Survey of Children's Reading Materials in African Languages in Eleven Countries – Final Report

EdData II: Data for Education Research and Programming (DERP) in Africa

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Abbreviations

ACALAN	African Academy of Languages
ACOTBA-SUBO	Association Congolaise pour la Traduction de la Bible et l'Alphabetisation—Sukia Boyinga (Congolese Association for Bible Translation and Literacy—Conquer Ignorance) (DRC)
AFD	Agence Française de Développement (French Development Agency)
ARED	Associates in Research & Education for Development
B&W	black and white
CDC	Curriculum Development Centre (Zambia)
CDF	Congolese Franc
CELTA	Centre de Linguistique Théorique et Appliquée (Theoretical and Applied Linguistics Centre) (DRC)
CFA	Central African Franc
CHAKITA	Chama cha Kiswahili cha Taifa (National Kiswahili Association)
CIDA	Canadian International Development Agency
CLAD	Centre de Linguistique Appliquée de Dakar
CRP	Centre de Recherches Pedagogiques (Pedagogical Research Centre) (DRC)
CWPM	Correct Words Per Minute
DERP	Data for Education Research and Programming
DFAT	Australian Government's Department of Foreign Affairs and Trade
DFID	United Kingdom's Department for International Development
DRC	Democratic Republic of the Congo
EdData II	Education Data for Decision-Making
EFA	Education for All (campaign)
EGR	early grade reading
EGRA	Early Grade Reading Assessment
ELAN	Education en Langues Africaines (Education in African Languages)
EMiLe	Education Multilingue (Senegal)
FBO	faith-based organization
GER	gross enrollment rate
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation)
GPE	Global Partnership for Education
ISBN	International Standard Book Number
ISO	International Organization for Standardization
KES	Kenyan Shilling
KfW	Kreditanstalt für Wiederaufbau (a German government-owned development bank)
KNLS	Kenya National Library Service
L1	first language
L2	second language
LOI	language of instruction
LWC	language of wider communication
MOE	Ministry of Education
MOES	Ministry of Education and Sports
MoEST	Ministry of Education, Science, and Technology

MoEVT	Ministry of Education and Vocational Training (Tanzania)
MCDGC	Ministry of Community Development, Gender, and Children (Tanzania)
NCDC	National Curriculum Development Centre (Uganda)
NELIMO	Núcleo de Estudo de Línguas Moçambicanas (Language Study Core Mozambican)
NERDC	Nigerian Educational Research and Development Council
NGN	Nigerian Naira
NGO	non-governmental organization
Norad	Norwegian Agency for Development Cooperation
OIF	Organisation Internationale de la Francophonie (International Organisation of the Francophonie)
OMEL	Organization Maliene des Editeurs
ONECS	National Office of the Catholic Teaching of Senegal
PALME	Partenariat pour l'Amélioration de la Lecture et des Mathématiques à l'Ecole Elémentaire (Senegal)
PHARE	Programme Harmonisé d'Appui au Renforcement de l'Education (Mali USAID/PHARE Program)
PISE	Programme d'Investissement Sectoriel de l'Education (Sector Investment Programme of Education)
PRIMR	Primary Math and Reading
PRODEC	Programme Décennal de Développement de l'Education (10-Year Programme of Educational Development)
READ	Reading for Ethiopia's Achievement Developed (Technical Assistance project)
RRP	Rivers Readers Project (Nigeria)
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SAIDE	South African Institute for Distance Education
SNNPR	Southern Nations, Nationalities, and Peoples' Region
STELLAR	STudents Empowered through Language, Literacy, and ARithmetic
SYPP	Six Year Primary Project (Nigeria)
TEACH	Transforming Education for Adults and Children in the Hinterland
TIE	Tanzania Institute of Education
Uganda SHRP	Uganda School Health and Reading Program
UGX	Ugandan shilling
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
USD	U.S. dollar
UUGI	Ukuria wa Urumwe wa Gikuyu (Gikuyu Language Committee)
WAEC	West African Examination Council
wpp	words per page

Executive Summary

Background

Reading is the foundational skill for all other learning. Children who fail to master basic reading skills in early primary grades will struggle to "read to learn" in late primary grades and are at an increased risk of falling behind in school or dropping out[1]. However, learning assessments have found that half of primary school-age children in sub-Saharan Africa are not achieving minimum learning standards by Primary Grade 4[2]. In some regions, most cannot even read a single word by the end of primary school[3,4].

The dearth of reading materials in classrooms, especially in languages that are familiar to students, makes it very difficult to address the critical deficit of basic reading skills. Children benefit from learning to read in a language they speak and understand because they can build on their existing oral language and vocabulary skills[5,6,7,8,9]. Unfortunately, reading materials in African languages that are appropriate for children in the early grades are critically scarce.

Increased supply and access to early grade reading (EGR) materials in African languages are needed urgently if more children are to learn to read in the early primary grades. The U.S. Agency for International Development (USAID) and other development partners have created the Global Book Fund, which will support a series of approaches and interventions aimed at transforming book development, provision, and distribution so that all children have the opportunity to learn to read with appropriate materials. One specific intervention is the Global

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[1] Gove, A., & Cvelich, P. (2011). *Early reading: Igniting education for all. A report by the early grade learning community of practice*. Revised edition. Retrieved from https://www.rti.org/pubs/early-reading-report-revised.pdf

[2] UNESCO. (2014). *Education for All (EFA) Global Monitoring Report 2013/2014: Teaching and learning: Achieving quality for all*. Paris, France: UNESCO. Retrieved from http://www.uis.unesco.org/Library/Documents/gmr-2013-14-teaching-and-learning-education-for-all-2014-en.pdf

[3] RTI International. (2011). *Assessing Early Grade Reading Skills in Africa*. Retrieved from https://www.rti.org/brochures/eddata_ii_egra_africa.pdf

[4] RTI International. (2014). *Nigeria Reading and Access Research Activity: Results of the 2014 Hausa and English Early Grade Reading Assessments (EGRAs) in government primary schools and IQTE centers in Jigawa, Kaduna, Kano, and Katsina States*. Retrieved from https://www.eddataglobal.org/documents/index.cfm?fuseaction=pubDetail&ID=746

[5] Abadzi, H. (2006). *Efficient learning for the poor: Insights from the frontier of cognitive neuroscience*. Retrieved from https://openknowledge.worldbank.org/bitstream/handle/10986/7023/366190Efficien101OFFICIAL0USE0ONLY1.pdf?sequence=1

[6] Ball, J. (2011). *Enhancing learning of children from diverse language backgrounds: Mother tongue-based bilingual or multilingual education in the early years*. Retrieved from http://unesdoc.unesco.org/images/0021/002122/212270e.pdf

[7] Bender, P., Dutcher, N., Klaus, D., Shore, J., & Tesar, C. (2005). *Education notes: In their own language… education for all*. Retrieved from http://siteresources.worldbank.org/EDUCATION/Resources/Education-Notes/EdNotes_Lang_of_Instruct.pdf

[8] Ouane, A., & Glanz, C. (Eds.). (2011). *Optimising learning, education and publishing in Africa: The language factor. A review and analysis of theory and practice in mother-tongue and bilingual education in sub-Saharan Africa*. Retrieved from http://unesdoc.unesco.org/images/0021/002126/212602e.pdf

[9] RTI International. (2015). *Report on language of instruction in Senegal*. Retrieved from https://www.eddataglobal.org/documents/index.cfm?fuseaction=pubDetail&ID=796

Reading Repository, which will serve as a global catalogue of existing materials and facilitate their sharing, adaptation, and printing on large or small scales[10].

Filling the gaps in the availability of reading materials requires knowledge of the current supply of titles in African languages for early grade readers. Unfortunately, reliable statistics on the African book sector are scarce[11], as are inventories of children's titles that cover all aspects needed to fully understand the supply and quality of existing titles. This report aims to contribute to the knowledge in this area.

Objectives

The purpose of the DERP Survey of Children's Reading Materials in African Languages in Eleven Countries [Reading Materials Survey] was to develop an approach to collecting information on the available supply of EGR materials. The approach included the development of a questionnaire and a protocol for data collection. The survey results will serve primarily to inform the Global Reading Repository by providing a detailed description of the current supply of EGR materials in African languages in the following 11 countries in sub-Saharan Africa: the Democratic Republic of the Congo (DRC), Ethiopia, Kenya, Malawi, Mali, Mozambique, Nigeria, Senegal, Tanzania, Uganda, and Zambia.

The survey had four main research objectives:

1. **Describe the availability of titles in African languages for the early primary grades** in terms of language and book type (textbooks or other reading materials).

2. **Review the usefulness of available titles for reading development** in terms of pedagogical utility, reading level, and the cultural relevance, age appropriateness, and social inclusivity of their contents.

3. **Assess the feasibility of using, adapting, and reproducing available titles** based on their copyright status and current availability in digital format.

4. **Describe the general landscape of the production of EGR materials in African languages**, including the types of organizations producing titles, the number of titles produced per decade since the 1960s, and market prices.

In addition, this study reviewed language in education policies in the 11 sampled countries, comparing the policy on paper against its implementation on the ground, when empirical data were available. Because the formal education sector can drive a large percentage of the demand for educational materials, information on the use of African languages in education can serve to explain the market dynamics that affect the availability of EGR materials in sub-Saharan Africa.

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[10] All Children Reading: A Grand Challenge for Development. (2014, March 17–18). *Global reading materials repository ideation meeting report*. Washington, DC: All Children Reading: USAID.

[11] Diallo, Y.S. (2011). Publications in African languages and the development of bilingial education. In A. Ouane & C. Glanz (Eds.), *Optimising learning, education, and publishing in Africa: The language factor* (pp. 291–309). Retrieved from unesco.org/images/0021/002126/212602e.pdf

Methodology

The DERP Reading Materials Survey focused on materials in African languages relevant for the early primary level (roughly kindergarten through Primary Grade 3). The target content for this survey included textbooks, "supplementary" reading materials (e.g., decodable and leveled texts and fiction and non-fiction texts), and other materials that support EGR instruction, such as teacher manuals and dictionaries. The survey focused on materials written in African languages, although titles in European languages were included if the title was a shell book[12], a bilingual publication, or a manual or reference book that served to support EGR instruction in African languages.

The survey instrument, or questionnaire, was originally developed for the DERP Reading Materials Survey and is available in English and French. It comprises a total of 56 questions and was applied to each individual title in the sample. A digital version of the instrument was built in Tangerine®, a software application for collecting survey data based on open-source code. Data collection was conducted on tablets.

Data collection occurred over one month in early 2015 and was led by a team of Local Consultants in each country. The sampling strategy was to directly contact stakeholders in each country that could be expected to have produced materials for EGR, such as the Ministry of Education (MOE), commercial publishers, international development organizations and bilateral donors, NGOs, faith-based organizations (FBOs), national libraries, digital libraries, and local language commissions. An open invitation to participate in the survey was broadcast through national newspapers and radio stations, and a public information session was held in each capital city.

The data collection effort was primarily concentrated in the capital cities, where most publishers, government agencies, bilateral donors, and NGOs are based. Organizations that could not directly submit their materials to the data collection team could enter information on titles through a web version of the questionnaire created specifically for this purpose. Regions outside the capital were also targeted, although not all regions could be reached because of inaccessibility, security concerns, or time constraints. As a result of these efforts, the survey gathered information on a total of 5,919 titles within the time allotted for data collection.

Overview of Findings

The analysis of the survey data was informed by reviewing the language in education policy in each country. The table below summarizes the policy on paper (Grades 1–12) and compares it against the fidelity of implementation (final column on the right).

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[12] Shell books are books intended and authorized to be adapted into multiple languages and are available in a "shell", or digital template, that simplifies the book-making process.

Country	Grade												Implementation
	1	2	3	4	5	6	7	8	9	10	11	12	
DRC	Kikongo, Lingala, Kiswahili, Tshiluba, or a "language of the locality"						French						Data not available
Ethiopia	The "nationality" language chosen by each regional state						English						Wide implementation with variations by region
Kenya	The "language of the catchment area" or Kiswahili (urban areas)			English									Implementation varies by region but is generally low.
Malawi	English												Not widely implemented. Chichewa is the language of instruction (LOI) in lower primary grades.
Mali	One of the 13 national languages	One of the 13 national languages (50%) and French (50%)		French									Partially implemented
Mozambique	One of 16 Mozambican languages and Portuguese						Portuguese						Portuguese is sole LOI in urban schools; partial implementation of bilingual model
Nigeria	"… Initially the mother tongue or language of the immediate community"			"… at a later stage, English" (the timing of the transition was not specified)			English						Partially implemented; English used widely at all levels
Senegal	A national language (bilingually with French)			French (the timing of the transition was not specified)			French						Not widely implemented
Tanzania	Kiswahili						English (possibly Kiswahili)						Widely implemented
Uganda	"Mother tongue"			English									Widely implemented
Zambia	Nyanja, Bemba, Lozi, Tonga, Kaonde, Luvale, or Lunda			English									Policy is new (2013); data not available

Based on data from the 5,919 titles surveyed, the main findings are as follows:

1. **The total number of African languages in which materials were found (200) exceeds the number of African languages with well-developed orthographies (186[13]).**

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[13] A total of 2,041 living languages (languages currently in use among the population) exist in sub-Saharan Africa. Of these, 1,335 languages in the region have not yet been developed in written form or are in danger of becoming extinct, and 520 are in the initial stages of language development but lack widespread literature. Therefore, only 186 languages have well-established orthographies, grammars, and bodies of literature and are "used and sustained by

2. However, there is a paucity of titles in many languages.

Although materials in 200 African languages were found, most languages are represented by very few titles: 40 languages have only one title each, 42 languages have between two and five titles, and 59 languages have between six and 20 titles. The three languages with the largest number of published titles also have relatively large speaker populations: Kiswahili (808 titles for an estimated 100 million speakers across several countries), Chichewa/Nyanja (509 titles for an estimated 10 million speakers in Malawi, Zambia, and Mozambique), and Amharic (366 titles for an estimated 26 million speakers in Ethiopia)[14]. However, due to special interests, such as faith-based organizations working with a particular language group, some languages with relatively small populations have more titles than other much larger language groups. For example, due to support from SIL International, the Kuwaataay language in Senegal has 37 titles, even though its speaker population is estimated at only about 7,000.

3. The degree of the implementation of language in education policies tends to predict the number of titles recorded for a particular language.

In general, correlations were found between the quantity of titles found for each language in a given country and the language in education policies, either as written on paper or as implemented on the ground. For example, in Tanzania, the language in education policy allows for only Kiswahili to be used as the language of instruction (LOI) at the primary level. Although 125 languages are reportedly spoken in Tanzania (Lewis, Simons, & Fennig, 2015a), 99 percent of all titles located were in Kiswahili. In Nigeria, the official policy since the 1970s has called for Nigerian languages to serve as the LOI, but this policy is not widely implemented. Indeed, in Nigeria, among the more than 500 languages spoken (Lewis, Simons, & Fennig, 2015a), materials were found in only six.

4. There is a high level of variation in the number and type of titles by country.

Kenya was the country with the most titles surveyed (1,009), and Mali was the country with the fewest (298). Data were collected for relevant books according to two broad categories: textbook-related books, including student textbooks or primers, student workbooks, and teacher manuals; and supplementary non-textbooks, including materials classified as narratives, informational materials, references, or as poetry, songs, riddles, or proverbs. The results for individual countries varied widely, but taken together, the results for all countries reveal the following:

- The overall ratio of textbook-related titles to supplementary titles is 2:3.
- The most common textbook-related materials are student textbooks (73 percent), whereas student workbooks are the least common (7 percent). Teacher manuals constitute approximately one fifth (19 percent) of the textbook-related titles surveyed.

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institutions beyond the home and community." Source: Lewis, M.P., Simons, G.F., & Fennig, C.D. (Eds.). (2015a). *Ethnologue: languages of the world* (18th ed.). Retrieved from http://www.ethnologue.com.
[14] Language population data are from the *Ethnologue* (Lewis, Simons, & Fennig, Eds., 2015a).

- Narrative texts (e.g., stories) are the most common type of supplementary title (79 percent overall). Informational texts (e.g., non-fiction) constitute only 13 percent of the supplementary inventory.

5. **Non-profit organizations and commercial publishers are the lead producers of EGR materials in African languages.**

Together, commercial publishers and non-profit organizations account for almost two thirds (63 percent) of titles surveyed produced since 2000, which include most of the titles surveyed (75 percent). Individually, commercial publishers account for 40 percent, and non-profits account for 34 percent.

