Practical Language Choices for Improving Foundational Literacy & Numeracy in sub-Saharan Africa

Introduction

Education quality matters. The shift of attention from access toward quality in the past two decades reflects a recognition that it is not enough that children are in school. New school buildings and colorful textbooks do nothing for a child if they do not understand what the teacher is saying or the words in the book.

Providing children with opportunities to learn in a language which they know and understand is an evidence-based practice. And its importance has been recognized in Sustainable Development Goal indicator 4.5.2, "the percentage of students in primary education who have their home (or first language) as a language of instruction". Yet even with evidence and support codified in an SDG indicator, implementation is still complex. Choosing which language(s) to include, thinking about orthographic choices and writing materials, mobilizing parents, deploying teachers—the decisions are many. Political sensitivities and possible resistance from stakeholders, as well as implementation challenges associated with rolling out a program in multiple languages, can further complicate efforts to ensure children learn in a language they can understand.

That said, few things worth doing are easy, and in sub-Saharan Africa, carefully deciding which languages to use for instruction, and planning carefully to use them, is worth the investment and is achievable if the considerations in this document are taken into account.

TERMS USED IN THIS GUIDE

Local language: A language that is used within a limited geographical area.

Lingua franca: A common language of communication in a given area. For some, it is their first language.

Official language: Language given special status by policy or law (often mandated to be used for official government purposes or in schools).

International language: Language that is spoken internationally and learned and spoken by numerous people as a second language (e.g. English, French, Portuguese)

L1: Used to refer to someone's first, or most familiar language (also referred to as "mother tongue").

L2: Used to refer to someone's second language.

Orthography: The set of conventions for writing a language.

THE PURPOSE OF THIS GUIDE

How does a policymaker, education leader, or technical support team think about the complex language issues underlying the learning process, and address potential challenges? How do they decide which type of multilingual education program is appropriate for their country or region? This guide provides a roadmap for policy makers, program designers, and implementers to navigate the complexities of language of instruction options for foundational literacy and numeracy (FLN) programs and to make context-appropriate design choices. Other recent resources in the form of handbooks, kits, and reports are listed in the Resources section at the end and are useful companions to this guide.

The guide discusses four major steps for navigating language issues in FLN programs. The first two steps – Step 1, know the languages and political context; and Step 2, build consensus and engagement – will inform and lay the groundwork for FLN program design. Step 3, design the FLN program, involves decisions and considerations about: the number and types of languages to include; use of L1 versus L2 and transition; planning for teacher and materials preparation; and if necessary, possible support for L2-only programs. The last, Step 4, integrates plans for continued engagement and consensus-building that will support both strong implementation and commitment for the longer term.

The guide focuses primarily on how best to utilize a local language (a language that is used within a limited geographical area and is likely to be the first language of people in that area) to support learning in students' foundational years given the substantial evidence for this approach.[1] It also offers guidance on how to provide support in situations where use of a local language is not feasible at the moment. While the guide provides a good basis for navigating issues and considering possible decisions associated with language in an FLN program, it is important to engage local linguists and literacy experts who have experience in these areas.

THE LANGUAGE DILEMMA IN SUB-SAHARAN AFRICAN CLASSROOMS

The African continent is known for its immense language diversity; indeed, most African countries are home to dozens of languages, as Table 1 illustrates.

TABLE 1. Living, indigenous languages in selected sub-Saharan African countries[2]

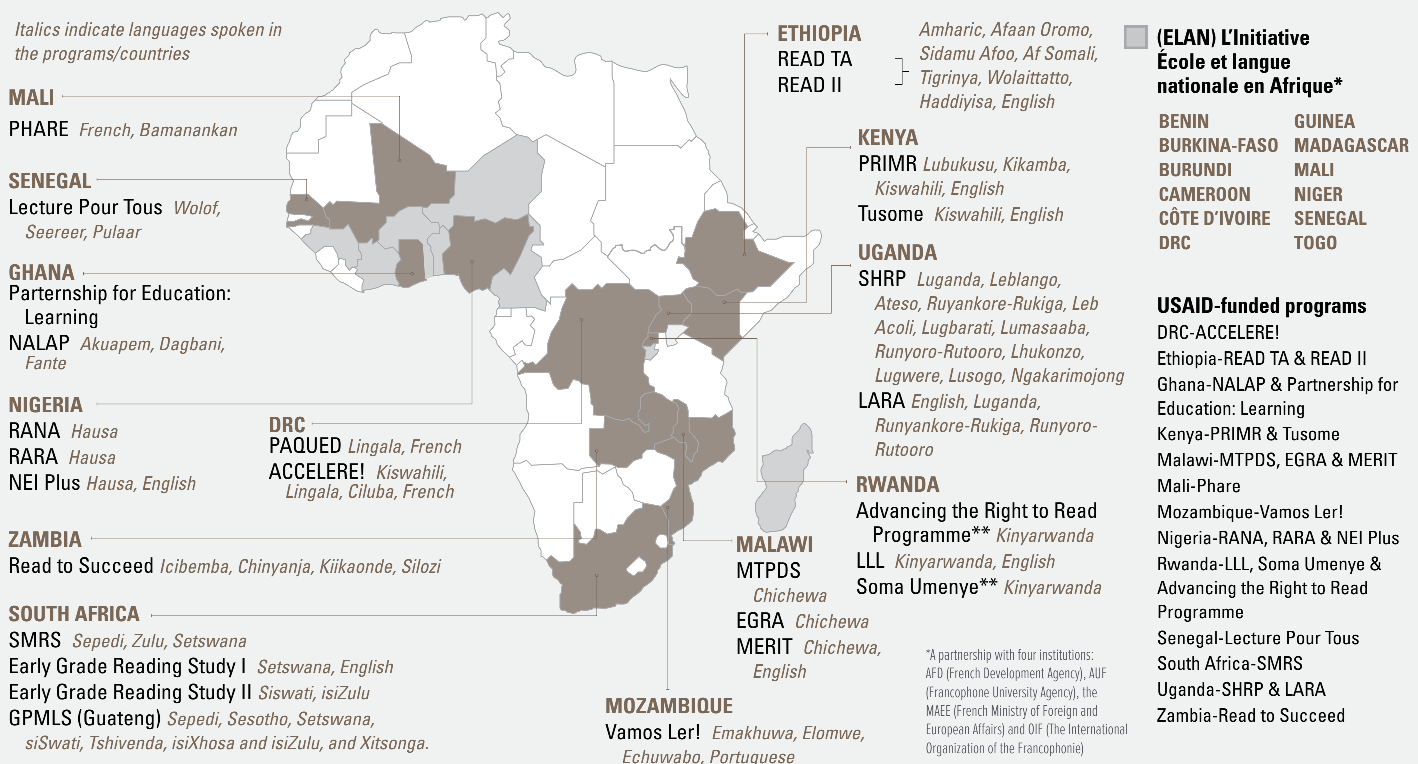
Country	Niger	Botswana	Senegal	Kenya	Mali	Ethiopia	Tanzania	Cameroon	Nigeria
# of living indigenous languages	19	26	31	60	63	86	117	270	508

As a result of this language diversity, education interventions in sub-Saharan Africa encounter complex language situations. For example, the official language of instruction may not be understood by the majority of children, or local communities may have speakers from many language backgrounds. At the same time, there is ample evidence that using a local language in education can result in better learning outcomes.

