 1 and 2 are “lost” years where the complexity of the grade-level content required in the curriculum contrasts starkly with children’s struggle to even identify letters.
2. Language of instruction plays a significant part in student learning outcomes. Research has long shown that the multilingual environment in which African children live is an advantage to the development of cognitive processes and cultural transitions. The trend of the 1990s, where many countries moved towards language of instruction policies allowing children to learn in their mother tongue in the early grades, responded to this research. However these policies are not followed in many classrooms. Research in Kenya and Uganda, for example, shows that the predominant language in rural Kenyan primary classrooms is English – ignoring the policy that requires use of the language of the catchment area as medium of instruction (Piper & Miksic, forthcoming). In Uganda, on the other hand, study showed that while the mother tongue was used extensively as medium of instruction, very few children have textbooks or reading materials in that language; this makes it extremely difficult for the teacher to use the mother tongue effectively for teaching. Several other countries have well-thought-through mother tongue and second language transition policies, but the teacher deployment policies do not support the language policies. In addition, many of the teacher training colleges recently surveyed in Sub-Saharan Africa do not include specific courses on how to teach reading in their mother tongue. The unpreparedness of early primary teachers to teach children how to read in the appropriate languages is therefore not surprising.

- The relationships between student reading outcomes and a number of other student and school level variables are very interesting. For example, having books (textbooks, books at home and extra reading materials) is statistically more related to good learning outcomes than is being from a wealthy home. One interpretation of this is that student achievement in reading depends more on having access to reading materials than it does on being rich. Also, there is a close relationship between knowing the letter sounds of the alphabet and reading ability. This suggests that one of the key skills predictive of success is whether children have letter-sound correspondence skills, and have them fluently. This fundamental skill, which is supposed to be taught in Grade 1, has been found lacking in even Grade 4 in some schools.

Future directions

Though changing this dire situation is difficult, it *can* be done. Interventions that include teacher professional development, material development for students, and lesson plans for teachers, with ongoing support for teachers focusing on improving outcomes in early grades, have been successful across Africa. In South Africa, a package of interventions called the Systematic Method for Reading Success (SMRS) improved student outcomes by more than 150% after four months (Piper, 2009). In Kenya, a program implemented by the Aga Khan Foundation has increased student reading fluency in both Kiswahili and English by more than 80% (Crouch *et al.*, 2009). Egypt’s Girls’ Improving Learning Outcomes pilot program in 60 schools showed large increases in identifying letter sounds (194.0%), reading familiar words (110.9%), and reading words in a story (81.8%). In Liberia, a 2 year program increased outcomes by more than 200% in reading fluency and comprehension (Piper & Korda, 2010) with effect sizes of nearly .8 standard deviations, which is an enormous program impact. Figure 5 below shows that the proportion of children reading with 80% comprehension in the full treatment program discussed above more than tripled as a result of the program.

Figure 5. Percentage of Grade 2 Children with 80% Reading Comprehension at Baseline and Final for Treatment Groups



The essential improvements found in these projects are:

- Increased attention to the systematic ways that children can learn to read, including but not limited to the alphabetic principle and phonemic awareness skills.
- Students having access to reading materials.

- Teacher professional development programs that were not only delivered to teachers but were also taken up in teacher practice. The reason for this appears to be that the professional development was organized to capitalize on the existing incentives for teachers.
- Increased focus by teachers on improving student achievement by spending time on reading books, discussing meaning, and helping children decipher the letters and sounds within words.
- Ongoing support for teachers as they implement new instructional strategies, with a heavy emphasis on observing classroom performance and providing feedback to teachers based on instructional practice.

While these findings are very encouraging, there remains a great deal of work to do. The next frontier is scaling up the improvements in student outcomes in reading. In Ghana, a recent reading improvement initiative is facing difficulties in ensuring that teachers are adequately supported and encouraged to use the high-quality materials that have been developed (RTI, 2011). However, promising programs are resulting from collaborations between the Ministry of Education and development partners in Kenya, Uganda, and Ethiopia, amongst others; the aim is to develop strong relationships between language specialists, reading experts, curriculum developers and pedagogical support systems in order to ensure that the reforms are integrated across the sector and student achievement is improved at scale.