6. **Available titles are generally appropriate for supporting EGR development.**

The results varied from country to country, but in general, a large percentage of textbooks contained reading passages (67 percent) and vocabulary exercises (60 percent), which are standard, expected components of EGR materials. Approximately 42 percent of all titles included a phonics-based approach to reading instruction[15]. Most titles (textbooks and non-textbooks) were evaluated as being culturally relevant to the target audience and void of inappropriate content (e.g., violence or traumatic events). Women and girls were generally represented in a positive manner. However, a marked absence of people with disabilities was noted in the titles in the sample.

7. **There are very few titles for the early stages of reading development in comparison to the more advanced levels.**

Textbook-related materials are available for all primary grades (Primary Grades 1–4) but extremely rare for pre-primary grades (only 4 percent overall). A third of all supplementary reading materials had more than 75 words per page (wpp), which is only appropriate for readers who have already attained fluency. Materials with fewer wpp, which are appropriate for children in the earlier stages of literacy development, were not as numerous: Only 13 percent of titles were found in the 51–75-wpp range (intermediate), followed by 14 percent in the 1–10-wpp range (beginning).

8. **The use of open licensing is not yet widespread in sub-Saharan Africa, and neither is the use of clear labeling on copyright status and conditions for re-use.**

The results from the DERP Reading Materials Survey show that 40 percent of surveyed titles have "All Rights Reserved". In contrast, only 7 percent of all titles surveyed are licensed under Creative Commons. A very large percentage of titles did not contain any explicit statement regarding conditions for re-use: as high as 96 percent in the DRC, 87 percent in Senegal, and 85 percent in Mozambique. The implication of these findings is that many of the materials currently available in African languages may be difficult to reproduce more widely or to translate into other languages.

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[15] Phonics-based approaches to reading instruction focus on the connection between written letters and the sounds they represent in speech and have been shown to be effective in teaching students to read in alphabetic languages.

Conclusions

The DERP Reading Materials Survey offers more information than has previously been available on EGR materials in sub-Saharan Africa. However, the data collected do not constitute an exhaustive inventory and, given the lack of reliable statistics on the African book sector, are not necessarily a representative sample of children's publications in African languages. Likewise, as the objective of this task was to gather data on as many titles as possible in a short amount of time, an in-depth evaluation of quality was not possible. Although the survey collected information about the presence of specific pedagogical components in textbooks, further research is required to determine whether the scope and sequence, level, and methodologies are aligned with research-based best practices for supporting EGR development.

Nonetheless, the results strongly indicate that, although materials exist in a wide range of languages, for many languages, the available materials are insufficient to adequately support children's reading development. In general, and accounting for languages for which a more robust supply of materials exists, the most salient gaps in the supply are teacher's manuals, decodable readers, and informational (non-fiction) supplementary readers.

The findings also suggest a need for strengthening the capacity of local talent to produce developmentally appropriate supplementary materials that match early readers' different skill levels. The specific knowledge areas to strengthen could be the following: reading acquisition, text difficulty and readability, and leveling. Better knowledge of how to appropriately level content could also prove useful for more rigorous evaluations of supplementary materials.

Finally, the findings of the DERP Reading Materials Survey suggest that producers of materials may not perceive any benefit in sharing information on copyright and permissions for re-use. The low use of Creative Commons licenses also signals either a lack of knowledge of open licensing or a perceived threat of open licensing to profitability or control over the original content of titles. All of these cases constitute barriers to making existing materials more easily available for reproduction, translation, or adaptation, either at a cost or gratis.

1   Introduction

1.1   Objectives

This study was commissioned by the U.S. Agency for International Development (USAID) under Task Order 19 of the Education Data for Decision-Making (EdData II) blanket purchase agreement, Data for Education Research and Programming (DERP) in Africa, primarily to inform the development of the Global Reading Repository, which will be part of the Global Book Fund initiative. The Global Reading Repository will store digital versions of available reading materials from several continents and may eventually contain teaching and learning materials across content areas. Pending an ongoing feasibility study, the repository is intended to serve as a global materials catalogue that will facilitate the sharing, adaptation, versioning, and printing of existing titles on large or small scales (All Children Reading, 2014).

The purpose of the DERP Survey of Children's Reading Materials in African Languages in Eleven Countries [Reading Materials Survey] was to develop an approach for collecting information about existing materials and provide a detailed description of the current supply of early grade reading (EGR) materials in African languages in 11 countries in sub-Saharan Africa. Data were collected in the following countries selected by USAID: the Democratic Republic of the Congo (DRC), Ethiopia, Kenya, Malawi, Mali, Mozambique, Nigeria, Senegal, Tanzania, Uganda, and Zambia. These 11 countries were chosen to reflect a variety of colonial heritages, policies regarding the use of African languages in education, and developmental levels of the industries involved in developing, printing, and distributing educational content.

Further background on issues related to the market for educational materials in sub-Saharan Africa is available in Section 1.2 of this report. Section 2 provides details about the data collection methodology, including the development of the survey instrument, sampling, and training of data collectors. Section 3 reviews the language in education policy for each of the 11 countries in the sample, comparing the policy on paper against its implementation on the ground. Section 4 presents and discusses the survey findings, organized according to the main research focus areas, as follows:

- **To describe the availability of titles in African languages for the early primary grades**, especially in terms of language and book type (textbooks or other reading materials; Section 4.1);

- **To review the usefulness of available titles for reading development** in terms of the pedagogical components, reading level, cultural relevance, age appropriateness, and social inclusivity of their contents (Section 4.2);

- **To assess the feasibility of using, adapting, and reproducing available titles** based on their copyright status and current availability in digital format (Section 4.3); and

- **To describe the general landscape of the production of EGR materials in African languages**, including the types of organizations producing titles, the number of titles

produced per decade since the 1960s, market prices, and the degree of development of the book sector based on the use of the International Standard Book Number (ISBN) (Section 4.4).

Section 5 of this report summarizes the conclusions. This general report is a high-level summary of the study, and the full country-level analyses are available in Annexes A–K. Annex L lists the number of titles found by language, and the survey instrument is provided in Annex M.

RTI International led all technical aspects of this project, including the research design, the development of an in-depth survey instrument, and data analysis and reporting. blueTree Group Kenya led the data collection effort by building a team of three or four Consultants in each country to collect data. In addition, blueTree Group Kenya coordinated the training of the data collection teams with technical assistance from RTI. As a result of these efforts, RTI and blueTree Group Kenya collected data on a total of 5,919 titles.

The DERP Reading Materials Survey offers more information than was previously available about EGR materials in sub-Saharan Africa, with greater detail and nuance per country. However, the data collected do not constitute an exhaustive inventory and, given the lack of reliable statistics on the African book sector, are not necessarily a representative sample of children's publications in African languages. Furthermore, the objective of this task was to survey as many titles as possible in a short amount of time; therefore, an in-depth evaluation of the quality of the materials or their effectiveness for instructional purposes was not possible.

1.2   Background

Reading materials in African languages that are appropriate for children in the early grades are critically scarce.[16] This deficit has negative implications for improving the reading skills of children in sub-Saharan Africa, 50 percent of whom fail to reach minimum learning standards in reading by Primary Grade 4 (UNESCO, 2014). Assessments of EGR have shown that in some regions, more than 90 percent of children are not able to read a single word by the end of Primary Grade 2 (RTI International, 2011; RTI International, 2014).

Children who do not have access to level-appropriate reading materials have reduced opportunities to become familiar with print and practice reading skills; therefore, they are less likely to develop reading fluency before the end of primary school (Davidson, 2013). Providing reading instruction in the languages that children speak and understand is critically important because children apply the oral language and vocabulary skills that they already have to the process of learning to read (Abadzi, 2006; Ball, 2011; Bender, Dutcher, Klaus, Shore, & Tesar, 2005; Ouane & Glanz, 2011; RTI International, 2015). Once students have learned to read in their mother tongue, they can transfer this skill to learning to read in another language (August & Shanahan, 2006; Royer and Carlo, 1991).

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[16] There is low availability of textbooks and learning materials in general. See Evans (2010) and studies cited by Fredriksen et al. (2015). This Introduction section explains why materials in African languages are likely to be even scarcer.

Conversely, initial reading instruction in an unfamiliar language has been shown to negatively affect literacy acquisition (Bender et al., 2005; UNESCO Bangkok, 2012). Because reading is the foundational skill of schooling, students who do not learn how to read in the early primary grades will struggle in school in all subjects, and many will drop out of school before Primary Grade 4 (Gove and Cvelich, 2011).

Unfortunately, guaranteeing children the opportunity to learn to read in a language they speak and understand has proven challenging for many countries in sub-Saharan Africa. Sub-Saharan Africa is characterized by high linguistic diversity, both across and within countries. Most people use African languages in their day-to-day interactions (Lewis, Simons, & Fennig, 2015a), but the official language in most countries is the language of 19th century European colonization (i.e., English, French, Portuguese, or Spanish) or Arabic.[17] The choice of language (or medium) of instruction (LOI) used in education has implications not just for learning outcomes but also for political and social power struggles and competing cultural identities; therefore, this is a sensitive issue in the region (Bamgbose, 1991; Brock-Utne, 2001; Cummins, 2000; Ouane & Glanz, 2011). Although many countries have now adopted policies that promote the use of African languages in education, these policies are not always widely implemented[18] because of a complex set of factors that are beyond the scope of this study (Bamgbose, 2011; Ouane & Glanz, 2011).

The link between the implementation of language in education policies and the market for reading materials in those languages is crucial to this study. Considering that the formal education sector can drive up to 95 percent of the total demand for books in some countries (Ogechi and Bosire-Ogechi, 2002; Ouane and Glanz, 2011), if the use of African languages in education tends to be the exception rather than the rule, then it follows that there will be a low demand for books in those languages. Other factors, such as low purchasing power, high illiteracy rates, and a lack of reading habits among the population (which could be linked to the low literacy levels caused, at least in part, by the use of languages students do not understand for instruction), also help explain the low demand for books in general (Diallo, 2011).

Previously, little was known about the existing materials (Diallo, 2011). Collecting information about the current supply, and focusing on titles that may be appropriate for EGR, is necessary for stakeholders to understand how best to fill the gaps in the availability of reading materials. Some of the book chain concerns are as follows: In which African languages are materials available? How does the production of textbooks compare to the production of supplementary reading materials? Are materials available for all early primary grades? Is the content of available materials culturally relevant and appropriate for young children? Which actors lead the production of materials in African languages? Has production grown, decreased, or remained stable in the past few decades? How does the supply compare across countries? The data collected through the DERP Reading Materials Survey represents a first important step toward answering these and other questions.

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[17] Section 3 of this report includes a summary of the official languages of the countries in the sample.
[18] Section 3 of this report presents a desk review of the language in education policies and their implementation.

2   Methodology

2.1   Target Content

The DERP Reading Materials Survey targeted materials in African languages relevant for the early primary level (roughly kindergarten through Primary Grade 3), including both reading textbooks and non-textbook, "supplementary" reading materials (e.g., fiction and non-fiction texts). The target content for this survey included not only materials that could be read by students or to them but also other materials that support EGR instruction, such as teacher's guides and dictionaries. The survey focused almost exclusively on materials written in African languages. Titles written in European languages—English, French, and Portuguese—were not included in this study *unless* they were available as shell books,[19] appeared bilingually alongside an African language, or in rare cases, were in a reference book (e.g., a description of the grammatical rules of the language) or a teacher's guide for a reading curriculum in an African language.

Although some materials, especially textbooks, are labeled for reading instruction at a specific level, many other materials are not specifically directed at children but could potentially facilitate the EGR process. To provide focus for the data collection exercise and to ensure that the most relevant materials were prioritized for this survey, the country research teams targeted the following types of materials, in order of importance. These three categories were used for sampling purposes only (not for data analysis).

Category 1—Materials that were intentionally developed to facilitate EGR acquisition and that match the age or grade level interests and reading abilities of early readers. These include reading textbooks, student workbooks, teacher's guides, "big books", leveled readers, storybooks, non-fiction or informational books, poetry, magazines, and other items that are intended for children.

Category 2—Materials that were not intentionally written for the targeted age or grade level but are of potential interest to early primary students or could potentially be adapted for early primary children. These materials include primers written for adult and/or non-formal literacy classes that could be adapted for early grade students and traditional stories, folktales, fables, Bible stories, poetry, and proverbs written for a general audience.

Category 3—Reference materials that were not intended for direct use by students but are potentially useful to teachers. These materials include dictionaries and grammar books.

These categories were used as a guide for selecting the sample of titles to be surveyed in each country. The following section describes the survey instrument in greater detail.

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[19] Shell books are books intended and authorized to be adapted into multiple languages and are available in a "shell," or digital template, that simplifies the book-making process.

2.2   Survey Instrument

The survey instrument was designed to facilitate the analysis of multiple aspects of reading materials in each country. Data fall into seven main categories as described below. The full survey instrument is available in Annex M of this report.

1. **Basic identifying information.** This category includes the title, author, producer, publication date, and price. The "producer" refers broadly to any organization responsible for the development and publication of reading materials. The type of producer (e.g., private, governmental, not for profit, or bilateral or multilateral donor) was also recorded.

2. **Print specifications and format.** This category includes the title's availability in hard copy, soft copy (digital file), or both. In the case of hard-copy titles, the physical dimensions of the books were recorded. For soft-copy titles, the digital file format was recorded. The number of pages and use of color in illustrations (if any) were also noted.

3. **Copyright.** This category gathers information on whether the reproduction and dissemination of materials are permissible and whether special authorizations or rights negotiations are required. Additionally, the use of a Creative Commons license, if any, was recorded for each title.

4. **Language.** For each title, the language of publication as coded on the *Ethnologue*[20] (Lewis, Simons, & Fennig, 2015a) was noted, as well as the script and the conformity of the text to the standardized orthography, when known.

5. **Book type.** Each title was categorized as a textbook-related or non-textbook (supplementary) material. The textbook-related sub-types included student literacy textbooks, student literacy workbooks, or literacy-related teacher's guides. (Textbooks for subjects other than reading or language arts were not considered.) In the case of supplementary materials, information about genre (narrative, informational, poetry, or reference) and the type of material (e.g., leveled reader or big book), where applicable, was noted.

    Given the diversity of languages in sub-Saharan Africa, it could not be assumed that local data collectors would be able to read all languages proficiently. For the next two types of data, the survey questions facilitated assessing these factors regardless of the data collector's proficiency in a particular language. For books written in an unfamiliar language, the data collectors were trained to make inferences based on the illustrations, number of words per page (wpp), and other relevant items.

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[20] The *Ethnologue* (Lewis, Simons, & Fennig, 2015a) is a comprehensive reference work by SIL International that catalogues statistics about all of the world's known living languages. The *Ethnologue*, in cooperation with the International Organization for Standardization (ISO), created an international standard for language codes. To facilitate identification and classification, a three-letter code is assigned to every known language or dialect in the world (Lewis, Simons, & Fennig, 2015a).

6. **Indicators of content.** For all titles except teacher's guides and reference materials, the survey instrument collected information about the prevalent topics or themes in the content.

7. **Usefulness for EGR instruction.** The potential usefulness of a particular title for EGR instruction was assessed by examining the following five factors:

   a. **Estimated Reading Level:** In the case of textbooks, the publisher-recommended grade level for each title, as stated on the cover or title page, was recorded. For supplementary materials, the maximum number of wpp was used as a proxy to gauge the relative levels of reading difficulty within the same language.

   b. **Pedagogical Components:** Textbook-related titles were examined for the type of activities they included (e.g., phonics, vocabulary, comprehension, or grammar).

   c. **Content Familiarity:** The content of each title was evaluated for its level of familiarity to the target audience based on a specific set of criteria. (The criteria are specified in Annex M of this report.)

   d. **Content Appropriateness:** For each title, data collectors were asked to record the presence of any potentially sensitive content (e.g., violence or substance abuse).

   e. **Representation of Gender, Ethnicity, Religion, and Persons with Disabilities.** Questions in the survey instrument were used to assess whether the contents of a particular title displayed bias or inequitable representation of gender, race, religion, or persons with disability.

A digital version of the survey instrument was built in Tangerine®, a software application that is used to collect survey data and employs open-source code.[21] The instrument was translated into French for the benefit of Francophone data collectors. Tablets were used to collect the data.

2.3   Country Teams

Each country team consisted of one Country Coordinator and two or three field researchers, collectively referred to as the "data collectors". The Country Coordinator was responsible for the sampling strategy and overall coordination of the study in each country, and the field researchers focused on the data collection effort. Team members were selected primarily based on their pedagogical and/or linguistic experience and their experience in developing reading materials and project management. Their experience with ministries of education and local organizations that develop reading materials was also considered in the selection process. blueTree Group Kenya was responsible for recruiting country team members and relied heavily on SIL International, the African Academy of Languages (ACALAN), and its own contacts in book printing and distribution in sub-Saharan Africa to identify potential candidates.