Over the past 50 years[3] many small formal education programs have been implemented that use a language that the children already know, before transitioning to another language of instruction later in primary school. By using a language the children speak and understand, these programs can better facilitate the learning of new content. For example, in reading, when they are learning to decode words, they can focus on how the sounds are represented by the symbols (or letters), because they already know the word's meaning. When children are writing, their knowledge of oral vocabulary can aid them when putting their ideas on paper. Similarly, because they can understand the language, they will be better able to grasp mathematical concepts and content in other subject areas.

Building on the evidence from these programs, numerous large-scale foundational literacy programs have included programming in local African languages, as shown in Figure 1.

FIGURE 1. Recent large scale foundational literacy programs in sub-Saharan Africa



Foundational literacy and numeracy programs which use children's L1 (first, or most familiar, language) as a language of instruction, often referred to as mother tongue-based multilingual education (MTB-MLE), generally fall in one of four categories, as illustrated in Table 2. The programs are defined by how the L1 is used (for literacy instruction only or across all subjects), and when the language of instruction shifts from L1 to L2 ("early exit" or "late exit"). Currently, Type I (L1 for literacy instruction and early exit) is the most common program type in sub-Saharan Africa. Type IV (L1 across the curriculum and late exit) is the next most common type. There are few Type II and III programs in sub-Saharan Africa.

TABLE 2. Four L1-based program types

	Early exit (grade 3 or 4)	Late exit (end of primary)
L1 as reading instruction only	**TYPE I** L1 for reading only in early grades; Early transition to L2 **Examples: Kenya, Senegal, Swaziland, and Zambia**	**TYPE II** L1 for reading only in primary school; Late transition to L2 **No examples currently known in sub-Saharan Africa**
L1 across the curriculum	**TYPE III** L1 for all subjects in early grades; Early transition to L2 **Examples: Ethiopia (certain regions) and Uganda**	**TYPE IV** L1 for all subjects in primary schoo; Late transition to L2 **Examples: Burkina Faso, Eritrea, and Ethiopia**

Many of these large-scale programs have yielded substantial learning gains. For example, in Ghana, the USAID Partnership for Education: Learning intervention was implemented in more than 7,200 schools and improved learning outcomes in 11 languages.[4] The Ugandan School Health and Reading Program increased learning in nine languages and 4,079 schools,[5] and the Senegal Lecture Pour Tous program showed meaningful improvements in two languages and 3,376 schools.[6]

Despite such gains, these programs often encounter challenges that make implementation difficult and reduce impact. Key challenges include resistance from stakeholders and practical implementation difficulties, some of which are addressed in this guide as well as the Structured Pedagogy series.

STEP 1: Know the Context: Languages and Politics

Before beginning an initiative that addresses language of instruction, it is essential to understand the linguistic, demographic, and political economy aspects of the language environment in your particular context.

In millions of classrooms across Africa, children do not understand the language of instruction. Table 3 illustrates this immense problem. Among the World Bank "Accelerator countries," 66% of Mozambicans, 88% of Nigeriens, and 47% of Nigerians do not speak the official language of instruction. Consider the millions of children in sub-Saharan Africa who struggle to learn due to the mismatch between their language skills and the available instructional options.

TABLE 3. Portion of the population speaking the language of instruction in select sub-Saharan African countries[7]

Official language of instruction	Country	Population in millions	Population speaking the official language of instruction, in millions	Percentage of population speaking the official language of instruction
English	Nigeria	195.9	104.0	53%
English **Afrikaans**	South Africa	57.7	15.9 17.1	28% 30%
English	Zambia	17.1	3.0	18%
English **Swahili**	Kenya[8]	52.6	7.4 36.8	15% 75%[9]
English	Sierra Leone	7.6	0.9	12%
English **Swahili**	Tanzania	55.4	6.0 47.0	11% 85%

Official language of instruction	Country	Population in millions	Population speaking the official language of instruction, in millions	Percentage of population speaking the official language of instruction
English	Malawi	17.6	0.9	5%
English **Amharic**	Ethiopia	108.4	0.2[10] 56.9	.01% 52%
French	Democratic Republic of the Congo	84.0	31.9	38%
French	Cote d'Ivoire	24.3	8.1	33%
French	Central African Republic	4.7	1.3	28%
French	Senegal	15.9	4.4	28%
French	Burkina Faso	19.7	4.2	21%
French	Mali	19.4	3.0	15%
French	Niger	21.5	2.5	12%
Portuguese	Mozambique	29.7	10.2	34%

Education happens within the context of a country's broader political economy, and language choices are not made in a vacuum. Despite the central role of language in effective learning, the pedagogical implications of language choice are often overshadowed by larger issues of identity and sociopolitical aspirations. **Policymakers, FLN program designers, and implementers will be managing the complex, powerful political economy of language.**

When policymakers make a decision about language of instruction they examine what language options exist, what the political implications of these options are, the role and use of that language in the country's history, what possible barriers there would be to specific language choices and what is best for student learning. Stakeholder buy-in may have very little to do with the pedagogical realities of language choices and much more to do with concerns about language, politics and identity that are not based on education research findings.

SUGGESTIONS

- **Investigate the languages spoken by teachers, students, and communities (language mapping).**
- Review data on languages used in the communities. If data isn't available conduct a new language mapping exercise, including teacher proficiency, that will guide many decisions.
- Learn which language-related beliefs are common among parents and community members.
- Learn which language-related beliefs are common to teachers and other local educators.
- Learn which language-related beliefs are shared by policymakers.
- Examine how language-related beliefs differ across the country.

Common language misconceptions:

- "Local languages cannot be written down in a systematic way."
- "Only international languages are appropriate for formal schooling."
- "Local languages are inadequate for conveying outside knowledge."
- "Well-paying jobs are available but only to those who know the more prestigious language."
- "Using local languages in the classroom is too expensive."
- "Promoting an official role for local languages will damage national unity."
- "Using a local language for early learning will ruin a child's ability to learn the more prestigious language."