One issue that is critical in the expansion of successful literacy interventions is that of scale: the transition from a small pilot program to a regional or national program. What previous programs have shown to be successful with small numbers of schools in pilots must be scaled up to the regional and country level; yet this scale-up process is both expensive and intensive. The programs that are most successful will retain a measure of intensity whilst limiting cost. (Intensity, or the frequency and quality of the interaction between teachers and professional development programs, is responsible for much of the success seen in pilot programs.) Scale-up attempts often fail because essential elements are lost in program scale-up: specifically, the intensity of interaction between educational professionals and teachers who are attempting to improve their literacy pedagogical techniques. This can be made easier when the programs are structured so that that the behavioral and pedagogical changes expected from these teachers are broadly in line with the incentives they may receive in their jobs and job advancement. Successful scale-up of these programs requires focus on learning outcomes rather than curriculum coverage, frequent observation and support of classroom teachers in the scaled-up program to ensure that they are implementing the pedagogical techniques they have learned.

Education has the potential for serving all African students well, not just those members of the elite who can afford private education. Education should offer all students who work hard and who use their innate language skills the chance to reap the benefits in literacy and unlock their potential for academic success. The solutions suggested by these EGRA studies – that is, appropriate reading materials, teacher professional development, and careful curriculum sequencing - will require investments and expertise, but we have seen that the expected outcomes will make it worth it.

PRAESA: Towards creating appropriate conditions for biliteracy learning

The PRAESA Early Literacy Unit (ELU) has worked, since 1992, to help transform the way young children are taught how to read and write in the multilingual school and community settings of South Africa as well as in other Sub Saharan countries. To this end, PRAESA staff carry out research, teacher mentoring and training of trainers, initiating and supporting reading clubs as well as materials development.

The foundation of the work of the ELU is to ask what children need to become successful, biliterate learners in 21st century Africa. The approach is a holistic one, which focuses on helping to create conditions of learning (Cambourne, 1995) across school, community and home settings that are conducive to the early literacy learning of all South African children irrespective of their linguistic, cultural and class backgrounds. For all children, the best foundations to strengthen and build on are the language(s) they use at home, their existing knowledge and skills, and above all, their capacity and enthusiasm for learning.

PRAESA advocates for, develops and supports a mother-tongue based bilingual education system with teaching methods that focus on meaning making and stories, in both their oral and written forms. Their perspective is informed by the large international body of research into how young children learn language (Vygotsky, 1978; Greenspan and Shanker, 2004) early literacy and biliteracy learning (Goodman, 1986; Kenner, 2004), second language learning (Cummins, 1986), reading for enjoyment (Krashen, 1993), literacy as social and cultural practices (Street, 1984), family literacy (Taylor, 1983), neuroscientific research (Hruby & Goswami, 2011) as well as our own research and training experience over the years (Bloch, 1997; Bloch and Alexander, 2003; Bloch *et al.*, 2010).

PRAESA has conducted various biliteracy research programs. The ELU's most recent research, *Creating Literate School Communities* (CLSC) was carried out with young children in grades R⁶-3; this is the research that will be explored below. Other PRAESA colleagues have looked at dual medium biliteracy education in grades 4-6. Both programs were carried out under the umbrella of a school language policy implementation process. PRAESA conducted advocacy workshops with teachers and parents, helped staff to describe their present language policy, and to draft a new one, which was based on the mother tongues of the children. The direction of the change was thus towards a bilingual teaching system in each school⁷.

The CLSC research included investigating and documenting early biliteracy development across home, community and school settings, but here only the intervention relating to school will be discussed. This qualitative research, conducted over four years, by colleagues in the Early Literacy Unit,⁸ builds on and deepens previous early literacy research insights gained in the Battswood Biliteracy Project (Bloch 2002; Bloch & Alexander, 2003)⁹.

The work was carried out in typical grade R-3 classes in four schools labeled under Apartheid as 'colored' and 'black'. These were all schools which had requested help with language policy implementation.

The ELU's work initially involved collaboration with teachers to identify language and literacy related challenges, followed by a mentorship process which included regular (twice weekly) school visits, classroom observations, demonstration lessons, regular after class meetings and workshops as well as reflective journal writing with teachers.