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[21] Tangerine® allows data to be entered directly into a server for analysis, thereby eliminating the significant costs associated with large-scale paper-based surveys and manual data entry. For more information about Tangerine®, please see www.tangerinecentral.org.

2.4   Training and Support for Data Collection

In preparation for the survey implementation, the Country Coordinators and field researchers (i.e., data collectors) were trained the week before data collection began. The training was led by blueTree Group Kenya with support from the project's technical leader at RTI. A two-day training session was held for Country Coordinators only, and then, a three-day session was held for the field researchers with participation from the Country Coordinators. Sessions were conducted in French for Francophone countries[22] and in English for Anglophone countries,[23] Ethiopia, and Mozambique. Because of budgetary constraints, the training occurred remotely via web conferencing. The contents of the training sessions included background about the project, the steps of the implementation process, the roles and responsibilities of the data collection team, how to use Tangerine® on the tablets, and how to use the survey instrument to collect data. The instructions for using the survey instrument are embedded within the instrument (see Annex M of this report).

The field researchers' training emphasized how to use the survey instrument. The specific module on the use of the survey instrument was informed by a pilot conducted by RTI before the training to test the instrument on Tangerine®. During training, the field researchers practiced completing the survey instrument with sample titles from a wide range of types of materials, in both familiar and unfamiliar languages. The field researchers compared and discussed their answers and received additional clarification during a live session with blueTree Group Kenya and RTI staff.

The final milestone during the training was an inter-rater reliability test that the field researchers completed individually to verify their proficiencies in the use of the instrument on the Tangerine® platform. Their answers were scored according to a "gold standard" established by RTI. A minimum score of 80 percent against the gold standard was required before the field researchers were authorized to begin data collection. The average score among the field researchers was 85 percent.

2.5   Sampling Strategy

All country teams used the same sampling strategy. Country Coordinators were asked to first conduct a desk review to identify local organizations, such as the following, in each stakeholder category:

- The Ministry of Education (MOE) and any other ministries or parastatals that produce or procure EGR materials, such as the Ministry of Gender or the Ministry of Culture;

- The directory of for-profit private publishers (both local and international) that is usually available through the national publishers association or an equivalent body at the national level;

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[22] DRC, Mali, and Senegal.
[23] Kenya, Malawi, Nigeria, Tanzania, Uganda, and Zambia.

- Development organizations, including the Agence Française de Développement (French Development Agency [AFD]), the Australian Government's Department of Foreign Affairs and Trade (DFAT), the United Kingdom's Department for International Development (DFID), the Deutsche Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation[GIZ]), and USAID. Additional development organizations include World Bank, the Global Partnership for Education (GPE), the Kreditanstalt für Wiederaufbau (a German government-owned development bank [KfW]), the Norwegian Agency for Development Cooperation (Norad), the United Nations Children's Fund (UNICEF), and the United Nations Educational, Scientific, and Cultural Organization (UNESCO);

- National and international non-governmental organizations (NGOs);

- Digital libraries;

- Faith-based organizations (FBOs), such as SIL International, Catholic Education, Caritas Internationalis, and Finnish Lutherans;

- Booksellers and distributors;

- The national library; and

- National, local, and regional language commissions.

Once blueTree Group Kenya had reviewed and approved the initial list of stakeholders in each country, the country teams contacted these organizations to determine whether they had relevant materials. The Country Coordinators used the list of stakeholders with relevant materials to develop a logistical strategy for data collection to maximize the number of titles surveyed during the time available.

Simultaneously, RTI and blueTree Group Kenya reached out to their own networks to search for materials, including USAID-funded EGR programs, many of which develop reading materials in African languages.

Finally, each country team issued a radio and/or newspaper advertisement to invite any interested parties not previously contacted by the country team to participate in the survey. Advertisements were published or broadcast through national newspapers and radio channels to ensure coverage in various portions of each country. In all countries, a public event was organized in the capital city. Organizations that were unable to attend the meeting were invited to enter information about their titles through an abbreviated, online version of the survey instrument in Tangerine®.

Table 1 shows where the titles were encountered in each country from among the following options:

- Provided by the publisher, funder, or sponsoring organization;
- Found in the market (i.e., at a bookstore, a shop, an open-air stand, or another distributor that was not directly affiliated with the publisher or government);
- Provided by a government official or public school staff;

- Provided by private school staff;

- Provided by a secular NGO or community organization not directly affiliated with the publisher or government;

- Provided by a faith-based NGO or religious organization (e.g., church) not directly affiliated with the publisher or government;

- Found in a library;

- Found in an individual's private collection; and

- Found on a Website.

Most titles (62 percent) were found through publishers. In the DRC, Malawi, and Zambia, a large percentage of titles were found in libraries, and in Nigeria, many were obtained from the market. Kenya and Uganda had a large number of online titles, primarily from the South African Institute for Distance Education's (SAIDE's) African Storybook Project.[24]

Table 1.   Sources of Titles

Country	Publisher	Market	Government/ Public School	Private School	Secular NGO	FBO	Library	Individual	Online
DRC	38%	7%	18%	9%	2%	13%	36%	12%	0%
Ethiopia	76%	11%	4%	0%	0%	0%	4%	2%	5%
Kenya	64%	4%	0%	0%	1%	0%	3%	1%	24%
Malawi	56%	17%	18%	3%	0%	2%	58%	9%	0%
Mali	51%	1%	20%	3%	8%	9%	3%	10%	0%
Mozambique	85%	0%	2%	0%	0%	0%	0%	5%	8%
Nigeria	41%	36%	3%	1%	3%	0%	0%	3%	13%
Senegal	95%	0%	3%	0%	2%	1%	0%	0%	0%
Tanzania	88%	5%	0%	0%	0%	0%	0%	3%	4%
Uganda	58%	1%	0%	0%	0%	0%	8%	0%	27%
Zambia	46%	13%	3%	0%	11%	2%	24%	1%	0%
OVERALL	**62%**	**8%**	**5%**	**1%**	**3%**	**2%**	**12%**	**3%**	**10%**

Note: Multiple responses were possible per title; therefore, the sum of the percentages may exceed 100.

It should be noted that this sampling strategy simply reflects the method used for locating books quickly, given the short time available for data collection. This sampling strategy does not necessarily reflect the total number of locations where the books might be found in each of the countries in the sample or the relative proportions of books available at those locations.

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[24] For more information about the African Storybook Project, see http://www.africanstorybook.org.

2.6   Data Collection

Data collection in all countries was completed within 30 days (roughly from the end of January 2015 through the end of February 2015). RTI made two technicians available to the data collectors during the data collection period to resolve technical challenges. RTI also monitored incoming data closely, flagging possible errors and following up immediately with data collection teams in the field. Following data collection, blueTree Group Kenya continued to enter additional titles that were available in a digital format. RTI staff entered data for some of the materials from the African Storybook Project website and for some USAID-funded materials provided to them directly by projects.

3   Language in Education Policy and Implementation

As previously discussed, the choice of LOI influences the market for and availability of materials in those languages. All of the countries in the study are multilingual. Individual countries use different terms to describe the de jure statuses of their languages, and sometimes, the terms have multiple meanings (e.g., in legal versus casual parlance). For clarification, in the context of this report, the term "official language" will refer to the languages that have been sanctioned by government decree, usually in the constitution, for use by the government in its official business, including in the administration, legislature, and courts. The term "national language" will refer to the African languages[25] that have been accorded some sort of officially recognized status by government decree in addition to the official language. The sanctioned uses of a national language may or may not overlap with those of the official language. In 10 of the 11 countries, the language of the former European colonial power remains the "official" language, sometimes solely and sometimes jointly with an African language. The exception is Ethiopia, which was never colonized by a European power, in which Amharic is the sole official language. The national languages are usually the African languages with the largest populations of speakers in the given country.[26]

In most cases,[27] the official language is also the LOI at the secondary and tertiary levels of education, but the countries surveyed take different approaches to the choice of the LOI at the primary level, as shown in **Table 3** at the end of this section of the report. The following paragraphs synthesize the information presented individually by country in Table 3; to facilitate reading, the supporting citations are also provided in Table 3, unless otherwise noted.

Several of the countries in the study have adopted an "early exit transitional" model (USAID, 2012), in which a presumably familiar language (the home or community language) is used as

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[25] In this terminology, "national" languages include only endoglossic (indigenous) languages, whereas official languages may be either endoglossic or exoglossic (non-indigenous).

[26] In some cases, languages spoken by relatively small populations may also be accorded a status as a national language (e.g., there are currently 22 national languages in Senegal and 13 in Mali). In contrast, sometimes, languages spoken by relatively large populations lack any type of government recognition.

[27] Exceptions include Ethiopia, where Amharic is the official language, but English is the LOI for upper secondary and tertiary levels of education, and Kenya, where both Kiswahili and English are co-official languages, but only English is officially used as the LOI after the primary cycle.

the LOI in early primary grades, followed by a transition to the official language in upper primary grades. Kenya, Uganda, Zambia, and Nigeria have official texts supporting this approach. In Kenya and Uganda, the prescribed year of transition is Primary Grade 4, and in Zambia, it is Primary Grade 5. In Nigeria, the timing of the transition is not stated explicitly.[28] Although Senegal does not yet have an explicit policy on LOI,[29] this country likely falls somewhere in this category as well, with official texts supporting the principle of using the national languages as the LOI in early primary grades (although the timing of this transition is not specified), presumably alongside French. Malawi was also among these countries until a recent policy change reversed the use of the "mother tongue" as the LOI through Primary Grade 4 in favor of English beginning in Primary Grade 1; however, the National Reading Strategy continues to promote literacy and language development in both Chichewa and English.

In contrast to these six countries, the policies of the DRC, Ethiopia, Mali, and, beginning in 2017, Mozambique, will follow a "late exit transitional" model. In this type of model, one or more African languages are employed as the LOI throughout the full primary cycle or beyond, and the transition to the official language is postponed until lower or even upper secondary education. In the DRC, national languages are to be used as the LOI throughout the primary cycle (i.e., through Primary Grade 6), and in Ethiopia, they will be used through Primary Grade 8. Mali has a bilingual model with the first (one or) two years in a national language, followed by four years during which the LOI is split roughly equally between the national language and French. Mozambique has recently been using a mixture of models, with urban schools using Portuguese throughout the primary cycle, and some rural schools using a bilingual model with national languages as the LOI alongside Portuguese; the bilingual model is scheduled to be expanded nationwide in 2017. Although the Mozambican bilingual model begins the transition to Portuguese as the LOI in Primary Grade 4, this transition occurs gradually from Primary Grades 4 to 6 and is complete by Primary Grade 7.

Finally, Tanzania also belongs to the "late exit transitional" model group, with Kiswahili used as the LOI throughout primary education (Primary Grades 1–7) and a transition to English in Primary Grade 8. In 2015, its government announced plans to make Kiswahili the LOI throughout the secondary and tertiary cycles as well, either instead of or in addition to English. However, the policy itself is subject to different interpretations. It is not yet clear precisely how, when, or if the new policy will be implemented, and the issue remains controversial. If Kiswahili were to assume this additional role, Tanzania would essentially have a "first language (L1)–based instruction" model in which students receive instruction in a familiar language from the primary through tertiary levels.

To facilitate comparison, **Table 2** maps the LOI by grade level prescribed by these various policies.

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[28] The "… government will see to it that the medium of instruction in the primary school is initially the mother tongue or the language of the immediate community and, at a later stage, English" (National Policy on Education as cited in Adegbija, 2004).

[29] As of this writing, the Senegalese Ministry of Education has established a working group to formulate a new national language in education policy, which will presumably make the role of the national languages more explicit (A. Niang, personal communication, December 16, 2015).

Table 2.   LOI by Grade Level According to Current or Imminent Policy

Country	Grade								
	1	2	3	4	5	6	7	8	9–12
DRC	Kikongo, Lingala, Kiswahili, Tshiluba, or a "language of the locality"						French		
Ethiopia	The "nationality" language chosen by each regional state								English
Kenya	The "language of the catchment area" or Kiswahili (urban areas)			English					
Malawi	English								
Mali	One of 13 national languages		One of 13 national languages and French				French		
Mozambique	One of 16 Mozambican languages		One of 16 Mozambican languages and, increasingly, Portuguese				Portuguese		
Nigeria	"… Initially the mother tongue or language of the immediate community"			"… at a later stage, English" (the timing of the transition is not specified)			English		
Senegal	A national language and French		French (the timing of the transition is not specified)						
Tanzania	Kiswahili							English (possibly Kiswahili)	
Uganda	"Mother tongue"			English					
Zambia	Nyanja, Bemba, Lozi, Tonga, Kaonde, Luvale, or Lunda			English					

Note: LOI policies prescribing the use of an African language are shaded in blue, a bilingual model (an African and a European language together) in stripes, and a European language in grey. Supporting citations are provided in Table 3.

The discussion thus far applies to the official policies. However, policies are not always implemented exactly as prescribed. Ethiopia, Uganda, Tanzania, and Mozambique show evidence of wide implementation of their current respective policies, although in some regional states of Ethiopia, the transition to English occurs as early as Primary Grade 5 (instead of Grade 9). Additionally Mozambique (and possibly Tanzania) is scheduled to implement the policy changes mentioned above in the near future. In Mali, evidence suggests that the bilingual education policy is at least partially implemented, but the degree of implementation appears to vary by region. In Kenya, Nigeria, and Senegal, the official European language is still widely used as the LOI throughout primary despite policies (or principles) favoring African languages. In Malawi, although a new policy in favor of English exists, Chichewa is still widely used. Recent data about implementation are not readily available for the DRC or Zambia, which is in the midst of a recent policy change favoring Zambian languages.

Moreover, it is worth noting that even when schools use African languages as the LOI, not all children will receive instruction in their L1 or even in a familiar second language (L2). Because of complex political and demographic factors, the choice of a common language to serve as the LOI in a particular location is not always straightforward. In any given classroom, the LOI could be the home language of all, most, or only a few of the children. For example, in the Mopti region of Mali, a 2010 study found that 68 percent of the 869 schools for which linguistic data were available were linguistically homogenous (i.e., all of the students spoke the same home language); therefore, the choice of a common language in those schools was not difficult (Rhodes, 2012). However, in Tanzania, where Kiswahili is the sole LOI in primary school nationwide, an estimated 80 percent or more of the population may speak it as a L2 (Lewis Simons, & Fennig, 2015b). Likewise, in Zambia, many children, and sometimes entire districts, are now learning in a Zambian language that is not their home language (Brombacher, Bulat, King, Kochetkova, & Nordstrum, 2015).

Table 3 summarizes the available data regarding the government-recognized language(s), the language in education policy, and the implementation of the language in education policy by country.