In addition to these individually held perceptions about language, issues of national identity and aspirations also influence language decisions. For example, in Tanzania[11] the post colonial decision made by President Julius Nyerere to use Kiswahili as an official language was seen by many as a unifying decision, and South Africa's post-apartheid 11-language instructional policy was in part an effort to mend the social impact of apartheid-era educational policy.[12] On the other hand, Rwanda's recent decision to use English as the language of instruction was made in the face of previous evidence of the effectiveness of instruction in Kinyirwanda.[13] It will be important to have discussions clarifying the language aspirations for students when they complete secondary and make decision based on those goals. If the goal is for upper secondary graduates to have facility in a second language because they

will use it in employment or further education, then starting education in the L1 with L2 entering later is the best way to eventually reach L2 proficiency.

SUGGESTIONS

- Identify the views on language of instruction from leaders in key institutions.
- Gain a clear understanding of the language ecology of the nation, and why the state has assigned particular languages to specific roles.
- Work together to ask:
  - Does the proposed language choice align with national identity?
  - Does the proposed language choice align with national political direction?
  - Do the state's education policies or financial resources favor a particular language choice?

"Yes" to any of these questions confirms the likelihood of strong national support for the proposed language of instruction. Answers of "No" may indicate a need to consider other language options.

STEP 2: Build Consensus

Use your understanding of the language context to engage with stakeholders' concerns at both the national and local levels. If stakeholders are largely supportive of using local languages, consensus-building will be substantially different than if there is deep-seated resistance. Where there is resistance, it is helpful to remember that stakeholders usually have logical reasons for their resistance. It is important to acknowledge the reasons for this resistance and consider them both when building consensus and when designing the program.

SUGGESTIONS: NATIONAL AND REGIONAL LEVELS

- Use the understanding of the language context gained in Step 1 to have discussions with key government and institutional stakeholders about the implications of the language choices for the program. It could be that program implementation can help ameliorate concerns about using local languages of instruction; if so, work with government to ensure that this is explicit. For example, if there is concern that using L1 will negatively influence outcomes in the international language, suggest piloting a local language program with a focus on learning what is the most effective way to transition from L1 to L2 and comparing students' progress over time.[15]
- Ensure that program monitoring will identify flaws in program implementation, and that the program changes course when needed. Beware of appearing like a "crusader," aiming to correct national and local language policies and practices in education.

SUGGESTIONS: COMMUNITY LEVEL

- Identify supportive community members and, together, hold meetings with skeptical community members to understand their resistance to local languages in school. Assume that their reasons for resistance are rational and learn from them. If

The Cameroon PROPELCA program faced concerns from some community members who perceived that the local languages were inferior to English for use in formal education. To address these concerns, the local language was included as a curriculum subject, along with using the language as medium of instruction. In one grade 7 PROPELCA class, the teacher taught the 12 verb tenses in the Bafut language and had the students compare them with English. It became clear to students that Bafut has more verb tenses than English does. The teacher pointed this out at the end of the class: "Bafut does have grammar, just as English has. In fact, it has a more complex system of tenses."[14]

The USAID-funded Partnership for Education: Learning program in Ghana program convened a series of language-related policy dialogues to build consensus around the language issues in the early-grade reading program. Teachers, parents, and education officials came together to discuss:

- Why is there resistance to the use of mother tongues in school? How can this resistance be overcome?
- What issues affect the teaching of Ghanaian languages in schools?
- What are parents' preferred choice of language for their children's schools? How would they react to languages other than their own being used in schools, and why?
- These discussions increased the quality of the program's design and its ability to work with the community.

appropriate, demonstrate the written language and show them books that have been written in that language. If possible, have a literate child show their literacy skills in their own language.

- If parents are concerned about their children acquiring skills in an international language, examine how the program will support the development of those skills, and ensure this is part of the design from the outset (see section 3.2).

STEP 3: Design the Program

Now with an understanding of the political economy of language and having laid the groundwork for consensus and engagement, you are ready to design the foundational literacy and numeracy program with key leaders in the sector. Designing the program will involve government leaders making key decisions about the language model, including: the number and type of languages to use; how L1 and L2 will each be used; and if, when, and how the program will transition from L1 to L2. In addition, the design will need to include plans for teaching and learning materials and teacher support, regardless of the selected model. This section will discuss each of these decisions in turn. In addition, program design considerations for supporting L2-only programs are also discussed for contexts where that is the only option.

Overall, the fundamental design options that will drive program design can be seen in Table 4, which presents models of L1/L2 use in sub-Saharan Africa.

TABLE 4. Models of L1/L2 use in sub-Saharan Africa

Model	Definition	Examples from sub-Saharan Africa
Bilingual education	The use of two languages in an education program. May include one L1 and one L2, or two non-L1 languages	Cameroon (French and English) Malawi (Chichewa and English) Uganda (L1 and English, with the L1 differing by location)
Multilingual education	The use of two or more languages in an education program. May or may not include an L1; may include two or more non-L1 languages	Nigeria (English, Nigerian language, and Arabic)
Mother tongue- based Multilingual Education (MTB- MLE)	The use of two or more languages in an education program, one of which is a local language that is the L1 of many of the students	Ethiopia (local language, English, and Amharic), Kenya (local language, English, and Kiswahili), Uganda (local language, English)
L1 as a subject, L2 for all other subjects	Teaching language arts or reading as a subject in the curriculum in the local or first language	Kenya, Nigeria (some states)
L1 across the curriculum	Local or first language as medium of instruction for all subjects (except L2)	Ethiopia
L2 across the curriculum	L2 as medium for all subjects; no instruction in a local or first language	Angola, Cote d'Ivoire, Mozambique (certain parts), Rwanda, Togo
Early-exit Bilingual education or Multilingual education[16]	Transition from the local or first language to L2 as medium of instruction in grade 4 or earlier	Kenya, Mozambique, Niger, Senegal, Uganda
Late-exit Bilingual education or Multilingual education	Transition from local or first language to L2 as medium of instruction at the end of primary (grade 5 or higher)	Burkina Faso (écoles bilingues), Ethiopia, Eritrea

This guide focuses primarily on program designs that include multiple L1s and one L2 because this is the most common design used in sub-Saharan Africa. While some countries add a third (L3) language, that model is substantially more complex and is beyond the scope of this guide.

3.1. DESIGN CHOICES: THE NUMBER AND TYPE OF LANGUAGES IN THE FLN PROGRAM

Determining which and how many local languages of instruction you may need to use has a substantial impact on implementation, affecting materials development, teacher preparation and support, and monitoring and evaluation. In many cases, a country's national language policy specifies the local languages that are acceptable for use in the classroom. In these cases, the literacy and numeracy program should be designed to align with national policy. The program may target all of the approved languages or a subset of them, depending on resources.