At the outset, the researchers identified the following challenges:

- Teachers were poorly trained in early childhood approaches and methods, particularly those involving how to teach reading and writing in mother tongue (in this instance either Xhosa or Afrikaans) and how to teach English as an additional language. They often do not speak English well, nor do they read and write much as part of their regular daily life activities, either in their mother tongue or in English.
- Classrooms were short of teaching and learning resources generally. Displays on the wall were mostly in English; they were old, and were not used for teaching. There were few or no reading materials, especially storybooks, particularly in African languages, but even in English.

- Where there was a school library, it was either not used or else it was used for another purpose, such as a storeroom. Books, which were mainly in English, were not displayed well, nor were they always appropriate. No one took responsibility for the life of the library in the school.
- Through regular meetings and workshops, the researchers systematically addressed these issues relating to policy, language and literacy pedagogy, and classroom management. Their regular demonstration lessons illustrated and illuminated the kinds of teaching methods that would allow children to learn about the function and form of written language in both mother tongue and English.

Key steps towards change included the following:

- Creating print-rich classrooms by helping teachers to take notice of their classrooms as spaces for learning. The teachers realized that disorganized and messy places are not conducive to learning; they were encouraged to make choices about using charts, posters, text books, story books, other books etc., appreciating the implications of the relative status of English and the other language in print.
- Related to this has been empowering teachers to create, display and use materials in the students' mother tongue; this has helped the teachers to realize that they are capable of doing this, and to see how significant such materials are if children are to learn about the value of their mother tongue as a language for writing.
- Teachers have been trained to use the classroom languages systematically. This includes:
 - a) the use of mother-tongue teaching approaches and strategies, i.e. how to teach reading and writing in isiXhosa;
 - b) how to teach English as a second language effectively;
 - c) how to foster biliteracy and bilingualism among the children.
- A particularly effective strategy, used with teachers to help them reflect on changes in their teaching practice, has been interactive journal writing. The use of interactive writing (Robinson et al 1990) with children has been documented in previous research (Bloch 2002); Xolisa Guzula initiated and adapted this for adults and it was found to be an important way to nurture teachers and to help them find their writing voice.
- In terms of the teaching program, teachers were encouraged to situate their phonics lessons within the context of whole, meaningful texts. Thus they needed to plan and prepare the text to be used (rhymes, songs, story extracts etc), deciding which language it should be in, and then what they should do with the text for that particular lesson. They were mentored in how to do "shared-and-paired reading", how to prepare and tell stories, and how to read to and with children on a daily basis, using in both the mother tongue and English.

Writing in both languages was taught by:

- encouraging and supporting writing for real reasons from grade R (emergent writing, using invented spelling), through interactive letter and journal writing strategies in the mother tongue and English;
- the use of writing frames;
- the exploration of different writing genres.

With English, the focus was on assuring comprehensible input, and systematically teaching new content and vocabulary first in the mother tongue. Either bilingual teaching or team teaching methods were used.

Lessons learned

1. Change is not easy, nor is it quick. Through this work of the Early Literacy Unit, as well as our ongoing involvement in community reading clubs, the evidence shows clearly how behavior changes over time, with appropriate interventions.
2. A mother tongue based bilingual education system which includes appropriate teaching methods in mother tongue and for teaching the additional language offers the best of both worlds for biliteracy learning and for all other learning: Teachers teach well when they have a good command of the language in which they are teaching. Children learn concepts and skills best in their mother tongue, and these are transferred well into an additional language when the mother tongue continues to be used as a co-teaching medium for as long as possible.
3. Teachers and children alike learn best through mentorship programs, where learners, whatever their age, are apprenticed to ‘more experienced others’ who can lead and guide them as interactive role models.
4. Teachers need support to become reflective practitioners, who can think for themselves in their preferred languages and create positive conditions for mother tongue and additional language in their classrooms where they read aloud to children, write together with children, and allow children time to practice writing and reading for real communication and self expression.