Table 3.   Summary of the Language in Education Policy and Implementation by Country

Country	Government-Recognized Languages in General	Language in Education Policy	Implementation of the Language in Education Policy
DRC	Official: French National: Kikongo, Lingala, Swahili (Congo), and Tshiluba (DRC Const. art. 1, §1).	French is the language of education, and one of the four national languages or a "language of the locality" is to be used as the LOI at the primary level (Loi-Cadre No 14/004 de l'Enseignement Nationale de 2014).	Recent data on implementation are not readily available.
Ethiopia	Official: Amharic National: "All Ethiopian languages enjoy equal state recognition" (Federal Democratic Republic of Ethiopia, Const, art. 5, §1). Regional states, zones, and weredas choose their own respective official languages (Leclerc, 2015a).	"Nationality" (i.e., Ethiopian) languages are to be used as the LOI for the full primary cycle through Primary Grade 8. Regional states choose their LOI from among the languages spoken in their respective areas or nationwide. English is to be the LOI beginning in Grade 9 and beyond (Federal Democratic Government of Ethiopia, 1994; Ethiopia MOS, 2002).	The policy is widely implemented, although the duration of the nationality language as the LOI varies by regional state. More than 20 languages, especially Amharic, are used as the LOI through Primary Grade 4, 6, or 8, depending on the regional state, with a transition to English thereafter (Heugh, 2010; Piper, 2010; Vujich, 2013).
Kenya	Official: Kiswahili and English National: Kiswahili (Kenya Const. art. 7 §1-2)	The "language of the catchment area" is to be used as the LOI for Primary Grades 1–3, with a transition to English in Primary Grade 4; in urban areas, because of linguistic heterogeneity, Kiswahili is to be the LOI (Republic of Kenya, 2012).	Implementation varies by region but is generally low; English is widely used as the LOI in early primary (Begi, 2014; Khejeri, 2013; Piper & Miksic, 2011). For example, in a 2010 study of 979 classrooms in both urban and rural schools in the Central and Nyanza provinces, children

Country	Government-Recognized Languages in General	Language in Education Policy	Implementation of the Language in Education Policy
			in Primary Grades 1–3 were taught in English 58 percent of the time overall (Piper & Miksic, 2011). In the rural areas, the use of the language of the catchment area was 18–31 percent, and in the urban areas, Kiswahili was used 31–32 percent of the time. Contrary to the national policy, in practice, the use of the mother tongue has even been prohibited at some schools (Spernes, 2012), and students may be punished for speaking it at school (Wangia, Furaha, & Kikech, 2014).
Malawi	Official (de facto): English (Leclerc, 2015b)	Beginning in 1996, the "mother tongue" was prescribed as the LOI in Primary Grades (called "standards" in Malawi) 1–4, with a transition to English in Primary Grade 5 (Secretary for Education's letter Ref. No. IN/2/14, 28 March 1996 as cited in Issa & Yamada, 2013). In 2014, the Minister of Education announced that English was to become the LOI beginning in Primary Grade 1, in accordance with the new Education Act passed in 2013 (Masina, 2014). Nonetheless, the National Reading Strategy (2014–2019) of the Ministry of Education, Science, and Technology (MoEST) promotes reading and language development in both English and Chichewa for early primary children (Malawi MoEST, 2014).	Chichewa is widely used as the LOI in lower primary grades (Issa & Yamada, 2013).
Mali	Official: French National: Bamanankan (Bambara), Bomu, Bozo, Dogon, Fulfulde, Hasanya, Mamara Senoufo, Soninke, Maninkakan, Songhay, Syenara Senoufo, Tamasheq, and Xaasongaxango (Mali Const. art. 25, §2; Article 1 of Decree 159/PGRM of 19 July 1982 and Law 96-049 of 23 August 1996, as cited in Canvin, 2007)	One of the 13 national languages is to be used as the LOI alongside French at the primary level (Canvin, 2007).	The policy is partially implemented. For example, in a study in 2010, 2,466 schools reported using one of 10 national languages (AFD & MEALN, 2010). In another 2010 study of 77 Primary Grade 2 classrooms across 16 districts, 84 percent of teachers used the national language designated as the LOI for that region as the only LOI in class, and 13 percent used both the national language and French (Varly, 2010a). However, a 2012 study of 949 schools in the Mopti region found

Country	Government-Recognized Languages in General	Language in Education Policy	Implementation of the Language in Education Policy
			that only 24 percent were using a national language as the LOI (Rhodes, 2012).
Mozambique	Official: Portuguese "The state shall esteem national languages as cultural and educational heritage, and shall promote their development and increasing use as languages that convey our identity" (Mozambique Const. art. 9-10, §1).	The 2002 Curriculum Reform policy allows three options: "(1) Portuguese-medium education … (2) Portuguese-medium education with 'recourse' to the local language as needed …, and (3) mother tongue-based bilingual education" (Chimbutane & Benson, 2012). In the bilingual model, the Mozambican language is used as the LOI through Primary Grade 3, and the transition to Portuguese as the LOI occurs gradually from Primary Grade 4 to 6 (Henricksen, 2010). The new policy to take effect in 2017 envisions one of 16 Mozambiquan languages to be used nationwide alongside Portuguese as the LOI at the primary level ("Ensino primário moçambicano", 2015).	Portuguese is currently used as the sole LOI throughout all grades in urban schools and in many rural schools (Henriksen, 2010). Experiments with bilingual models using a Mozambiquan language and Portuguese at the primary level began in rural areas in the 1990s and are ongoing. As of 2015, nearly 500 schools were estimated to be offering bilingual classes to 80,000 children (ASSECOM, 2015).
Nigeria	Official: English National: Hausa, Igbo, and Yoruba (Nigeria Const. art. 55, §5)	The "mother tongue or the language of the immediate community" is to be used "initially" as the LOI for early primary grades, with a transition to English "at a later stage" (i.e., upper primary) (National Policy on Education as cited in Adegbija, 2008).	The policy is partially implemented, but English is widely used as the LOI at all levels, especially in urban and private schools. For example, a 2012 study of Primary Grade 1–3 classes in 12 primary schools in Lagos state found that 85–94 percent of science lessons were orally delivered in the mother tongue in the rural schools (27–62 percent in urban schools) (Okebukola, Owolabi, & Okebukola, 2012). However, a 2011 study that randomly sampled 720 primary schools, both urban and rural, from across the 36 states found that the mother tongue was not widely used as the LOI (Duze, 2011).
Senegal	Official: French National: Diola (Jola-Fonyi), Malinke, Pulaar, Serer, Soninke, Wolof "and any other national language [that] has been codified" (Republic of Senegal Const. art. 1, §1) As of 2015, a total of 22 languages had been	No explicit policy is currently in place, although as of this writing, a government working group is in the process of finalizing a proposal for a new official policy (A. Niang, personal communication, December 16, 2015). Several official documents support the use of national languages as the LOI in early	The use of national languages as the LOI is not widely practiced. From 2002 to 2008, the Senegalese government supported more than 400 experimental bilingual programs at the primary level in one of six national languages and French, but currently, most of the few remaining bilingual programs are

Country	Government-Recognized Languages in General	Language in Education Policy	Implementation of the Language in Education Policy
	codified, including: Balant, Bayot, Guñuun, Hassanya, Jalunga, Joola, Kanjaad, Laalaa, Mandinka, Mankaañ, Mënik, Manjaaku, Ndut, Noon, Oniyan, Paloor, Pulaar, Sooninke, Saafi-Saafi, Seereer, and Wolof (RTI International, 2015; D. Bathily Toure & F. Badiane, personal communication, December 10, 2015).	primary grades, but the official curriculum is in French from Primary Grade 1 (Leclerc, 2015c; RTI International, 2015; DeStefano, Lynd, & Thornton, 2009).	supported by NGOs (with government consent to operate in public schools). Otherwise, French is widely used as the LOI at all levels (RTI International, 2015). For example, a 2009 study based on classroom observations in 50 schools in 11 regions found that teachers used French as the LOI more than 95 percent of the time (Varly, 2010b).
Tanzania	Official: Kiswahili and English (Tanzania Const. art. 4, §1)	Currently, Kiswahili is to be used as the LOI for the full primary cycle (i.e., Primary Grades 1–7, called "standards" in Tanzania), with a transition to English at the secondary level. In 2015, the government announced plans to move toward a new policy, potentially extending Kiswahili as the LOI to all levels of education (The United Republic of Tanzania Ministry of Education and Vocational Training, 2014).	The policy is widely implemented. Kiswahili has also been used informally as the LOI at the secondary level (Kinyaduka & Kiwara, 2013), and this practice could potentially be formalized by the new policy.
Uganda	Official: English and Kiswahili (Uganda Const., art. 6, §1-2).	The policy recommends that the "mother tongue" be used as the LOI in the early primary grades, with a transition to English in Primary Grade 4 (Uganda Ministry of Education, Science, Technology, and Sports, 2010).	The policy is widely implemented. For example, a 2010 study based on 620 classrooms found that more than 70 percent of the time, the "mother tongue" was consistently used as the LOI in Primary Grades 1–3; its usage fell abruptly in Primary Grade 4 (Piper & Miksic, 2011).
Zambia	Official: English (Zambia Const. art. 304, §23)	The new policy implemented in 2013 authorizes seven Zambian languages (i.e., Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja, and Tonga) for use as the LOI through Primary Grade 4, with a transition to English in Primary Grade 5 (Zambia Ministry of Education, Science, Vocational Training, and Early Education, 2013).	Implementation is in transition from English as the LOI to one of seven regional Zambian languages. Data on implementation are not yet readily available.

4　Findings and Discussion

4.1　Availability of EGR Materials in African Languages

4.1.1　Total Titles

A total of 5,919 titles were surveyed. The largest number of titles reviewed was for Kenya (1,009), and the fewest was for Mali (298). **Table 4** shows the titles surveyed per country.

Table 4.　Titles Surveyed

Country	Number of Titles Surveyed	Percentage (%) of Entire Data Set
DRC	458	8%
Ethiopia	598	10%
Kenya	1,009	17%
Malawi	354	6%
Mali	298	5%
Mozambique	324	5%
Nigeria	364	6%
Senegal	460	8%
Tanzania	387	7%
Uganda	786	13%
Zambia	881	15%
OVERALL	**5,919**	**100%**

Note: In all instances in this report, the percentages are rounded off to the nearest whole percentage. Any apparent inexactitude in the sum of the totals is explained by rounding.

4.1.2　Languages

The survey sampled relevant materials in all the African languages encountered. As previously stated, materials in European languages were only considered in the case of bilingual publications, in which a European language appeared alongside an African language, "shell books" (i.e., intended and authorized for versioning into local languages), or in rare cases, reference books (e.g., a description of the grammatical rules of the language) or teacher's guides for an African language reading curriculum.

Table 5 lists the three African languages with the highest number of titles recorded in each country, along with the estimated population of native language speakers taken from the *Ethnologue* (Lewis, Simons, & Fennig, 2015a), the most comprehensive database of statistics on world languages. However, some of these estimates are out of date and may under- or overestimate the size of the current population. Additionally, some languages (e.g., Chichewa/Nyanja, Hausa, Kiswahili, and Wolof) have significant numbers of L2 speakers.

In several countries, more than half of the titles inventoried were in one language (e.g., Amharic in Ethiopia [61 percent], Chichewa in Malawi [87 percent], Bambara in Mali [52 percent], and Kiswahili in Tanzania [99 percent]).

Table 5.   Languages with the Most Titles Surveyed in Each Country

Country	Languages[a] with the Most Titles Surveyed in Country	ISO 639-3 Language Code[b]	Estimated Number of L1 Speakers in Country[c]	Estimated Number of L2 Speakers in Country[c]	Number of Titles Surveyed in Country	Percentage of Titles Surveyed in Country
DRC	Lingala	lin	2,040,000	Unknown	105	23%
	Kikongo	kng	3,000,000	5,000,000	88	19%
	Ngbaka	nga	1,010,000	Unknown	70	15%
Ethiopia	Amharic	amh	21,600,000	4,000,000	366	61%
	Afan Oromo	gaz	8,920,000	Unknown	52	9%
	Bench	bcq	348,000	22,600	36	6%
	Suri	suq	26,900	Unknown	36	6%
Kenya	Kiswahili	swh	111,000	16,500,000	424	42%
	Kamba	kam	3,893,000	600,000	70	7%
	Maasai	mas	842,000	Unknown	54	5%
Malawi	Chichewa	nya	6,500,000	Unknown	309	87%
	Tumbuka	tum	1,180,000	Unknown	18	5%
	Yao	yao	1,760,000	Unknown	14	4%
Mali	Bambara	bam	4,000,000	10,000,000	155	52%
	Fulfulde, Maasina	ffm	1,040,000	Unknown	46	15%
	Sénoufo, Mamara	myk	738,000	Unknown	27	9%
Mozam-bique	Makhuwa	vmw	3,220,000	Unknown	56	17%
	Makonde	kde	360,000	Unknown	41	13%
	Nyanja	nya	599,000	Unknown	41	13%
Nigeria	Igbo	ibo	18,000,000	Unknown	126	35%
	Yoruba	yor	18,900,000	2,000,000	107	29%
	Hausa	hau	18,500,000	15,000,000	91	25%
Senegal	Serer-Sine	srr	1,130,000	Unknown	122	27%
	Wolof	wol	5,210,000	Unknown	57	12%
	Kuwaataay	cwt	7,200	Unknown	37	8%
Tanzania[d]	Kiswahili	swh	15,000,000	Unknown	382	99%

Country	Languages[a] with the Most Titles Surveyed in Country	ISO 639-3 Language Code[b]	Estimated Number of L1 Speakers in Country[c]	Estimated Number of L2 Speakers in Country[c]	Number of Titles Surveyed in Country	Percentage of Titles Surveyed in Country
Uganda	Ganda	lug	4,130,000	1,000,000	182	23%
	Lugbara	lgg	797,000	Unknown	82	10%
	Lango	laj	1,490,000	Unknown	72	9%
Zambia	Tonga	toi	1,330,000	Unknown	168	19%
	Bemba	bem	3,810,000	Unknown	159	18%
	Chinyanja	nya	2,180,000	Unknown	146	17%

[a] Many languages are known by several different names. Language names are given here as they are listed in the *Ethnologue* (Lewis, Simons, & Fennig, 2015a), except Kiswahili ("Swahili") in Tanzania and Chinyanja ("Chichewa") in Zambia. The ISO 639-3 code is given for clarification.
[b] ISO 639-3 is a code that aims to define three-letter identifiers for all known human languages (SIL International, 2015).
[c] All speaker population data are from the *Ethnologue* (Lewis, Simons, & Fennig, 2015a) unless otherwise noted.
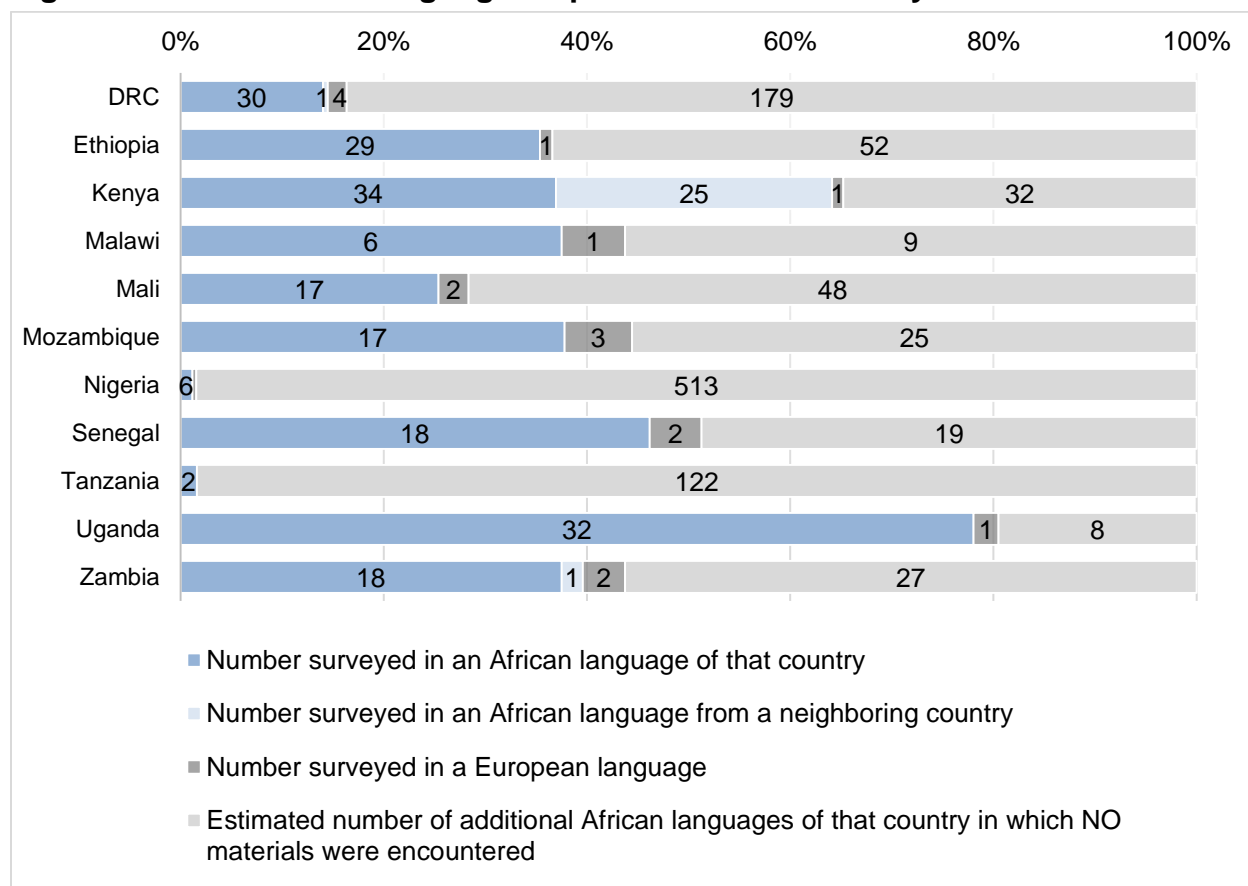[d] In Tanzania, only 10 out of 387 titles contained languages other than Kiswahili: one in Nyamwezi and four in languages that the data collectors were unable to identify. Five of these were bilingual with Kiswahili.

Figure 1 illustrates the percentages of languages represented in surveyed materials with respect to the estimated total number of languages in each country. The estimates are based on the number of languages listed in the *Ethnologue* (Lewis, Simons, & Fennig, 2015a) for each country, excluding any languages listed as extinct. The number of native speakers of each of these languages can range from a few hundreds to the millions. Additionally, many languages span country borders.