On occasion, especially if existing policy does not specify language of instruction, work with education leaders to consider what language choices may meet national and program goals. (The Global Proficiency Framework for Reading and Math Grades 1-9, listed in the Resources section, can help to guide this discussion). For example, consider Nigeria. Nigeria's education policy calls for teaching Arabic and French in lower primary grades alongside of English and the local Nigerian language. However, the practicalities of teacher competence and cognitive learning load for students have led most education interventions to focus on fewer languages than specified in national policy.

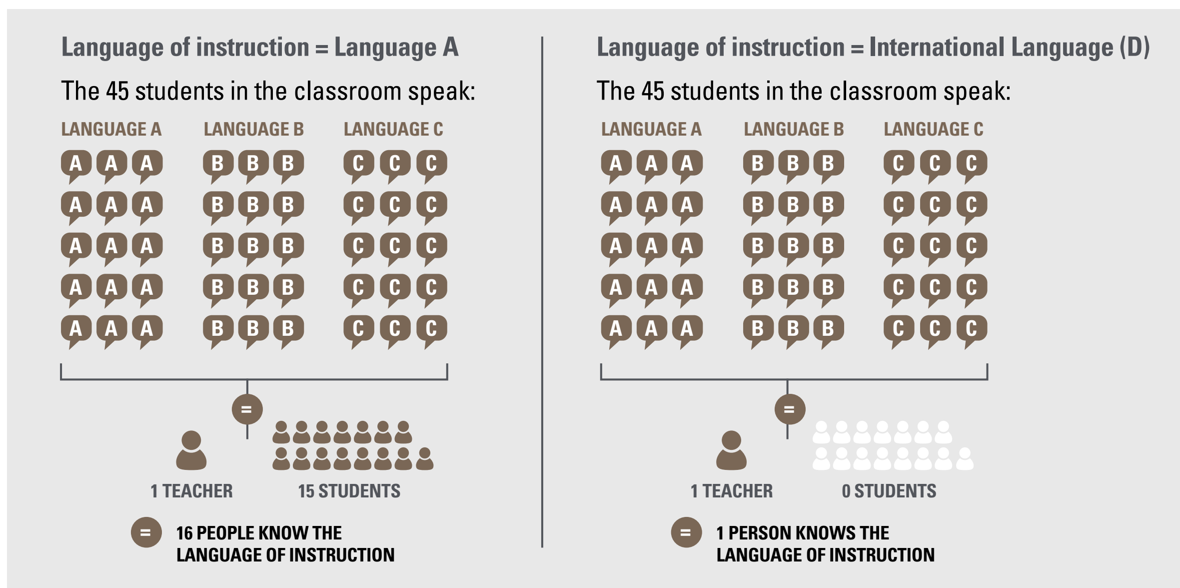
When selecting which languages to include, you should consider three criteria:

- Size and geographic spread of the population speaking each language.
- The potential for a language to serve both L1 and L2 speakers of that language.[17]
- The existence of a writing system that is agreed upon by speakers of the language.[18]

Even in environments where there are students from multiple local language groups, avoid using the international language as the default solution. Instead consider the benefits of choosing one of the local languages as the language of instruction. Using one of the local languages will ensure some of the children in the class already speak the language of instruction and there is a greater likelihood that the other children may have some familiarity with the language, such as through hearing their classmates speak it in and outside of class. Figure 2 offers a comparison between classrooms where the language of instruction aligns with the language spoken by some students and classrooms where only the teacher speaks the international language. It is important to note that choosing one of the local languages still disadvantages children who do not speak that language as L1. Those children could benefit from using teacher's aids, such as community volunteers, who speak their L1.

> Senegal's USAID-funded early-grade reading program, Lecture Pour Tous, is centered on three Senegalese languages of instruction. The three languages— Wolof, Pulaar, and Sereer— were chosen from the 31 indigenous languages spoken in the country based on three criteria: (1) survey findings that these are the languages that most children understand and speak in the regions where Lecture Pour Tous is being implemented; (2) the prior existence of effective bilingual education programs in these languages; and (3) the languages' "codified" status (i.e., approval by the government as acceptable for use in Senegalese classrooms).

FIGURE 2. Language exposure for a Local Language compared to an International Language



SUGGESTIONS

- Examine how the national language policy is being implemented across the country.
- Research the degree of orthography development and instructional use of the languages under consideration.
- Consider the financial and human resources available for the inclusion of new languages. This may include plans for phasing in languages over time. Developing teaching and learning materials for two languages annually is generally manageable.
- Plan for community conversation and mobilization around the project's language goals. Programs that regularly engage with key stakeholders in these decisions have had more success.[19]

3.2. DESIGN CHOICES: USE OF L1 AND L1 TO L2 TRANSITION

When a foundational literacy and numeracy program will utilize an L1, you will need to determine how it will be used, as well as how and at which grade to transition from L1 to L2.

USE OF L1

The two most prevalent uses of L1 are (1) as the medium of instruction in one subject (either the "mother tongue subject" or a reading or language arts subject) or (2) as the medium of instruction across the curriculum (except for the L2 subject). Table 5 outlines the benefits and weaknesses of each option.

TABLE 5. Considerations for using L1

Use of L1	Benefits	Weaknesses
L1 for one subject	Provides a dedicated curricular space for teaching literacy in the L1	Has a limited impact on overall pupil learning (since other subjects are taught in the L2)
L1 for all subjects	Provides greater opportunities for content learning	Demands substantially more policy, curriculum, and financial support to implement

Deciding on the role of L1 is an important choice. For example, consider mathematics: If the L1 is limited to literacy, then mathematics instruction will continue in the L2, which will affect students' ability to develop their conceptual understanding of mathematics. If L1 is used across the curriculum, children will understand the mathematics concepts better, but mathematics materials will need to be developed in each L1, so both materials and teacher training costs would substantially increase.

SUGGESTIONS

- A collaborative approach, involving government and other stakeholders, should be used to decide how the L1 will be used: for teaching literacy only or as the instructional language across the curriculum.
- Ensure that sufficient financial backing and buy-in from the government is in place prior to finalizing the decision.
- If you choose to focus on L1 for literacy instruction, note that literacy as a subject is not typically included in many sub-Saharan African curricula or teacher training programs. It will be imperative to liaise with teacher training and teacher support bodies to build capacity for teaching literacy and to ensure instructional time in the timetable.
- Do not require children to learn to read in more than one language at a time. **Asking children to learn to develop reading skills while navigating two languages at the same time, is an unrealistic burden.**[20]

LANGUAGE TRANSITIONS

The medium of instruction transitions from L1 to L2 at some point before secondary school in most countries. The transition grade is often stipulated in the national education policy, and while non-transition L1-medium models do exist (e.g., dual immersion models), they are not commonly utilized in sub-Saharan African contexts.