Future directions

There are no quick-fix solutions to the language-related challenges found in classrooms across Africa. However the CLSC study is showing that when South African teachers are well mentored, they begin to realize that it is possible to enhance their teaching practices, even under very difficult conditions (Bloch *et al.*, 2010). Teachers move into a cycle of reflection and self - improvement when they experience for themselves the positive effects of their teaching on their students’ attitudes towards literacy learning and on their ability to read and write. Such changes show the way for leaders and decision makers in education.

SIL in Africa: Using African languages of instruction in the formal education system

Over the last 30 years, SIL Africa Area, along with its partner agencies, has done significant work in piloting bilingual or multilingual education projects around the continent. Some of those projects are described below:

Kenya: SIL’s Kenyan partner organization, BTL, is operating pilot multilingual education projects in the Tharaka, Sabaot, Pokomo and Giriyama language communities (Graham, 2010; Schroeder, 2004). The programs cover preschool through grade 3, for four years of mother tongue-based education. Kiswahili and English are taught as subjects. Sabaot and Tharaka programs are the longest-running of the programs, and have expanded to primary schools throughout their districts; assessment of these programs has revealed strong positive links between academic outcomes, classroom practices and use of the mother tongue.

Burkina Faso: SIL’s Burkinabè partner organization, ANTBA, operates 20-30 *centres à passarelle*, sponsored by the Strømme Foundation (Trudell and Konfe, 2010). This 1-year program targets children ages 9-12 who have either dropped out of the French-language school system or have not

been able to enroll. ANTBA education specialists have condensed the curriculum for primary grades 1-3 into one year of intensive study. The first half of the program teaches reading, writing and maths in the mother tongue; the second half of the program teaches French as a second language, while continuing with the other subjects. Informal assessment has indicated that many *centres à passarelle* graduates are able to rejoin the classical school system, testing into grade 4; their ability to read and write in their own language put them at an equal learning level with children who have spent 3 more years in school than they have. Parents in the local communities strongly support this program, as it delivers learning outcomes for their children in less time than the French-language government schools do.

Cameroon: In 1981, SIL Cameroon began a partnership with the University of Yaoundé I's *Departement de Langues Africaines et Linguistique* (Department of African Languages and Linguistics), to provide mother-tongue based multilingual education to children in grades 1-4 in a program called PROPELCA (*Projet de Recherche Operationelle Pour L'Enseignement des Langues au Cameroun*, Operational Research Project for the Teaching of Cameroonian Languages). The National Association of Cameroonian Language Committees (NACALCO) later joined this partnership.

From its experimental beginnings in four Cameroonian languages, by 1995, 55 primary schools and 10 secondary schools in 13 Cameroonian languages were using the PROPELCA program, serving a total of approximately 28,000 Cameroonian children (Tadadjeu, 1997; Trudell, 2005). The project then moved into a generalization phase, with the goal of being officially adopted throughout the Cameroonian public school system. However PROPELCA began to languish in the mid 2000's, due to insufficient funding and inconsistent support from education authorities.

Research is currently being carried out by SIL scholars on the effects of mother tongue-based education in Kom, one of the language communities which have had PROPELCA for more than 30 decades. The initial results are very impressive: children not only perform much better on reading and writing assessments than do their peers in English-medium primary schools, but they also score higher on year-end testing of general knowledge.

Ethiopia: The Ethiopian government in 1991 adopted an ambitious and impressive policy for using local languages as medium of instruction in Ethiopian primary schools. SIL Ethiopia began collaboration with government education staff soon after that, to help in the areas of language analysis, alphabet development, the development of pedagogical materials, and teacher training. Currently SIL is collaborating with partners in the Ministry of Education and the Ministry of Culture in at least 8 languages in two areas of the country: the Benishangul-Gumuz region, and the Bench-Maji zone around Mizan.

Senegal: SIL Senegal has been cooperating for nearly a decade with several Senegalese CBOs to provide local-language literacy programs to adults and youth in those language communities. One of these Senegalese partners, the *Association pour le Developpement de la Langue Saafi* (Association for the Development of the Saafi Language, ADLAS), has been providing local-language literacy learning opportunities in nonformal education contexts for eight years. A few years ago this program expanded to include a Saafi-language pre-school program. Now, with funding help from the Norwegian government agency NORAD and the Hewlett Foundation, these mother-tongue literacy initiatives are moving into the primary schools as well (Trudell and Klaas, 2010).