The percentages of languages for which titles were found with respect to the total number of languages in any given country varied widely. Some countries within the study that had a relatively low degree of linguistic diversity had a high degree of coverage (e.g., Kenya and Uganda), whereas some of the most linguistically diverse countries had the lowest levels of coverage (e.g., Nigeria and Tanzania). These results reflect the language in education policies of each government. For example, in Tanzania, the policy allows only for Kiswahili to be used as the LOI at the primary level, and an overwhelming majority of the materials surveyed were in Kiswahili, with very few published in any of the other 124 living languages (Annex I). The findings of the study may also reflect the implementation of language in education policies. For example, in Nigeria, the official policy has called for Nigerian languages to serve as the LOI in Nigeria since the 1970s. However, the policy is not widely implemented, and materials were found in only six of Nigeria's more than 500 languages (Annex G).

It is worth noting that the failure to identify titles in particular languages may also reflect the limitations of this study, including the sampling methodology and logistical and security constraints in reaching some regions. More information about country-specific constraints is presented in Annexes A–K.

Figure 1.   Number of languages represented in the surveyed titles

Number surveyed in an African language of that country

Number surveyed in an African language from a neighboring country

Number surveyed in a European language

Estimated number of additional African languages of that country in which NO materials were encountered

Notes: Multiple responses were possible per title because an individual title could be written in two or more languages. Language origins are taken from the *Ethnologue* (Lewis, Simons, & Fennig, 2015a). Titles published in European languages—English, French, and Portuguese—were included in this study only if they were available as shell books, appeared bilingually alongside an African language, or in rare cases, were a reference book or teacher's guide for a reading curriculum in an African language.

4.1.3 Types of Materials

The data collectors searched for relevant books in two broad categories: textbook-related materials, including student reading textbooks or primers,[30] student workbooks, and teacher's guides; and supplementary non-textbooks, including materials classified as narratives, informational materials, references, or as poetry, songs, riddles, or proverbs.

Overall, 3,617 supplementary titles were identified, compared to 2,302 textbook-related titles, corresponding to a ratio of approximately 3:2. **Figure 2** shows the number of titles surveyed in these two broad categories by country. The proportions for each category varied widely from country to country. For example, the percentage of textbook-related titles was the lowest in Malawi (19 percent) and the highest in Nigeria (80 percent).

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[30] According to the Merriam-Webster Dictionary (www.merriam-webster.com), a textbook is "a book about a particular subject that is used in the study of that subject especially in a school," whereas a primer is "a small book for teaching children to read."

Figure 2.   Number of titles surveyed by category
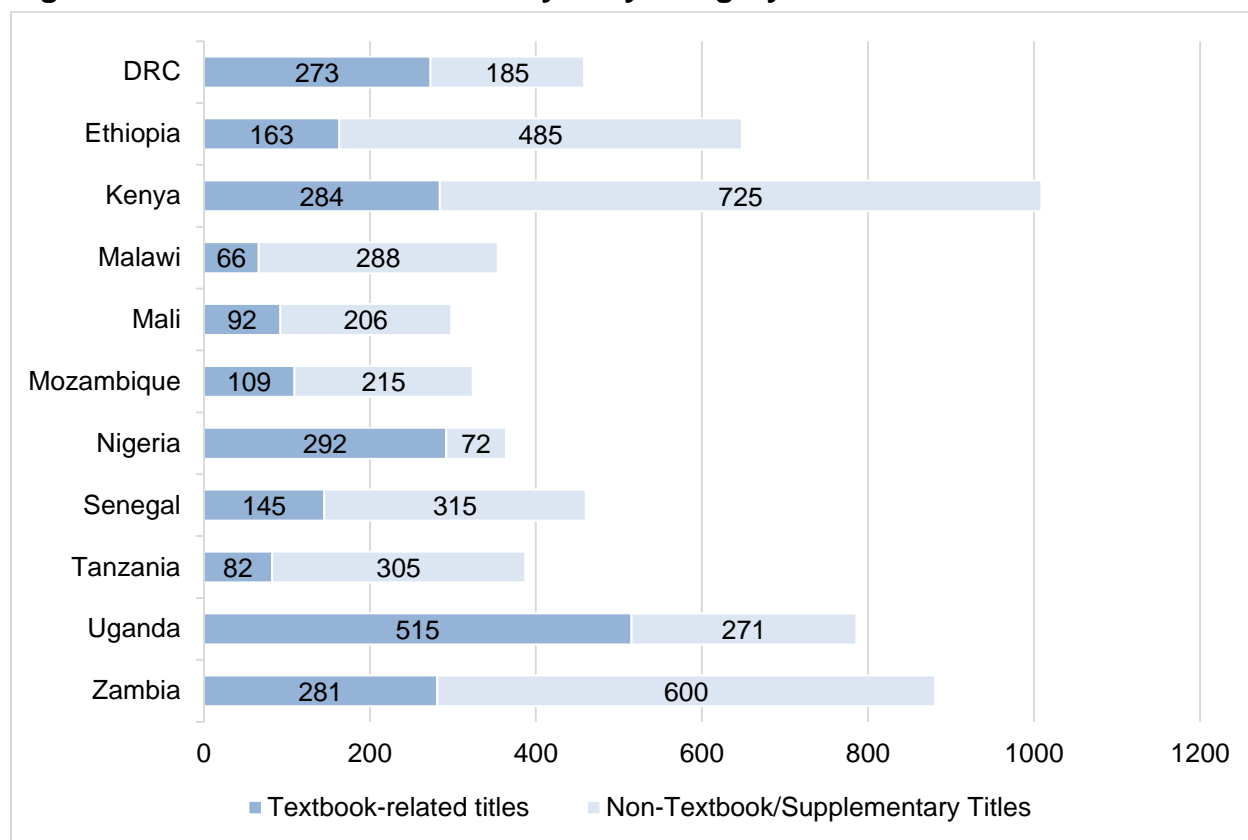
Among textbook-related materials, student literacy textbooks were the most common type overall (73 percent), and student literacy workbooks were the least common (seven percent); literacy teacher's guides constituted approximately one fifth (19 percent) of the textbook-related titles surveyed (**Figure 3**). These proportions varied by country. In the DRC, teacher's guides were more numerous than student textbooks and accounted for more than half of textbook-related titles (56 percent). Mozambique had the largest percentage of student workbooks (34 percent), but Zambia had slightly more in terms of raw numbers. Uganda had, by far, the most student textbooks (469), almost double that of the country with the next highest number (i.e., Nigeria, with 250).

Figure 3. **A breakdown of titles identified as textbook related**
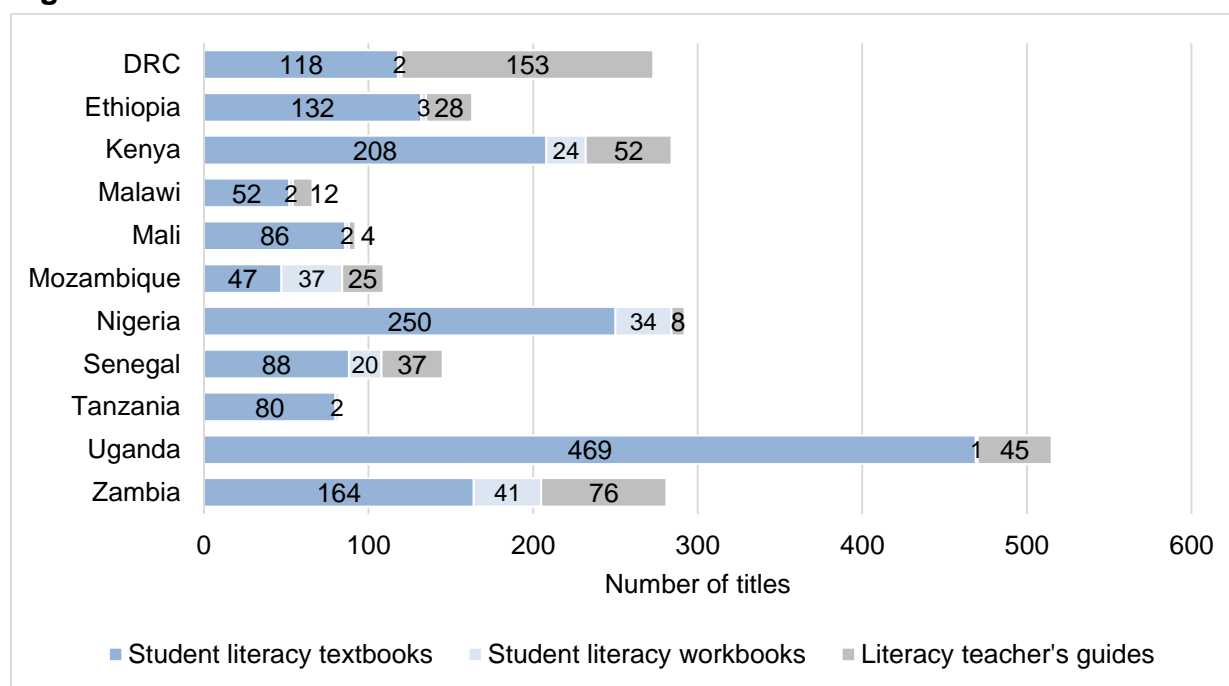
Among the supplementary titles (**Figure 4**), narrative texts (e.g., stories) were consistently and overwhelmingly the most common type (79 percent overall). Informational texts (e.g., non-fiction) were much rarer across the board, constituting only 13 percent of the supplementary inventory, and in some countries (e.g., Nigeria and Mali), they were almost non-existent.

**Figure 4.** **A breakdown of titles identified as supplementary**
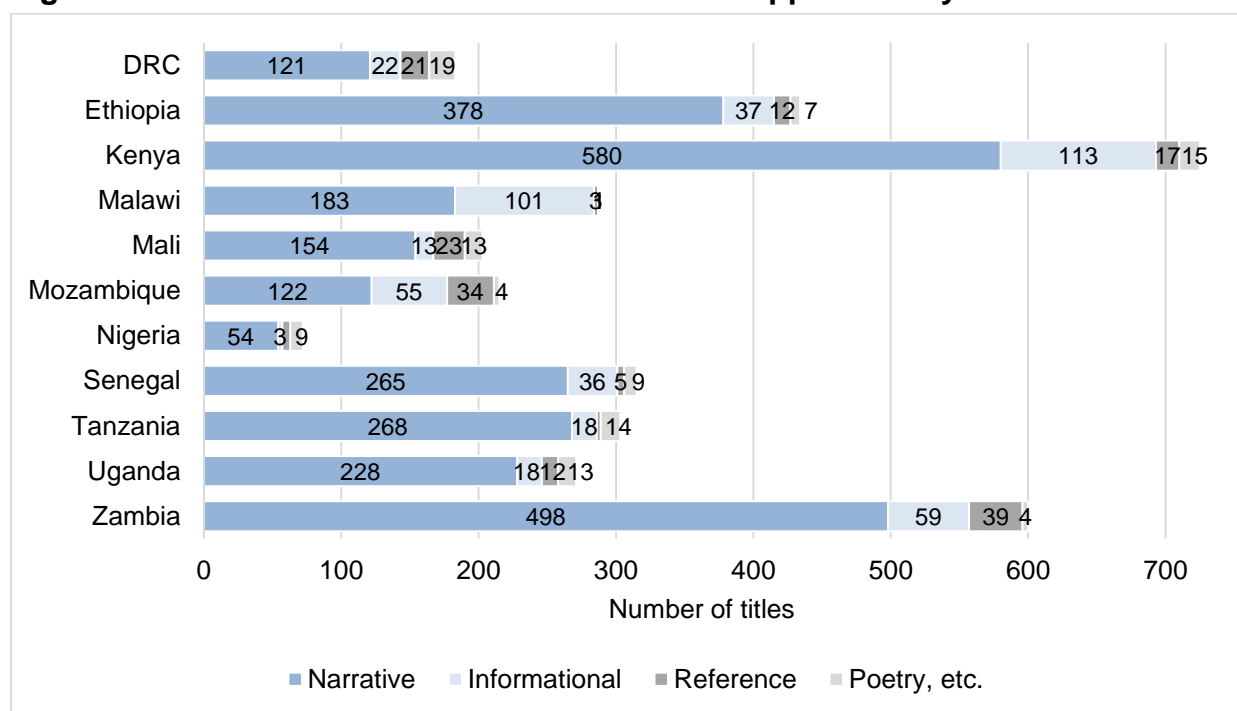
4.2   Usefulness of Available Materials for EGR Development

4.2.1   Pedagogical Components of Textbook-related Materials

Overall, 2,302 textbook-related materials were analyzed regarding their pedagogical components. The most common components were reading passages, which appeared in 67 percent of titles, and vocabulary development activities, identified in 60 percent of titles (**Figure 5**). The least common component was grammar instruction, which was found in only 20 percent of the titles overall.

Figure 5.   Pedagogical components in textbook-related materials
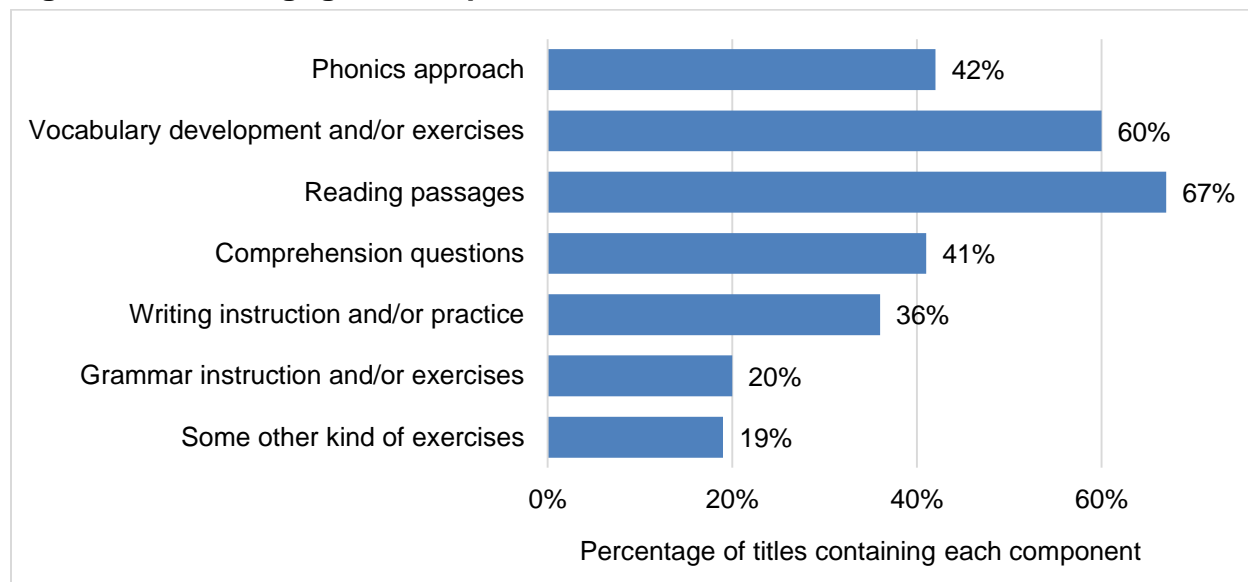
Note. Multiple responses per title were possible.

Phonics-based approaches to reading instruction, which focus on the connection between written letters and the sounds they represent in speech, have been shown to be effective in teaching students to read in alphabetic languages (Adams, 1990; Davidson, 2013). Phonics instruction may include exercises on sound recognition and manipulation, blending sounds into syllables or words, and segmenting syllables and words into individual sounds. An example of such an approach is presented in **Figure 6**.

Figure 6.   A sample lesson incorporating a phonics approach

Note: Excerpted from *Kusoma Kiswahili*, a Kiswahili language Primary Grade 1 student textbook from the Primary Math and Reading (PRIMR) Initiative in Kenya.

Overall, approximately 42 percent of the textbook-related titles included a phonics-based approach to reading instruction, at least in part.[31] However, the inclusion of phonics in textbook-related titles ranged from as low as nine percent in Mozambique to as high as 70 percent in Nigeria.

Other components also varied between countries. **Table 6** shows the differences between countries in terms of the specific pedagogical components found in the textbook-related materials surveyed.

Table 6.   Percentages of Textbook-related Materials with Specific Pedagogical Components by Country

Country	Phonics	Vocab- ulary	Reading Passage	Compre- hension Questions	Writing	Grammar	Other
DRC	46%	19%	93%	32%	17%	11%	15%
Ethiopia	71%	88%	81%	62%	79%	13%	17%
Kenya	35%	48%	25%	15%	31%	30%	36%
Malawi	41%	62%	79%	42%	41%	8%	50%

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[31] The presence of elements of phonics-based instruction in a textbook does not necessarily imply that it is being used within the context of a curriculum or program that promotes phonics-based instruction.