The two most common language transition models involve an L1–L2 transition at either the end of lower primary (grade 3 or 4, known as "early exit") or the end of upper primary (between grade 5 and 8, known as "late exit"). The early-exit model is a frequently implemented L1-use policy, but the impact of early-exit L1 instruction on learning outcomes can be more limited. Studies show that the late-exit model can have significant pedagogical and academic benefits,[21] as seen in Ethiopia,[21a] but its utilization in sub-Saharan Africa has been low.

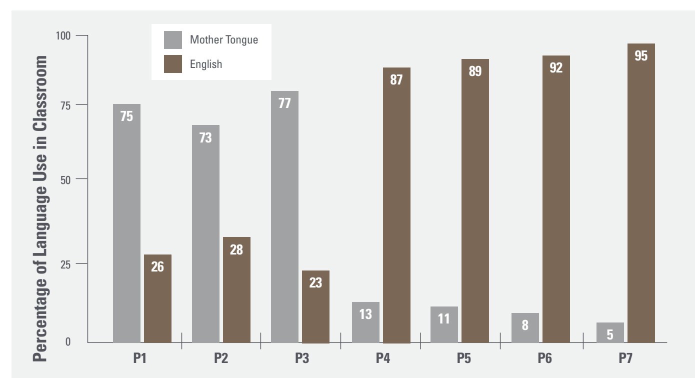
Putting together the choices for use of L1 and L1/L2transition, Table 6 presents the pedagogical and programmatic implications of the program types introduced earlier.

TABLE 6. The four L1-based program types and their pedagogical implications

	Early exit (grade 3 or 4)	Late exit (end of primary)
L1 for reading instruction only	**TYPE I** Supports literacy skills Positive affective outcomes in early grades Potentially little impact on long-term academic outcomes No impact on L2 learning Permitted by most language policies Highest likelihood of acceptance	**TYPE II** Supports literacy skills Long-term L1 language arts skills develop Learning gains do not necessarily transfer to L2 subjects Not permitted in most national policies, though could be acceptable if linked to reading gains in L2
L1 across the curriculum	**TYPE III** Supports early-grade content learning Positive affective outcomes in early grades Must include effective L2 teaching for transition Learning gains may diminish by grade 5 Policy allows this is in some, but not all, countries Acceptance depends on how important early-grade learning outcomes are to education leaders	**TYPE IV** Effective content learning Strong L2 learning must be included Substantial policy and curricular support needed Not permitted by most national policies Acceptance depends on wider national aspirations for L1

Designing the transition year is essential. Design the transition year to gradually increase the use of L2. This will be considerably more effective if the L2 has been taught as a subject from the beginning of lower primary. Unfortunately, gradual language transitions are not the norm in early-exit language programming. Figure 3 shows the language use in the transition year faced by children in Uganda in 2009, who went from 23% English to 87% English in their transition from grade three to four. If the transition year is not carefully planned, children—particularly poor and rural children—can be left behind in the new language. In addition, without substantial support for the transition year, the entire language design could be rejected given lower outcomes in L2. Designing and implementing the transition to L2 effectively is one of the most important steps to getting buy-in and support for an L1 program.

FIGURE 3. Observed language usage in Uganda (2009)[22]



SUGGESTIONS

- Determine which transition model is most appropriate for your context. If your FLN program will be aiming for specific learning goals by grade 2, grade 5, or secondary school, be aware of which L1–L2 transition model is most likely to deliver those goals.
- Make intentional L2 language learning and oral skills an early curriculum priority, along with the use of L1 as the medium of instruction.
- Ensure that there is sufficient focus on planning the language transition year and on structuring the transition as a gradual move from L1-medium to L2-medium learning.
- Involve specialists in second-language acquisition and language transition.[23]

Nigeria's Ife Primary Education Project, carried out in 1970–76, was a landmark initiative in late-exit bilingual education. Its success was due not only to strong curricular support for the use of the L1 (Yoruba) as the medium of instruction in primary school but also to its strong support for English-language learning. English was taught systematically as a distinct subject from grade 1, by specialist English teachers, with a strong focus on reading and communication. While the subjects were all taught in Yoruba, the academic vocabulary used was also incorporated into the English lessons.

3.3. DESIGN CONSIDERATION: PLAN FOR TEACHER PREPARATION AND MATERIALS DEVELOPMENT

Whichever language choice is made, the program must develop high quality teaching and learning materials, teacher training, and ongoing teacher support. This section provides suggestions on how to build the sort of effective materials and teacher training that will be supportive to the language choices your program has made.

TEACHING AND LEARNING MATERIALS

One of the central features of a foundational literacy and mathematics program is the provision of teaching and learning materials that are linguistically, culturally, and pedagogically appropriate to the target classrooms. These materials require significant financial and technical program resources, which will be substantially higher where smaller (and more) African languages of instruction are involved. The number of L1 languages developed impacts the ability of your program to effectively design the materials, and also means smaller print runs and larger unit costs for books.

For specific information on developing materials for foundational literacy and numeracy programs, see Structured Pedagogy Guide #3, Curriculum, Scope and Sequence. The development of reading instructional materials in languages that have little or no written materials requires a strong linguistic foundation, including an orthography that (ideally) has a symbol for each sound; an understanding of the spelling rules, syllable types and word breaks; and some written text, whether preexisting or developed in preparation for the instructional materials. Cultural relevance is also important, especially where story content and illustrations are concerned.

Reading methodology in new languages of instruction will yield questions about pedagogical methods. The good news is that across most languages in sub-Saharan Africa, the instructional methods called for by structured pedagogy approaches (a coordinated, combined approach including lesson plans, student materials, training and ongoing support) can help ensure that students learn the relationship between sounds and symbols (phonics), how to use tonal markings (they signal the pitch that distinguishes meaning) if relevant, and the meaning of morphological units (such as letter s indicating plural in English). Program designers should be aware that there is an interaction between the features of a language and learning to read in that language. Such features include:

Transparency. The transparency of a language refers to the consistency between the sounds of the language and the written symbols that represent them. A language that has sounds that connect to symbols in a consistent one-to-one correspondence is described as having a transparent orthography. For example, the Kiswahili word kitabu has six symbols that each map to one of its six sounds. Conversely, an orthography that is less consistent in the relationships between sounds and symbols is considered opaque. An example is the English word weigh which has two sounds that map to five symbols. The level of transparency of a language influences the rate of reading acquisition. Learning to read in a highly transparent orthography (e.g., Kinyarwanda) can be faster than learning to read in an opaque orthography (e.g., French).[24]

Visual Features. The visual features, or forms, of the orthography influence learning to read. In an alphabetic orthography language (e.g., English, Arabic) an individual sound is represented by a symbol or letter. In an alpha-syllabic language (such as Amharic) the symbol represents a syllable. As a result, a distinguishing difference between alphabets and alpha-syllabaries is the number of symbols that one needs to learn to read fluently, as well as the most effective methods for reading instruction. Teaching the 200+ symbols in Ge'ez script languages, such as Amharic, involves a substantially different scope and sequence, and differences in pedagogical methodology, from an alphabetic language with one tenth the number of symbols.