Lessons learned

1. Language of instruction is a key component of successful early-grade learning, and especially learning to read and write. Improvement in educational achievement for Africa's children is only going to happen when those children can learn in a language they speak. In addition, use of the child's mother tongue for learning has been shown to accelerate the learning process significantly beyond the normal rate for schools using the official language as medium of

instruction.

2. Learning to read and write, through the mother tongue medium, has a significant positive influence on learning achievement across the curriculum. Acquisition of these skills is allowing African children who have dropped out of the official school system to return to their studies, often gaining 3 school years or more in the process.
3. Reading instruction needs to specifically be in the curriculum. Too often, reading instruction is subsumed under the curriculum subject of “language”. Yet, improved proficiency in a first or a second language is not at all the same as the acquisition of reading and writing skills. The curriculum needs to reflect that fact, and space must be given to reading instruction in a language that the child speaks fluently. In addition, teachers must be trained in how to teach reading and writing.
4. Second language acquisition needs to be respected as a key component of the curriculum. Language learning must be intentional. It must not be assumed that the child will “pick up” the language without explicit and careful instruction. Language instruction should be carried out by teachers who are themselves fluent in the language being taught. Current, effective methods for learning a second language must be incorporated into the teacher’s competencies and into the pedagogical materials used.
5. All of the above lessons point to the crucial role of teacher preparation in successful early-grade literacy acquisition. Too often teachers are expected to teach without adequate training and supervision, and to determine by themselves how to implement changes in policy or recommended pedagogical methods. Teacher training and support is key to reading and writing success among African pupils.
6. National language policy supporting the use of mother tongues as languages of instruction in the formal education system is important. However, such policy cannot stand on its own; it must be aligned with other policies that govern teacher training and placement, pedagogical materials, and language of examinations.

Future directions

Multilingual learning *IS* Africa’s best-scenario future. African children are among the most intelligent in the world. Their success in literacy and learning need not be blocked by language-related obstacles, as is currently the case. Once policies are aligned to support instruction in the language the child speaks, and once serious implementation of those policies is taking place, the future for early grade literacy and learning will be significantly enhanced.

Conclusion: Recommendations

The four programs described above provide a rich source of knowledge regarding the conditions and the potential surrounding early-grade literacy in Africa. This knowledge, gained through numerous research and pilot projects, confirms that early-grade literacy *can* provide a solid and reliable base for lifelong learning. However these initiatives also sound a serious note of warning: early-grade literacy must not be ignored or under-resourced. To do so is to remain languishing in the current distressing educational environment of under-achievement and high rates of school failure.

The authors of this paper therefore offer these specific recommendations regarding early-grade literacy:

1. Because of the strong evidence linking successful literacy learning to improved learning achievement throughout formal schooling, learning to read and write must be central to the primary education curriculum in the early grades. Teachers must be trained specifically to teach reading and writing, along with the other language skills of speaking and listening. The time allotted to reading and writing instruction in the curriculum must reflect this priority.
2. Children learn to read and write successfully when they engage regularly with authentic and enjoyable reading and writing activities, and when they master the building blocks of text (letters, syllables, words) within a context of meaningful use of reading and writing. Ignoring either of these two crucial components of literacy makes literacy learning extremely difficult for most children.
3. Regular assessment of students' literacy learning is essential, in order to ensure that learning is taking place as planned. Continuous assessment should be done in the classroom itself, as part of the ongoing teaching and learning experience; in addition, broader national-level assessments are important for keeping all the stakeholders aware of program outcomes and student achievement.
4. Teacher capacity is central to the entire endeavor of early-grade literacy learning. When they are well trained, mentored and supported, teachers can help make the difference between the child's failure and success in early-grade literacy acquisition. When teachers are not trained or supported appropriately, they can do little to facilitate literacy achievement in the early-grade classroom. Particularly when the teaching methods are new to the teachers, careful and ongoing support of those teachers is critical to ensure effective implementation.
5. Reading materials of sufficient quantity, quality and variety serve a significant role in successful early grade literacy acquisition. In particular, materials with appropriate stories to read aloud to children, and those which are used for shared and paired reading, enhance language and literacy development. Such materials not only guide the student through learning of essential reading and writing skills, they also provide the student with a crucial link between skills acquisition and meaningful use of literacy throughout the student's life.
6. Since reading and writing are meaning-filled activities, learning to read and write must also be meaning-based; this means, among other things, that they must be done in a language the student understands. Use of the child's language as the medium of instruction and the language of leisure reading accelerates learning, and allows the child to gain literacy skills that will enhance his or her potential for lifelong learning.
7. Multilingualism must be seen as a resource, and used intentionally to strengthen the learner's ability to learn curricular content. This will enable the learner to draw on the knowledge and skills they already have, to tackle new learning and become bi/multilingual and bi/multiliterate. Language learning and literacy learning must be seen as distinct but symbiotic processes, each requiring careful instruction. Care must be taken during the early years of mother-tongue medium instruction to support the systematic introduction and consolidation of the additional language, so that it can eventually become a teaching medium along with the mother tongue. In addition, careful attention must be paid to helping teachers understand how to support the transfer of literacy skills from one language to another.
8. Moving from pilot projects in reading and writing to national-level systems is crucially necessary in order for the knowledge that is gained in local contexts to be beneficial to the entire nation. Scale-up, if it is going to be successful, requires alignment of a range of policy, systems and financial components. The challenges involved in scaled-up programs are different from those encountered in small-scale projects, and they must be boldly and