Country	Phonics	Vocab-ulary	Reading Passage	Compre-hension Questions	Writing	Grammar	Other
Mali	52%	27%	79%	39%	21%	23%	14%
Mozambique	9%	29%	81%	81%	73%	40%	5%
Nigeria	70%	79%	79%	70%	57%	36%	5%
Senegal	54%	39%	60%	39%	43%	26%	30%
Tanzania	20%	35%	38%	34%	33%	7%	54%
Uganda	27%	76%	64%	29%	12%	6%	20%
Zambia	37%	89%	66%	46%	47%	28%	6%
OVERALL	**42%**	**60%**	**67%**	**41%**	**36%**	**20%**	**19%**

4.2.2 Level

Designated Textbook Levels

The survey sample targeted materials that were potentially appropriate for Primary Grades kindergarten–3. Because leveling systems are not consistent across publishers and are based on criteria unknown to the data collectors, materials designated for higher primary grades were included if they appeared potentially useful for the lower grades as well.

Of the 2,302 textbook-related materials surveyed, 1,831 (80 percent) were explicitly labeled by the publisher for a specific grade or level (**Figure 7**). The highest percentages of titles were intended for Primary Grades 1 (36 percent) and 2 (25 percent). Approximately one fifth of the surveyed titles were labeled for Primary Grade 3 (17 percent), and one-tenth were labeled for Primary Grade 4 (11 percent). Materials designated for pre-primary were extremely rare (only four percent overall) and non-existent among titles surveyed in the DRC, Mali, Mozambique, and Zambia.

Figure 7.   Publisher-designated levels for textbook-related materials

	Pre-Primary	Primary Grade 1	Primary Grade 2	Primary Grade 3	Primary Grade 4	Other Level
DRC		53	38	21	15	8
Ethiopia	11	48	34	35	28	6
Kenya	19	119	67	44		
Malawi	1	20	17	15		4
Mali		22	26	5	1	13
Mozambique		13	5	47	23	18
Nigeria	15	60	61	49	42	21
Senegal	13	28	22	8	11	7
Tanzania	4	26	28	31		5
Uganda	2	169	117	40	26	10
Zambia		118	52	30	45	16
OVERALL	65	676	467	325	200	99
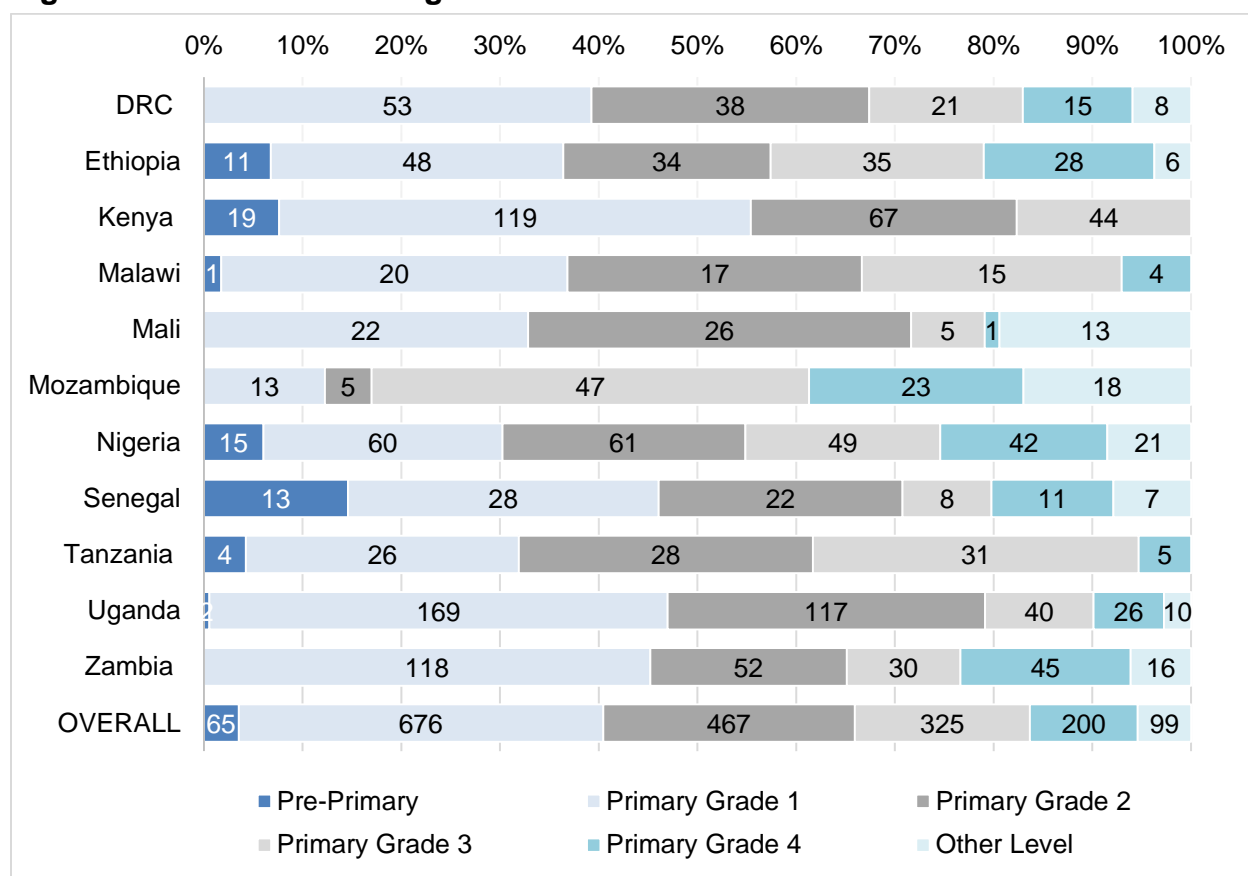
Note: This graphic only shows the numbers of textbook-related titles that were explicitly labeled for a specific level by the publisher. "Other Level" most often referred to designations used outside the formal sector or in adult literacy programs, such as "beginner", "intermediate", or "advanced". Although rare, multiple responses per title were possible.

Non-textbook Levels

Supplementary materials were not expected to be labeled for a particular grade level. Text level is a highly complex construct. Currently, more than 100 readability formulas exist for text level analysis in English. Most formulas rely on measures of semantic or syntactic difficulty (Davidson, 2013) that were either not available for the languages studied or too time consuming for the data collectors to analyze within the study's time constraints. Nonetheless, to obtain some indication regarding relative text difficulty, the maximum number of wpp was counted to serve as an approximate proxy. These counts were classified into the following five ranges to mirror the five levels in the similar model used by SAIDE's African Storybook Project[32]:

1. First words: 0–10 wpp;
2. First sentences: 11–25 wpp;
3. First paragraphs: 26–50 wpp;

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[32] More information about the five levels can be found at the following website:
http://www.africanstorybook.org/browse-by-reading-level

4. Longer paragraphs: 51–75 wpp; and

5. Read alouds/advanced: More than 75 wpp.

Although the number of wpp is only one of many dimensions of the text level, these ranges provide a general method for ranking books from "less" to "more" advanced, especially within the same language, as can be seen by comparing the excerpts from two titles by the African Storybook Project in **Figures 8** and **9**.

Figure 8.   A sample page from a narrative in the 1–10-wpp range
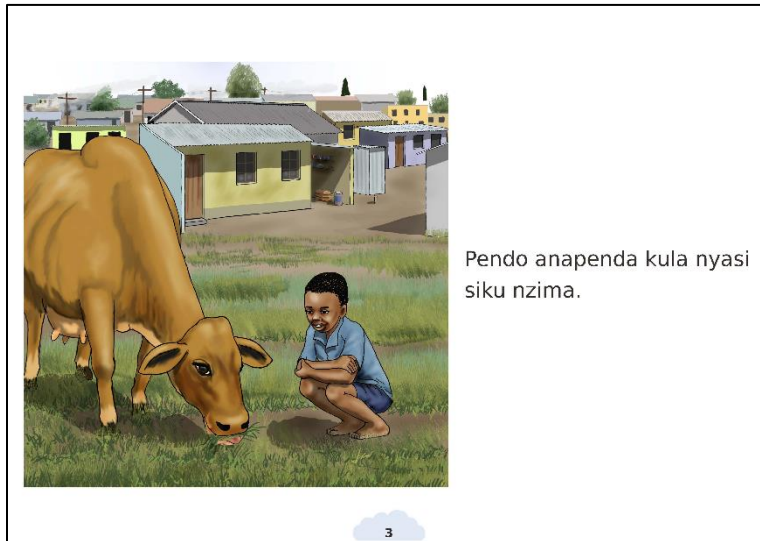
Note: Excerpted from *Ng'ombe Wetu,* written by Ruth Odondi and illustrated by Rob Owen, © African Storybook Initiative and Molteno Institute, 2014.

Figure 9.   A sample page from a narrative in the 51–75-wpp range.
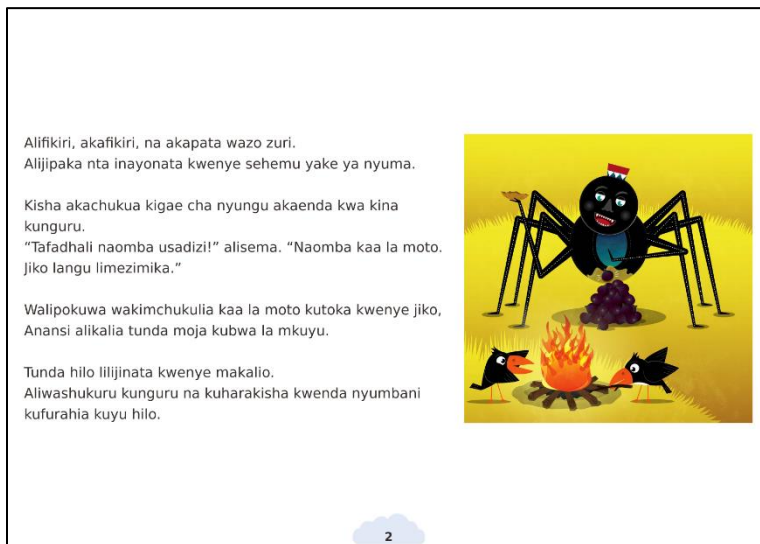
Note: Excerpted from *Anansi, Kunguru na Mamba,* a Ghanaian folktale illustrated by Wiehan de Jager, translated by: Mutugi Kamundi

It is helpful for learners to have an abundance of reading materials at all wpp ranges to support their progressively developing reading skills at each stage. As shown in **Figure 10**, relatively few titles were available for the earliest stage of reading development. Data concerning the wpp were recorded for 3,213 narrative and informational titles. Nearly one third of these titles (31 percent [1,005 titles]) featured more than 75 wpp, which is appropriate for readers who have already attained fluency. However, those with fewer wpp are more manageable for the earlier stages of literacy development, when emerging readers are just learning to decode, and their fluency is, therefore, low. Only 13 percent (408) of these titles were in the 51–75-wpp range (intermediate), followed by 14 percent (437) in the 1–10-wpp range (beginning). These proportions also varied widely by country. For example, Zambia had 106 titles in the 1–10-wpp range, whereas the DRC and Mali each had only two titles in this range, and Nigeria had zero.

Figure 10.   Number of narrative and informational non-textbook titles by maximum wpp
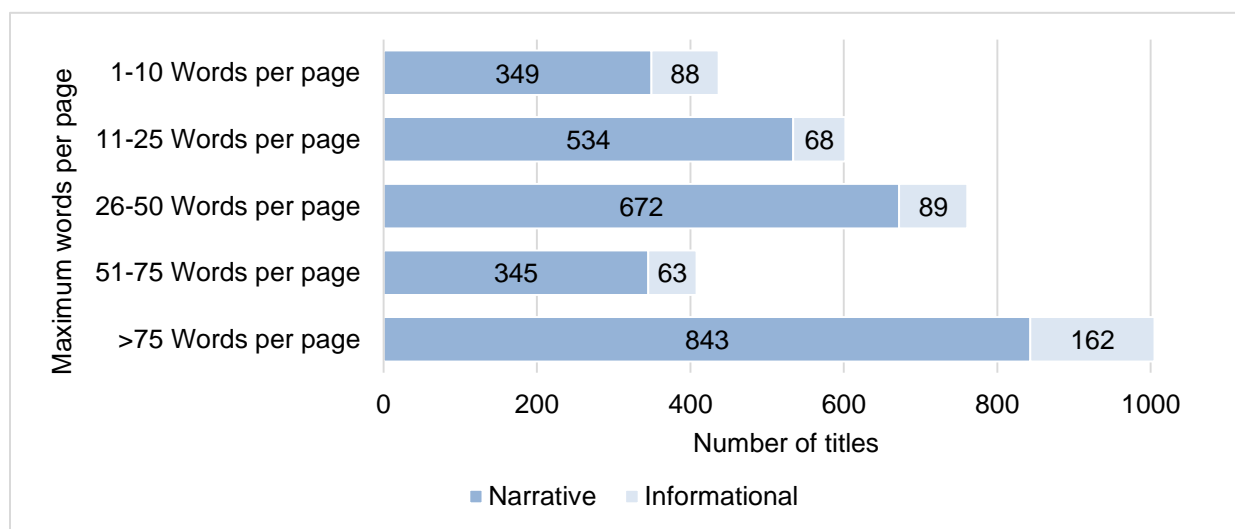
Note: This calculation was not performed for poetry or reference titles.

4.2.3   Illustrations

Illustrations, pictures, and graphics are common elements of early grade instructional and reading materials. Out of the 5,919 titles surveyed, 5,235 (88 percent) were illustrated. Most of the non-illustrated titles were teacher's guides and reference materials that were not designed for students. Overall, illustrations were almost evenly split between those in black and white (B&W) (2,410 [41 percent]) and those in all color (2,550 [43 percent]), with 275 titles (five percent) having a mixture of both (**Figure 11**). (The data are missing for one title.) The titles surveyed in Kenya, Tanzania, and Zambia were more frequently illustrated in color, whereas in all the other countries, the largest percentage of titles contained B&W images. The DRC also had the highest percentage of non-illustrated materials (38 percent).

Figure 11.   Presence and type of illustrations

Legend: ■ Not Illustrated   ■ All B&W   ■ Some B&W, Some Color   ■ All Color

Country	Not Illustrated	All B&W	Some B&W, Some Color	All Color
DRC	173	220	14	51
Ethiopia		347	44	206
Kenya	67	232	25	684
Malawi	43	147	2	164
Mali	74	162	10	52
Mozambique	61	142	13	108
Nigeria	31	165	52	116
Senegal	34	359	8	59
Tanzania	8	68	58	253
Uganda	57	354	40	335
Zambia	135	214	9	523
OVERALL	684	2410	275	2550
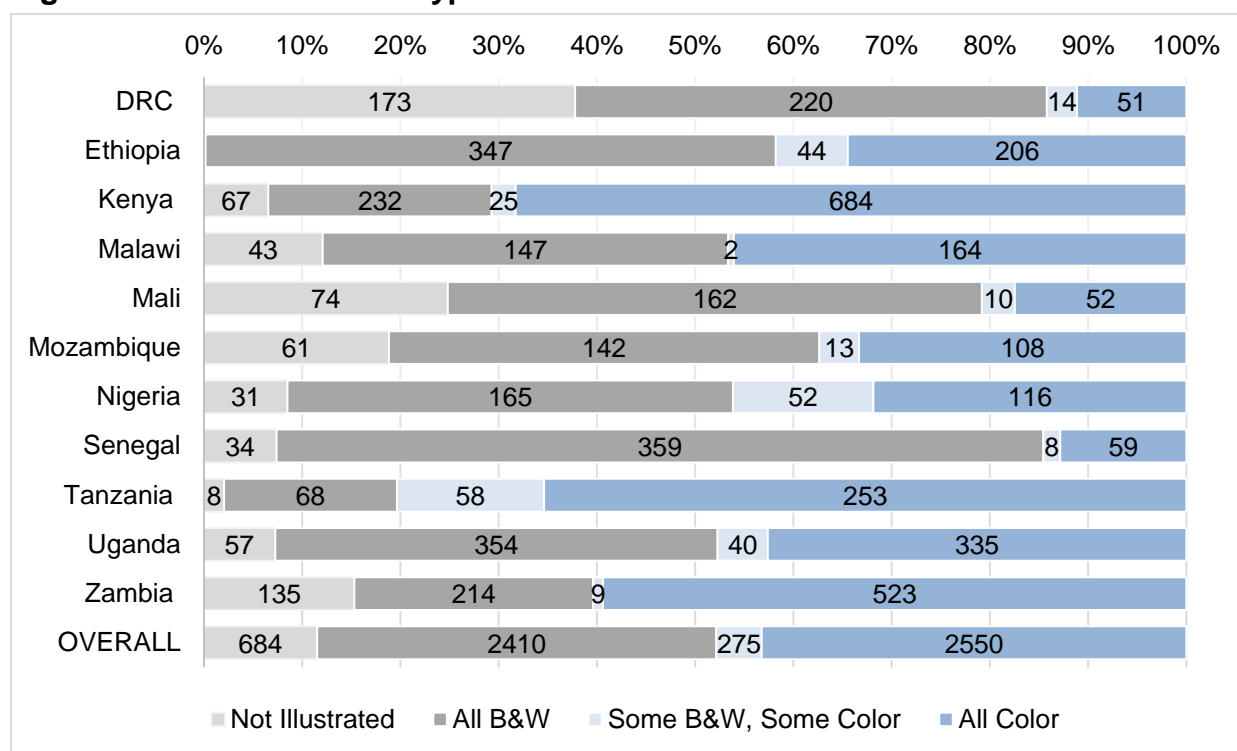
4.2.4   Content: Themes, Familiarity, Appropriateness, and Representation

Content Themes

Excluding teacher's guides and reference materials, the data collectors examined the content and/or illustrations of 5,298 titles for content themes. The data collectors skimmed the texts if they knew the language; if they did not know the language, they reviewed only the illustrations. The data collectors checked off the most prominent themes from a set list and could select any number of themes because no limits were set for the minimum and maximum numbers.