Visual Form – Word Length. Another visual feature of a language that influences learning to read is word length. In some agglutinating languages, single words might be used to mean the same as what would be a multi-word phrase

> The USAID/READ TA program in Ethiopia supported the development of teaching and learning materials in seven languages, including two alpha- syllabic languages and five alphabetic languages. This work involved seven teams which worked to develop scope & sequence and materials in the respective languages. Though many of the same pedagogical techniques could be used in all of the languages, specialized technical support had to be provided for the two language types. Both the length of time needed to teach all the symbols in the alpha-syllabic languages, and the strategies used to introduce them in lessons, were significantly different.

in another, resulting in many long words. For example, "It has been cut off" is five words in English, but translates to one word, Imekatika, in Kiswahili.

These language features have pedagogical implications that will substantially impact the scope & sequence and materials development. It will be essential to involve linguists, writers and speakers of the target languages, as well as reading specialists, in the design and development process.

Where school subjects other than reading are concerned, a key challenge relates to the availability of textbooks at a reasonable ratio, if not the ideal of 1:1. Translations of existing subject content textbooks into the target L1 language is a faster option than developing new materials, but care must be taken to ensure that concepts and vocabulary are translated in an age- and context-appropriate manner. If that is not possible, then new materials development across the subject areas would be required. Note that it may be difficult to find translators who have experience producing age-appropriate materials for lower primary education, in which case training for these specialists may need to be included in the program plan.

SUGGESTIONS

- Consider budget limitations when deciding on the number of languages that will be taught and/or the timeline for introducing new languages, since it is likely that the program will need to develop or translate pedagogical materials for every subject in which the L1 is being used. As mentioned in 3.4, developing teaching and learning materials for two languages annually is typically manageable.
- Understand how the features of each target language and its orthography link to different reading instruction approaches, and use that understanding to determine the combination of approaches that you will use. Involve experts in African languages and literacy to design the materials.

TEACHER CAPACITY-BUILDING AND SUPPORT ISSUES

Clearly, a central feature of a successful L1-medium program is teachers' fluency in that language. However, countries differ in whether they match teacher language fluencies to the location of their teaching assignments. While some countries provide a clear language match between teachers and students, some countries intentionally post teachers to locations outside their home areas; in other cases, teachers are allocated without regard to language fluency or cultural familiarity.[25] USAID's Ghana Partnership for Education: Learning is an example of a program that carefully undertook analyses of teacher language match to determine how closely the languages of teachers aligned with students' skills and learning materials.

A teacher's oral fluency in the language is not the only ingredient for L1 program success. Since many teachers have not been educated in the L1 themselves, they may not know how to read it efficiently or feel comfortable doing so. If a program uses the L1 to teach subjects other than literacy, teachers may not know how to use the L1 to explain or discuss academic concepts. Building teachers' competencies in teaching L1-medium literacy is therefore particularly important. They will require specific training on the particular language characteristics of the L1 and how to use the specific learning materials developed by the program.

> When the Opportunity Schools early-grade reading program began in 2012 among the Maasai of southern Kenya, evidence gathered from Maasai speakers and linguists indicated that the existing orthography was difficult to read. Several vowel features, including tone, were unmarked, which resulted in confusion between affirmative and negative statements, subject and object nouns, and a range of other grammatical features. Using a community-focused approach, the material writers secured permission from local Maasai authorities and the Kenya Institute for Curriculum Development to add markings on vowels with high tones and falling tones in the primers. The result stunned Maasai teachers, who reported that their students were reading fluently within months rather than years.

In addition to training in the L1, most teachers who will be supporting transition to L2 will also need training and support for their L2 language pedagogical skills. While teachers may have received their own education in the L2, many may still struggle with the language themselves. Being able to read and write a language is different from in-depth knowledge of its structure to be able to teach it effectively without further training. There are many programs that focus on providing L2 learning opportunities for teachers, which are often provided as separate or stand-alone programs. Ensuring an effective L1-L2 interaction and transition will demand close collaboration with any such L2 programs and incorporating L2 support for teachers into the program design. For example, British Council's Building Learning Foundations program in Rwanda and the École et Langues Nationales program, carried out in multiple Francophone

countries by the Institut de la Francophonie pour l'Éducation et la Formation, provide materials for and train teachers in L2 pedagogy to complement or alongside L1 instruction programs .

Finally, effective mother tongue programs should consider not only the initial capacity building that teachers need but also the ongoing teacher support modalities required to help them implement the program over time. As discussed in more detail in the Structured Pedagogy Guide #6 Teacher Professional Development: Ongoing Teacher Support, it is critical to have regular and targeted instructional feedback and support for teachers implementing the program. It should be expected that a substantial portion of the teaching population will have weak skills in at least one of the target languages and the teacher support mechanisms will need to include a specific plan for how to provide that support over time. This could include, for example, tools for coaches to observe how effectively teachers teach L1 and L2 and then provide specific guidance to teachers that are struggling in either language.

SUGGESTIONS

- Ensure that teachers are trained in L1 skills, particularly teachers who are not native L1 speakers.
- Discuss the possibility of recruiting, training, and placing local "community teachers" who are fluent in the language and can supplement the skills of teachers.
- If teachers' fluency in the L1 is limited to oral proficiency, ensure that they are taught to read and write the language as a component of the teacher training curriculum.
- Review teacher training practices discussed in Structured Pedagogy guide #5 on Teacher Professional Development: Teacher Training, including ensuring that teacher trainees gain ample practice using the L1 materials.
- Provide ongoing teacher support to teachers with limited skills in L1 or L2. Expect that large proportions of teachers may have limited skills and design teacher support to provide practical guidance to them.
- Review ongoing teacher support practices discussed in Structured Pedagogy guide #6 on Teacher Professional Development: Ongoing Teacher Support, and ensure that teachers are provided ample ongoing support in their classrooms to reinforce key skills

3.4. L2 INSTRUCTION

There are some contexts in which the use of local African languages in formal education is simply not advisable given political economy realities. In these contexts, it is critical that your program focuses on providing effective support to local language speakers as they learn the L2. This section presents suggestions on how to maximize program impact in these contexts.

Your program's design and implementation should draw on what is known about effective structured pedagogy (see the Structured Pedagogy guides). This includes quality and carefully paced teaching and learning materials that are appropriate to the ages and language fluencies of students. One key element that should be emphasized in the materials and teacher training are speaking and listening skills. Most L2-medium classrooms in sub-Saharan Africa operate on the inaccurate assumption of pupil fluency in the L2, which poses serious problems for students' learning of both content and the L2. Your L2 program should intentionally build L2 speaking and listening skills from grade 1, adding literacy skills over time once adequate oral fluency has been gained, and provide opportunities for students to practice their L2 skills in a supportive and enjoyable environment.