wisely confronted by government and other stakeholders. Scale-up efforts must include provision for materials, training and support for those teachers who are implementing new methods. Many multilingual education programs have struggled because of the lack of provision for ongoing support for teachers, as they attempt to implement entirely new methods for improving literacy outcomes.

9. Change of the magnitude required for African nations to attain success in early grade literacy does not come quickly or without significant attention. Improvement in reading and writing scores, and improvement in learning in general, could take some years to become obvious. For this reason, success in early-grade literacy must not be tied to short-term projects or strategies, but must be an education and development priority for the long term. It must also be recognized that the sustained and generalized uses of literacy in a community depends not only on effective pedagogical methods; it also depends on the development of cultural habits that include regular, meaningful reading and writing among adults and children both in school and in the wider community.

The evidence is powerful, and the conclusion is urgent: increased attention to early-grade literacy achievement in African classrooms is critical to the attainment of lifelong learning, sustainable development, and all manner of economic and social goods. Refusal to acknowledge this crucial component of learning and development will severely handicap efforts to improve the technical, scientific and vocational skills of Africa's citizens; but embracing the importance of early-grade literacy learning can help to turn the corner in educational achievement and provide a foundation for successful learning in both the school and the community.

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¹ Grade R, or Reception year, is a non-compulsory first year of schooling in South Africa, similar to pre-school in other countries.

² http://siteresources.worldbank.org/EDUCATION/Resources/ESSU/Education_Strategy_4_12_2011.pdf

³ http://www.usaid.gov/our_work/education_and_universities/

⁴ These findings have been shared with the relevant government entities and the results are publicly available at www.eddataglobal.org

⁵ Alternatively, of course, it might be that dropout means that the children assessed in Grade 3 are substantially different from the Grade 2 children and the differences emanate from the sample differences. The average repetition rates identified in our research are much less than 10% for the most part. The SACMEQ III findings show that repetition rates at the latter portion of primary are higher, closer to 12% (Hungu, 2010). Even with 12% repetition assumed, the gains in alphabetic fluency could not be entirely due to repetition or other sample issues.

⁶ Grade R, or Reception year, is a non-compulsory first year of schooling in South Africa, similar to pre-school in other countries.

⁷ PRAESA is one of four partners in a consortium forming the larger ‘3 R’s research project’ on improving literacy and numeracy in South Africa for the Department of National Education in South Africa (see <http://www.3rs.org.za/>).

⁸ Xolisa Guzula, Ntombizanele Mahobe and Nadeema Jogee.

⁹ This research, carried out by Carole Bloch and Ntombizanele Mahobe, followed a class of Xhosa speaking children from grade 1 to 6. They were taught to read and write simultaneously in both Xhosa and English through a range of emergent literacy strategies that included a focus on stories and interactive writing (Bloch 2002).