Of the titles evaluated, the most common themes were animals (2,089 titles [39 percent]), morals/values (1,982 titles [37 percent]), education/school (1,609 [30 percent]), family (1,518 [29 percent]), and home life (1,309 [25 percent]). In addition, a total of 409 (eight percent) of the titles examined for content were found to contain explicit religious content, although this also varied widely between countries. A large percentage of titles in the DRC (34 percent [98 titles]) and Malawi (27 percent [92 titles]) had explicit religious content, whereas in most of the other countries, very few titles with religious content were found (less than five percent).

Content Familiarity

The same titles were analyzed for the familiarity of the content for the target audience (i.e., a typical child who is a native speaker of the language of publication). The data collectors rated the content as "very familiar", "semi-familiar", or "mostly unfamiliar". Overall, 88 percent of the titles were judged to contain "very familiar" content for children, nine percent had "semi-

familiar" content, and only two percent contained "mostly unfamiliar" content. (The data collectors marked an additional 102 titles as "unable to evaluate".) No country diverged from this trend; the percentages of "very familiar" content ranged from 72 percent in the DRC to 97 percent in Zambia. Kenya had the highest number and percentage of titles with "mostly unfamiliar" content, but even in this country, only 43 titles (five percent) were identified.

Content Appropriateness

These titles were also analyzed for the presence of potentially sensitive content in the illustrations, including traumatic events, violence, smoking, nudity, or another known cultural taboo. No potentially sensitive content was found in the vast majority (89 percent) of the titles evaluated for this item.

The most commonly identified, although rarely found, type of sensitive content was a traumatic event, which was noted in three percent of the materials overall. The other categories were even rarer, each occurring in less than one percent of the titles. These trends were fairly steady across the board with few exceptions. Nigeria had the highest incidence of sensitive content noted (13 percent for a traumatic event).

Frequency and Equality of Representation

The data collectors examined the illustrations in a subset of the materials regarding the frequency and equality of roles of the people in the illustrations according to gender, ethnic or religious group identity, and disability. Excluded from these investigations were teacher's guides, reference materials, and titles that were not illustrated with humans or anthropomorphic animals. Therefore, the percentages presented in the following paragraphs are based on the subset of materials for which an evaluation was possible.

Whereas frequency counts are quantitative, the questions regarding equality of roles were inevitably subjective. The concept of equality is highly contextual, culturally relative, and fluid. For example, specific depictions of women performing domestic chores may be interpreted as sexist or demeaning in one culture (or sub-culture) but not in another. Therefore, to be portrayed with comparable skills, knowledge, accomplishments, and roles means that the sub-groups (e.g., genders or ethnic groups) were generally presented as social, intellectual, and moral equals. Thus, the sub-groups should participate in similar activities and exercise traditional, non-traditional, leadership, and supporting roles in similar proportions to one another. Additionally, no sub-groups should be exclusively portrayed in positions that are considered inferior, subservient, or demeaning for that sub-group. Finally, although stories may contain antagonists who perform "bad things" and are ultimately "defeated" by the protagonists, these characters should not be portrayed as representative of a whole sub-group.

Gender

The illustrations in titles containing characters with obvious genders were evaluated regarding frequency of representation of each gender. Materials containing mostly male characters or mostly female characters should not necessarily be interpreted as an affront to the excluded gender. For example, a story may have a male or female protagonist with very few other

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characters, if any. Nonetheless, most of the titles evaluated for this item were found to have an overall balance in the representation of both genders, and this trend held across all countries. Ethiopia had the highest number of titles featuring illustrations containing primarily male characters (117).

Additionally, for the titles for which there was a sufficient basis for comparison, data collectors judged whether male and female characters were portrayed with comparable skills, knowledge, accomplishments, or roles. Again, in most cases, the genders were judged to be portrayed equally. The DRC had the highest percentage of titles judged to portray the genders unequally (13 percent), and Zambia had the highest raw number count (52).

Ethnic and Religious Group Identity

Similarly, the data collectors examined the illustrated titles regarding the frequency of representation of different ethnic and/or religious group members. Of titles examined, a majority in each country and 75 percent overall were deemed as not portraying characters with obvious ethnic or religious group identity markers.

Of the illustrations that portrayed characters with ethnic or religious group identity markers, the data collectors judged how those representations reflected the proportions of those ethnicities and religious groups within the target audience. Specifically, they answered the following question: For ethnic and religious groups that comprised more than 10 percent of the local population in the target audience, were these groups represented proportionally in the illustrations, or was one group represented to the exclusion of others?

Overall, of the titles evaluated, only five percent were judged to contain illustrations that portrayed members of one group to the exclusion of another group present in the target population. These findings may suggest that book producers are generally sensitive to depicting characters in an ethnically and religiously neutral manner. Although the DRC and Uganda had slightly elevated percentages of this response (nine percent each), for many countries (Ethiopia, Kenya, Mozambique, Senegal, and Tanzania), this response constituted one percent or less.

For the overwhelming majority of titles, the data collectors judged that there was an insufficient basis for comparison of the nature of the portrayal, if any, of ethnic or religious groups in the illustrations. Across all countries, of the rare titles for which this evaluation was possible, the data collectors judged that 85 percent portrayed different ethnic or religious groups with equal skills, knowledge, accomplishments, or roles.

Disability

The data collectors examined the illustrated titles regarding the frequency of representation of people with disabilities. People with disabilities are estimated to constitute, on average, 15 percent[33] of the world population (RTI International, 2015), and this value was used as the benchmark for being representative of reality. In contrast to the relatively encouraging results for gender, ethnicity, and religion, overwhelmingly, the materials surveyed lacked any illustrations

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[33] The benchmark was actually set at 10 percent based on the research available at the time when the survey instrument was designed. More recent research suggests that the actual percentage is closer to 15 percent.

of people with disabilities at all. People with disabilities appeared in just four percent of the titles evaluated and were portrayed in representative proportions in less than one percent of titles. This may constitute a gap that future literacy initiatives could address to establish more realistic and inclusive representation of people with disabilities.

Although illustrations of people with disabilities were rare, of the titles which portrayed people with disabilities at all, the data collectors judged that 73 percent portrayed them with skills, knowledge, accomplishments, and roles typically attributed to people without disabilities, similar to the example in **Figure 12**.

Figure 12.   A sample illustration featuring a person with a disability functioning in a role typically attributed to people without disabilities

Note: Excerpted from *Tiwerenge Nkhani 1*, a decodable reader in Chichewa from the USAID Early Grade Reading Activity in Malawi.

4.3   Feasibility of Reusing, Adapting, and Reproducing Available Titles

The main criteria for determining the feasibility of re-using, adapting, or reproducing existing materials were the copyright and the availability in digital format. It should be noted that neither of these factors is necessarily an impediment to the inclusion of a title in the repository; however, they do determine the level of effort involved in using existing content.

4.3.1   Copyright, Restrictions, and Permissions

Copyright specifically includes the rights to reproduce copies of the work, prepare derivative works based on the original piece, distribute copies to the public, and/or display and perform the

work publicly. The copyright is conferred automatically to the author[34] without the need for registration. A copyright can also be transferred—or often, licensed—but only through express assignment in writing (Zimmerman, 2015).

Based on the copyright status, the implications for the level of effort involved in using content from existing titles are as follows:

Titles for which all rights are reserved. Traditionally, copyright owners have used the phrase "All Rights Reserved" (usually on the copyright page of a book) to indicate that that they reserve all of the rights granted to them under the law. Parties interested in reproducing the work or creating derivatives of it—partially or in its entirety—are obligated to contact the copyright owner to request permission or purchase a copyright license. To request permission or initiate a copyright license negotiation, the first step is to successfully contact the copyright owner. Then, once contacted, the copyright owner can grant or deny permissions based on the request. Additionally, rights' negotiations take time, and depending on the negotiation, licenses may need to be renegotiated after their expiration date.

Titles in the public domain. Copyright protection is limited in duration. Once a copyright expires, the work becomes a part of the public domain and, therefore, public property. An author's exclusive rights over a work remain valid 70 years after his or her death (life plus 70 years), although the term of duration varies between countries depending on national copyright legislation (see **Table 7** for the copyright protection terms for each of the 11 countries.) If publishers registered in one country want to publish the work of an author from another country, then public domain will be determined by the copyright laws of the author's country of birth and/or by a copyright treaty between the two countries. A work can also become a part of the public domain if the copyright owner voluntarily forfeits his or her rights (Copyright Clearance Center, 2015; Zimmerman, 2015). Therefore, although titles under public domain are free to use, verifying whether a work is in the public domain requires knowing the author's country and date of birth and the country-specific legislation. Data about authors' countries and date of birth was not collected because of anticipated difficulties; therefore, the public domain statuses of the surveyed titles cannot be verified.

Titles with a Creative Commons license. Creative Commons licenses are legal tools of international use that streamline the process through which copyrighted content can be searched, discovered, and used. A variety of Creative Commons licenses grant free (gratis) rights to re-use licensed content or to derive new content from it. The licenses differ in the specific rights granted ("some rights reserved") and the conditions under which they can be used. Works under a Creative Commons license can easily be searched online and used automatically according to the terms of the license without the need to contact the copyright owner (Creative Commons, 2015). Titles with a Creative Commons license are the easiest to re-use and adapt; because the conditions are clearly pre-stated, there is no need to contact the copyright owner, and the available rights are gratis.

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[34] With a few exceptions, if a work is commissioned or made for hire, then the copyright belongs to the employer or the entity that commissioned the work.

Titles for which there is no explicit statement on copyright owner and permissions or licenses. In the absence of information about the copyright owner or clarity regarding the conditions under which the existing content can be adapted or disseminated, materials cannot be used until the copyright owner is found and contacted. Searching for this information may require many months and may ultimately be fruitless.

Table 7.   Copyright legislation and duration of copyright protection

Country	Legislation on Copyright	Duration of Copyright Protection
DRC	Ordinance-Law No. 86-033 of April 5, 1986, on the Protection of Copyright and Neighboring Rights (DRC, 1986)	Life + 50
Ethiopia	Copyright and Neighboring Rights Protection Proclamation No. 410/2004 (Federal Democratic Republic of Ethiopia, 2004)	Life + 50
Kenya	The Copyright Act, 2001 (Kenya, 2001)	Life + 50
Malawi	Malawian Copyright Act of 1989 (Malawi, 1989)	Life + 50
Mali	Law No. 08-024 of July 23, 2008 laying down the Regime of Literary and Artistic Property in the Republic of Mali (Mali, 2008)	Life + 70
Mozambique	Law No. 4/2001 of February 27, 2001 (Mozambique, 2001)	Life + 70
Nigeria	Copyright Act, Chapter C28, as codified 2004 (Nigeria, 2004)	Life + 70
Senegal	Law No. 2008-09 of January 25, 2008 on Copyright and Related Rights (Senegal, 2008)	Life + 70
Tanzania	Copyright and Neighbouring Rights Act, 1999 (United Republic of Tanzania, 1999)	Life + 50
Uganda	The Copyright and Neighbouring Rights Act, 2006 (Uganda, 2006)	Life + 50
Zambia	Copyright and Performance Rights Act, 1994, Act No. 44 of 1994 (Zambia, 1994)	Life + 50

The survey results suggest that issues of copyright may be one of the most laborious aspects of implementing a Global Reading Repository because most titles would require some form of permission request or rights negotiation. **Table 8** shows that relatively very few titles (680 [12 percent]) contained explicit statements granting permissions for re-use under specific conditions, with only 529 (nine percent) having a Creative Commons license. The survey results show that Creative Commons licensing is not yet a widespread practice in these countries. The unusually high percentages in Kenya and Uganda can be attributed to the numerous Creative Commons-licensed titles made available in Kenyan and Ugandan languages by SAIDE's African Storybook Project[35], and that in Nigeria is the result of the titles provided by the American University of Nigeria.

Overall, 4,547 (77 percent) of the titles contained a copyright symbol. Whether the remaining 23 percent of titles are in the public domain cannot be determined at this time because information about each author's country and date of birth was not collected in this survey. The omission of

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[35] For more information about SAIDE's African Storybook Project, see http://www.africanstorybook.org.

explicit statements regarding permissions was widespread in the investigated sample (2,741 [46 percent]). However, although only 2,391 titles [40 percent] contained an explicit statement equivalent to "All Rights Reserved", it seems plausible that all copyrighted materials without an explicit statement about permissions are also "All Rights Reserved".

In general, a large number of titles contained no information about copyright or permissions. The absence of clear information on the status of rights and permissions could signal producers' lack of knowledge about book sector best practices or the absence of clear copyright legislation. Unclear or unenforced copyright legislation[36] makes a country more vulnerable to book piracy. Although investigating the prevalence of book piracy was beyond the scope of this study, reports from the country data collection teams consistently alluded to piracy as a challenge to their efforts (Annexes A–K).

Table 8.   Copyrights and statements of restrictions or permissions on re-use

Country	Copyright Symbol	Statements on Permissions			
		"All Rights Reserved" Statement	Creative Commons License	Statement Granting Permissions	No Explicit Statement on Permissions
DRC	46%	2%	<1%	<1%	96%
Ethiopia	68%	46%	0%	2%	40%
Kenya	89%	51%	24%	1%	23%
Malawi	82%	25%	7%	2%	65%
Mali	53%	38%	<1%	<1%	60%
Mozambique	15%	1%	1%	13%	85%
Nigeria	93%	75%	12%	0%	13%
Senegal	85%	10%	0%	3%	87%
Tanzania	94%	93%	0%	0%	7%
Uganda	86%	42%	27%	8%	21%
Zambia	86%	43%	0%	0%	57%
OVERALL	**77%**	**40%**	**9%**	**3%**	**46%**

Notes. For two percent of the titles, the questions concerning an explicit statement were marked as "unknown/unable to evaluate", for example, when the front matter was missing or when the data collectors did not understand the language of publication.

4.3.2 Medium

A digital repository of books will require that all titles be available in digital form, or soft copy. Less than one fourth of the titles were available in soft copy. Across all countries, 5,030 books

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[36] "Although many African countries have enacted copyright legislation and are signatories to at least one of the international copyright or intellectual property conventions, very few actually take steps to enforce the instruments, and even fewer have regulatory authorities or organisations to promote copyright or intellectual property understanding" (Reiner, 2011).

(85 percent) were surveyed in hard copy, and 1,248 books (21 percent) were surveyed in soft copy. Of these hard- and soft-copy titles, only 359 books (six percent) were known to be available in both media. However, because many of the titles surveyed were published after 2000 (see Section 4.4 regarding the relevant findings), there is a strong possibility that many of the hard-copy titles were printed from a digital file. The countries with the largest numbers of available soft copies were Kenya (520), Uganda (261), and Ethiopia (207). As previously mentioned, a significant number of the titles in Kenya and Uganda were from SAIDE's African Storybook Project. Of the soft copies surveyed, only five were from the DRC, and one was from Zambia.

Again, the availability of soft-copy titles will affect the effort needed to make titles readily accessible for re-use and adaptation. Titles that are already available digitally will likely need to be exported to the preferred format for easy re-use and/or adaptation, although this is yet to be determined. Titles that are only available in hard copy will need to be converted into a digital format, which will likely include creating digital versions of the layout.

4.4   Landscape of the Production of Children's Reading Materials in African Languages

Data collected through the survey also provided insight regarding the overall landscape and historical trends of the production of reading materials for young readers in African languages.