> In Liberia, English is the official language of instruction, though it is a second language for most children. Structured pedagogy efforts have helped improved reading in English through USAID's EGRA-Plus (2008-2011), LTTP II (2010-2016), and Read Liberia (2017-2022) programs. While these programs have resulted in improvements in reading skills (children's oral reading fluency increased from 4.8 words to 14 words per minute between baseline and midline of LTTP II), feedback from teachers participating in Read Liberia indicated that children still struggled with English comprehension. In response, the program revised the teachers' guide and student materials to increase the emphasis on oral language skills, including additional explicit vocabulary instruction and utilizing visual cues to support comprehension.

Figure 5 shows an example of an activity for building vocabulary skills in L2. The image is from a grade 1 teacher guide where English is taught as an L2 subject. The activity supports second language learning through multiple modes - text, images, and actions. The text includes rhyme which helps to develop sensitivity to the phonological structure of the language (i.e. phonological awareness). The related images are purposely simple to recreate on the chalkboard. The pictures together with gestures support the students to learn the meaning of words.

A carefully organized L2 approach, that includes this type of supportive teacher materials, can practically respond to the challenge of implementing a complex L2 program for children who are not fluent speakers of L2. It is better to do an effective L2 intervention in these contexts than to ineffectively advocate for L1 when the political realities make L1 impossible.

L2 programs can also benefit from the development of structured lesson plans that show teachers how to use the L1 orally to assist with L2-medium learning.

Teachers could be trained in how to use the L1 to scaffold L2 content (as opposed to informal switching between languages, which is less effective for language learning). As an example, L1- medium explanations of common L2 vocabulary terms in each subject could be prepared and used in the course of content instruction.

FIGURE 5. Grade 1 Language Activity[26]

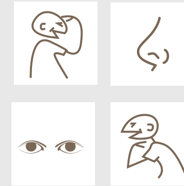
Concept of Word: Text

PICTURE 1: I use my head to think, think, think.

PICTURE 2: I use my nose to smell.

PICTURE 3: I use my eyes to blink, blink, blink.

PICTURE 4: I use my throat to yell.



Concept of Word: Action

PICTURE 1: Touch head with one finger and nod three times.

PICTURE 2: Touch nose with one finger and pretend to smell something.

PICTURE 3: Touch under eyes and blink three times.

PICTURE 4: Touch throat with hands. Open mouth wide to yell.

STEP 4: Plan for Continued Engagement and Consensus-Building

Circumstances will certainly change over the course of your program. For example, the country's policy environment may be altered, political leadership may change, or key partners in the government or civil society may shift. Will your program be ready to respond to those issues? How will the interventions be institutionalized beyond the program?

The political and social ramifications of language of instruction choices almost always require balancing policy alignment with the achievement of program goals. The ideal instruction environment is not always attainable, and compromises are often required. However, sensitivity to the concerns and realities of national and local stakeholders in program design can keep those stakeholders engaged and possibly working toward a more ideal instruction environment over time. Effective programs respond to this reality and actively work to build consensus over the long term.

SUGGESTIONS

- Make engagement between policymakers and program stakeholders an ongoing feature of your program. Plan for regular, respectful interactions throughout the life of the program, particularly with national-level decision-makers and community stakeholders who will be responsible for program sustainability. Consider sharing the results of assessments evaluating the impact of the local language programs with the community and stakeholders. When the results are positive, it will increase buy-in, and when the results are minimal, it will induce change.
- Incorporate advocacy efforts into the program's design, and plan for the dissemination and discussion of program results. National political leaders have to be able to advocate for the program within the government and to the broader population, and will themselves continually be assessing the program's added value to their national aspirations and agendas. Advocacy engagement is a long-term necessity, especially since program results may take longer than, or be different from, what you expected.
- Review and incorporate practices and approaches as discussed in the Structured Pedagogy Guide #1 on Government Leadership; Guide #2 on Design; and Guide #8 on Systems Management, for ensuring that government partners and stakeholders are fully engaged in the program from pre-design stage and plan jointly to ensure that the program is fully integrated into the government system by the end of the program.

Conclusion

The development and implementation of a successful foundational literacy and numeracy program has to include careful consideration of the languages that will be chosen for instruction and how they will be used. The choices of which and how many local languages to use and when and how to transition to a second language for instruction form the basis for determining the type of program to design. How these choices are made should be informed by a strong understanding of the language and political context, and must be made jointly with government and stakeholders.

This guide has presented the four main steps for understanding and navigating complex language environments and using this understanding to make key design decisions:

1. Know the language and political context;
2. Build consensus and engagement;
3. Design the program;
4. Build in plans for continued engagement and consensus-building.

Ultimately, the outcomes of the program that you are designing and delivering belong to the citizens and the leadership of the nation. Your readiness to acknowledge that, and to listen as well as advocate for key program design issues, could make the difference between long-term program impact or failure.

RESOURCES

Global Proficiency Framework containing minimum proficiency levels in reading and mathematics for grades 1-9: Reading: https://www.edu-links.org/sites/default/files/media/file/GPF-Reading-Final.pdf **Math:** https://www.edu-links.org/sites/default/files/media/file/GPF-Math-Final.pdf

SIL International on good answers to tough questions in MTB-MLE: https://www.sil.org/literacy-education/good-answers-tough-questions-mother-tongue-based-multilingual-education

Handbook on Language of Instruction Issues in Reading Programs: A Global Reading Network Resource https://www.globalreadingnetwork.net/resources/handbook-language-instruction-issues-reading-programs

UNESCO's MTB-MLE resource kit: https://en.unesco.org/inclusivepolicylab/learning/mtb-mle-resource-kit.

UNESCO's Global Education Report background paper "If you don't understand, how can you learn" https://unesdoc.unesco.org/ark:/48223/pf0000243713

UIL/ADEA on optimizing learning in Africa with African languages: https://uil.unesco.org/literacy/multilingual-research/optimising-learning-education-and-publishing-africa-language-factor

Video of African-language reading camps in Ethiopia: READ II's reading camps in Ethiopia on Vimeo

Video of African-language reading program in Senegal: Lecture Pour Tous, helping all children read in Senegal - Bing video

TECHNICAL EXPERTISE NEEDED

In addition to expertise mentioned in the Structured Pedagogy Guides, involve experts on:

- African languages and research, to support language mapping
- Second language acquisition, to inform language transition and L2 support program design
- Linguistics, African languages, and reading, to support development of reading instructional approach and scope & sequence

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1 UNESCO, Global Education Monitoring Report 2016: Education for People and Planet (Paris: UNESCO, 2016); Laitin, D. D., Ramachandran, R., & Walter, S. L. (2019). "The legacy of colonial language policies and their impact on student learning: Evidence from an experimental program in Cameroon." *Economic Development and Cultural Change*, 68, no. 1 (2019): 239-272.

2 David M. Eberhard, Gary F. Simons, and Charles D. Fennig (eds.), Ethnologue: *Languages of the World*, 23rd ed. (Dallas: SIL International, 2020).

3 Some well-known examples include Nigeria's Yoruba-language mother tongue education project from 1970 to 1976, Mali's pedagogie convergente program from 1987 into the 2000s, and Cameroon's PROPELCA program from the 1980s–1990s. See Aliu Babs Fafunwa, Juliet Iyabode Macauley, and J. A. Funnso Sokoya (eds.), Education in Mother Tongue: The Ife Primary Education Research Project (1970–1978) (Ibadan: University Press Limited, 1989);

Traore, S. "La Pedagogie Convergente: Son Experimentation au Mali et son Impact sur le Systeme Educatif. Monographies Innodata (The Convergent Pedagogy: Its Experimentation in Mali and Its Impact on the Educational System. Innodata Monographs)." Geneva: International Bureau of Education. (20001).

Tadadjeu, M. "Le Defi de Babel au Cameroun." Yaoundé: University of Yaoundé I (1990).

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4 *USAID Partnership for Education: Learning*, https://www.fhi360.org/sites/default/files/media/documents/resource-ghana-learning-brochure.pdf

5 Tracy Brunette, Benjamin Piper, Rachel Jordan, et al., "The Impact of Mother Tongue Reading Instruction in Twelve Ugandan Languages and the Role of Language Complexity, Socioeconomic Factors, and Program Implementation," Comparative Education Review 63, no. 4 (2019): 591–612.

6 USAID and Ministry of Education of Senegal, *Lecture Pour Tous Results at Midline*: October 2016 to July 2021, https://chemonics.com/wp-content/uploads/2020/08/SenegalEGRA_Brochure_English_Final-Print.pdf

7 Eberhard et al., Ethnologue, 2020.

8 World Bank, "Population, Total–Kenya" (2019), https://data.worldbank.org/indicator/SP.POP.TOTL?locations=KE

9 UNICEF, *The Impact of Language Policy and Practice on Children's Learning: Evidence from Eastern and Southern Africa* (2016), https://www.unicef.org/esa/sites/unicef.org.esa/files/2018-09/UNICEF-2016-Language- and- Learning-Kenya.pdf

10 This number is likely to be higher today, given that the English fluency rates are based on a 2010 national census.

11 Harvard Political Review, "A Language of Their Own: Swahili and Its Influences" (April 20, 2015), https://harvardpolitics.com/swahili-language-influence/

12 Anne-Marie Beukes, "Language Policy Incongruity and African Languages in Postapartheid South Africa," Language Matters 40, no. 1 (2009): 35–55.

13 The USAID/L3 endline showed significant improvement in reading skills in Kinyarwanda among P1–P3 students and significant improvement in English among P4 students. Education Development Center, Literacy, Language and Learning Initiative (L3): National Fluency and Mathematics Assessment Baseline Report (Washington, DC: USAID, 2014); Education Development Center, Literacy, Language and Learning Initiative (L3): *National Fluency and Mathematics Assessment of Rwandan Schools*: Endline Report (Washington, DC: USAID, 2017).

14 Barbara Trudell, " Language Development and Social Uses of Literacy: A Study of Literacy Practices in Cameroonian Minority Language Communities," *International Journal of Bilingual Education and Bilingualism 9*, no. 5 (2006): 631.

15 An example of this is the PRIMR mother tongue intervention in Kenya.

16 Although there are other models of dual language use in primary schools, they are not included here because their use is rare in African contexts.

17 Languages within a given language family may be easier for speakers of related languages to learn and use in an MTB-MLE program setting. For example, in Cameroonian bilingual education programs, children from smaller, neighboring language communities find learning in a given Cameroonian language easier than learning in French or English, even if the Cameroonian language is not their L1.

18 For example, Uganda's School Health and Reading Program faced challenges in the development of early-grade reading materials in 12 Ugandan languages due to the uneven quality of the orthographies (writing systems) of the languages. In some cases, the writing systems didn't include all of the sounds needed to write the language completely, while in other cases, more than one writing system had been developed. The program had to address such issues through community-focused discussion and linguistic work.

19 USAID, Lecture Pour Tous Results at Midline: October 2016 to July 2021 (2020), https://www.usaid.gov/sites/default/files/documents/1860/USAID_Senegal_Early_Grade_Reading_Program_Assessment_Lecture_Pour_Tous_English_Final_June_2020.pdf

20 In some African countries, the languages of instruction may not even use the same script (e.g., Ethiopic and Roman scripts in Ethiopia; Arabic and Roman scripts in Sahelian countries). This burden on young learners is exacerbated by the fact that students from low-resource homes often have little or no prior exposure to reading upon entering primary school.

21 Leila Schroeder, Megan Mercado, and Barbara Trudell, "Research in Multilingual Learning in Africa: Assessing the Effectiveness of Multilingual Education Programming," in Elizabeth Erling, John Clegg, Casmir Rubagumya, and Colin Reilly (eds.), *Multilingual Learning and Language Supportive Pedagogies in Sub-Saharan Africa* (London: Routledge, 2021).

21a Kathleen Heugh, Carol Benson, Berhanu Bogale, and Mekonnen Alemu Gebre Yohannes, Final Report: Study on Medium of Instruction in Primary Schools in Ethiopia (Addis Ababa: Ministry of Education, 2007), http://www.hsrc.ac.za/en/research-outputs/view/2926

22 Benjamin Piper, *Uganda Early Grade Reading Assessment Findings Report: Literacy Acquisition and Mother Tongue* (Research Triangle Park, NC: RTI International and Makerere University Institute for Social Research, 2010).

23 Benjamin Piper and Agatha van Ginkel, "Reading the Script: How the Scripts and Writing Systems of Ethiopian Languages Relate to Letter and Word Identification," *Writing Systems Research 9*, no. 1 (2017): 36–59.

24 Fafunwa et al., Education in Mother Tongue, 1989.

25 Benjamin Piper, Stephanie Simmons Zuilkowski, Margaret Dubeck, et al., "Identifying the Essential Ingredients to Literacy and Numeracy Improvement: Teacher Professional Development and Coaching, Student Textbooks, and Structured Teachers' Guides," *World Development* 106 (2018): 324–336.

26 Ugandan Ministry of Education, Science, Technology, and Sports, Primary 1, *Teacher's Guide English: I Can Read and Write* (2014).

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