### 4.4.1   Primary Producers of Materials in African Languages and Historical Evolution of Production

According to studies that refer to the history of the book sector in Africa (Diallo, 2011; Ogechi and Bosire-Ogechi, 2002; Reiner, 2011; Read, 2015), Christian missionaries were pioneers in the production of reading materials in African languages, beginning as early as the 19th century. However, the growth of local publishing ventures focused on African languages is a recent phenomenon that began approximately 20 years ago. In the interim, books in Africa were imported for many years but only in dominant colonial languages (Askerud, 1997). Then, in the late 1960s and early 1970s, in the aftermath of independence, in several countries[37], the states led ambitious projects for the publication of instructional materials in (usually all major) national languages. In most cases, these projects were abandoned before materials were published in all languages. By the 1980s, publishing in sub-Saharan Africa had become dominated by large international publishers, which began to create local subsidiaries until a local industry became consolidated in the 1990s. However, these large, profit-driven publishers have focused primarily on dominant world languages, for which there is a much larger market. UNESCO's Education for All (EFA) goals, which were launched in 2000, galvanized support from bilateral and multilateral donors, several of which have directly invested in the publication of instructional materials in local African languages in recent years.

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[37] These countries include Guinea, which was not part of this survey (Diallo, 2011), and Kenya (Ogechi and Bosire-Ogechi, 2002). Details are available in the country reports in Annexes A–K.

The survey results confirm the historical trajectories in the production of publications in African languages. Most titles surveyed (4,451 [75 percent]) were published after 2000, and nearly half of all titles (2,671 [45 percent]) were published between 2010 and 2015.

The survey findings indicate that commercial publishers and non-profit organizations[38] are the leading producers of EGR materials. Overall, commercial publishers published 2,338 titles (40 percent), with non-profits accounting for 1,986 (34 percent). Titles registered as having been produced by domestic government entities represent 15 percent (908 of all titles surveyed), although almost half of these titles (42 percent) were co-produced with bilateral or multilateral donors. **Figure 13** presents the findings on production per publisher type and decade.

Figure 13.   Number of titles per publisher type and decade
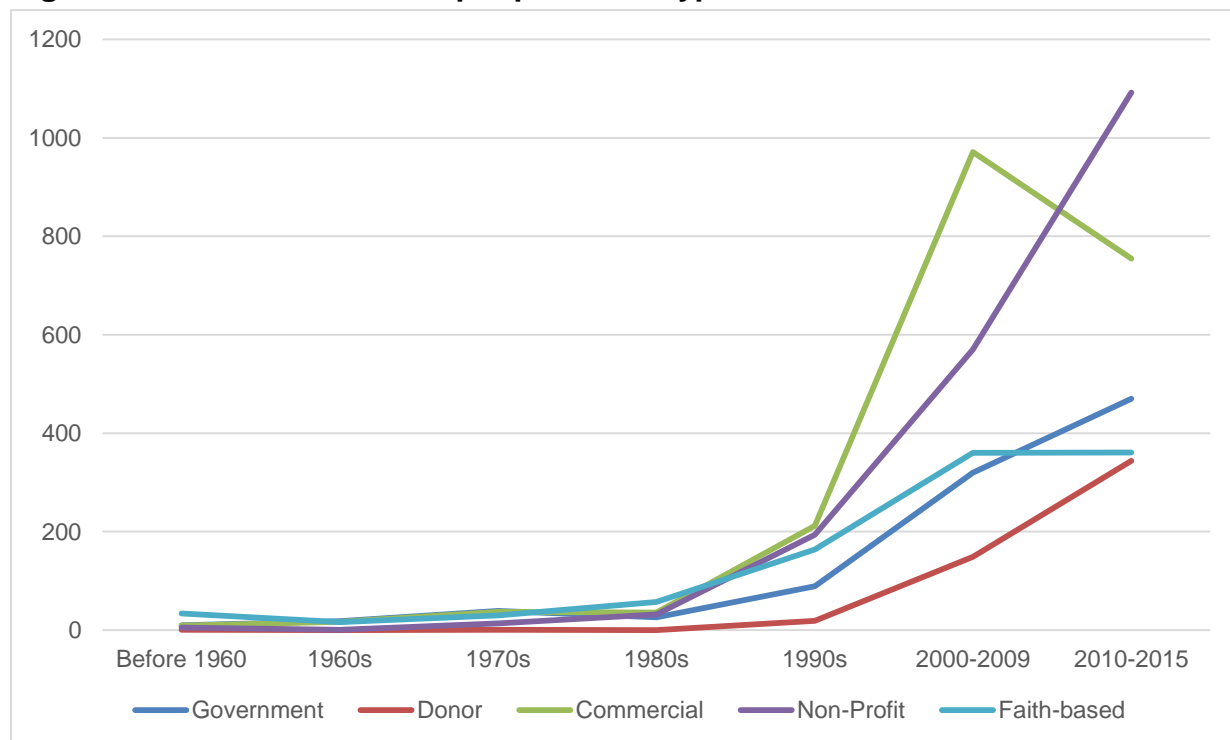
On a country-by-country basis, the results indicate that despite regional averages, with a few exceptions, commercial publishing is more robust in Anglophone countries than in Francophone and Lusophone countries, where supply is dominated by non-profit organizations and FBOs and is, thus, primarily subsidized. **Figure 14** presents the production numbers by type and country.

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[38] Multiple categorizations were possible per publisher or producer, and titles may have been registered as having multiple publisher types. Thus, approximately one third (28 percent) of titles were classified as having been produced by a non-profit organization and a FBO because FBOs are not for profit.

Figure 14. Production by publisher type and country

	DRC	Ethiopia	Kenya	Malawi	Mali	Mozambique	Nigeria	Senegal	Tanzania	Uganda	Zambia
■ Government	16	107	176	119	63	89	11	37	2	25	263
■ Commercial For-Profit	8	223	452	42	122	29	297	27	354	325	459
■ Non-Profit	162	169	374	37	86	184	46	410	30	362	126
■ Faith-Based	340	176	68	137	17	20	0	278	1	97	17

■ Government   ■ Commercial For-Profit   ■ Non-Profit   ■ Faith-Based
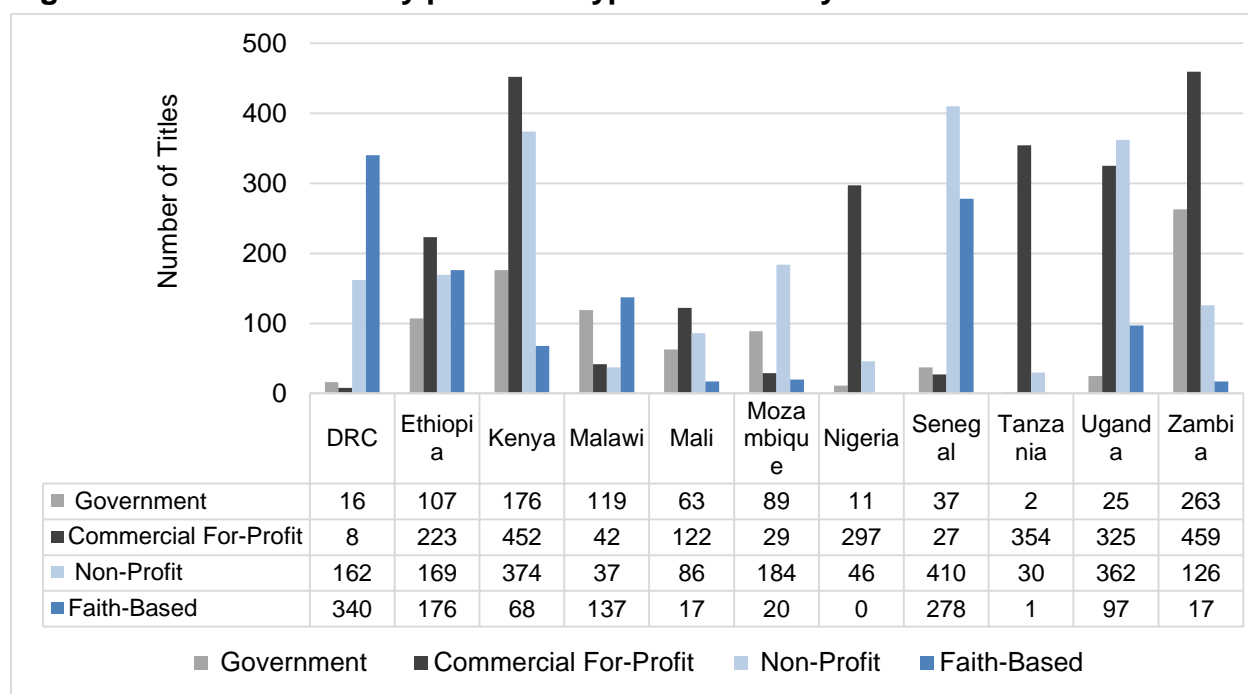
Notes: Multiple categorizations were possible per publisher or producer, and titles may have been registered as having multiple publisher types. Additional publisher categories not shown here included bilateral and multilateral donors, academic, self-published, and unknown. These data are presented in the country reports in Annexes A–K.

4.4.2 Price

Because of the nature of the data collection strategy, in which data collectors accessed materials directly from the publishers or in libraries but not primarily from booksellers, price data were collected for only a small subset (less than one fourth) of the hard-copy titles. Because this subset was so small, any calculation of the average price cannot be considered to accurately represent the whole set. Moreover, the average prices calculated based on this survey differ from the results of another survey on textbook prices in Africa from 2007, as cited by Read & Treffgarne (2010). Nonetheless, **Table 9** presents the price data for the two most common title sub-types: student textbooks and narrative supplementary materials.

Table 9.   Average Prices of Hard-copy Student Textbooks and Narrative Supplementary Materials

Country	Student Textbooks			Narrative Supplementary Books		
	Number Recorded as Free	Number Recorded with Price >$0.00	Average Price in U.S. Dollars (USD) for Non-free Materials	Number Recorded as Free	Number Recorded with Price >$0.00	Average Price in USD for Non-free Materials
DRC	0	14	$4.67	0	16	$3.12
Ethiopia	3	41	$1.27	2	137	$0.89
Kenya	2	131	$2.78	6	239	$1.65
Malawi	2	11	$2.40	0	18	$1.24
Mali	—	—	—	—	—	—
Mozambique	—	—	—	—	—	—
Nigeria	16	216	$2.20	—	—	—
Senegal	0	22	$2.02	0	38	$1.58
Tanzania	0	72	$3.25	0	201	$2.43
Uganda	18	180	$1.91	0	10	$1.21
Zambia	—	—	—	—	—	—
OVERALL	**41**	**684**	**$2.35**	**8**	**660**	**$1.74**

Note: Subsets with data on fewer than 10 titles have been omitted from the overall calculation and are indicated by an em dash in the table. The exchange rate used for each currency can be found in that country's report (Annexes A–K).

ISBN

The ISBN is a standard published by the ISO. ISO standards are used in various industries and serve to "ensure that products and services are created and used safely, efficiently and effectively by establishing the requirements and specifications which should be consistently applied in each case" (International ISBN Agency, 2015). Each title (or edition of a title) published in a particular country should be registered with the national ISBN agency by providing basic data on its publication. The ISBN agency will then issue a unique 13-digit number and a corresponding bar code for each individual title or edition.

Although requesting an ISBN is not a requirement for printing, sales, or distribution, and it does not protect a copyright, the ISBN is an important support for the circulation and marketing of books, facilitating cataloguing titles, tracking book circulation, and maintaining up-to-date statistics about the book sector in a given country. Furthermore, it can be argued that the ISBN is an indicator of the degree of development of the book sector in a particular country. Indeed, the absence of a national ISBN agency or low rates of title registration suggests a lack of

standardization and poor knowledge (or application) of best practices of the book industry worldwide.

Out of the 11 countries included in this survey, three have no national ISBN agency (the DRC, Mozambique, and Senegal)[39] (International ISBN Agency, 2015). Overall, only 2,771 (47 percent) of the titles surveyed had an ISBN. Greater adherence to the standard was observed in Tanzania (354 titles [91 percent]), Zambia (723 titles [80 percent]), Nigeria (289 titles [79 percent]), and Malawi (232 titles [66 percent]). Excluding countries without an ISBN agency, Ethiopia (201 titles [34 percent]) and Uganda (283 titles [36 percent]) showed the lowest adherence to the ISBN standard.

5   Conclusions

The findings of the DERP Survey of Children's Reading Materials in African Languages in Eleven Countries [Reading Materials Survey] provide a clearer picture of the current state of affairs of local language publishing in sub-Saharan Africa than was previously available. Some of the most salient findings of this survey are as follows:

- The total number of languages in which materials were found (200) exceeds the number of African languages with well-developed orthographies (186; Lewis, Simons, & Fennig, 2015a). Although this finding does not imply that titles existed for all languages with a strong written tradition, it is nonetheless clear that titles are available in an unexpectedly large number of languages. Additionally, although titles were concentrated in a small number of (usually widespread) languages, the existence of titles in a wide range of languages is still a positive finding of this survey.

- A correlation was found between the number of titles recorded for a particular language and the degree of implementation of the language in education policy. However, the number of titles per language was not always proportional to the language group size.

- Non-profit organizations, FBOs, and international development agencies play a very important role in the production of reading materials in African languages and are largely responsible for the availability of titles in more languages than anticipated. Their contributions also serve to explain why some smaller languages may have an unexpectedly large number of titles. These organizations fill gaps in the supply that would otherwise not be covered by commercial publishers because of the low profitability of publishing in languages that are either too small or not yet stable in written form. However, commercial publishers account for more than one third of the total supply (39 percent), at least according to the sample of this survey.

- Although titles are available for all early primary age or grade levels, the production of titles for the early stages of reading development is notably lower than that for more advanced levels. This finding probably reflects both a lack of emphasis on pre-primary

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[39] The DRC and Senegal are covered by the ISBN agency in France; Mozambique is covered by the ISBN agency in Portugal.

education in the sampled countries and the need for a better understanding of how to develop progressively difficult texts that children can read.

- Overall, the findings indicate that the content of most titles is potentially useful for supporting EGR development. One of the major assets of locally produced materials targeting a local audience is the familiarity and cultural relevance of the content. Additionally, few instances of potentially sensitive content (e.g., violence or traumatic events) were found in the surveyed titles. The materials were, for the most part, judged as positively representing women and girls. However, a marked absence of people with disabilities was observed in the analyzed titles.

- A more in-depth evaluation of materials that "rise to the top" as a result of this survey will nonetheless be necessary to determine their real value for supporting EGR instruction. The results regarding the portrayal of minority ethnic and religious groups indicate that this was a difficult aspect to evaluate because differences between groups were apparently not readily perceived based on the illustrations. Likewise, although the survey collected information about the presence of specific pedagogical components in textbooks, more in-depth research is required to determine whether the scope and sequence, level, and methodologies are suitable for early grade students.

- The use of Creative Commons licenses is not yet widespread in sub-Saharan Africa. However, SAIDE's African Storybook Project stands out as a major innovator in supplying high-quality materials that can be easily adapted and shared through the use of Creative Commons. Most other titles are "All Rights Reserved", implying that expanding access to their contents may entail additional investments of time and funds.

- Overall, a large proportion of the titles included in the survey sample lack adequate labeling regarding copyright owner and conditions for re-use or adaptation. The lack of adherence to standard conventions for sharing information on copyright and permissions for re-use, along with the low registration of titles with national ISBN agencies, indicates that producers of materials may not perceive any benefit in applying international standards to the production of printed materials. Book piracy was consistently cited by country research teams as a challenge during data collection because differentiating between legitimate and pirated copies of titles was not easy.

These conclusions are based on a selective analysis of data points to examine the three focuses of this report: availability based on language and book type, suitability for early grade children, and feasibility of the re-use and adaptation of titles. Nonetheless, the full data set of the DERP Reading Materials Survey allows for further analysis and could help answer many more questions about the current supply of reading materials in African languages. Additionally, the individual title data, along with photographs of the covers and sample interior pages, could be leveraged to create a searchable online database of titles.

The findings of the DERP Reading Materials Survey are not only beneficial to parties immediately interested in the findings, such as USAID and its partners in the Global Book Fund and Global Reading Repository, but also to national governments and other development

organizations. Local for-profit and not-for-profit publishers may also identify opportunities for developing titles to fill gaps in the current supply. Therefore, the simple act of implementing this survey may have already set some powerful wheels in motion for increasing the supply of high-quality, easy-access EGR materials in African languages.

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Glossary

"Big book"—An oversized children's book intended to be read aloud by a teacher to the entire class.

Decodable readers—These are aligned to an early literacy curriculum or sequence of presentation of letter sounds and contain only or mostly words that students should be able to sound out ("decode") at a particular point in that curriculum. Decodable readers, which are sometimes called decodable stories or texts, often focus on one or more particular letter sounds or patterns, either explicitly or implicitly, by including many words with those spellings.

Early exit transitional—A model for language use in education in which L1 instruction is provided for a few years before transitioning (usually very abruptly) to instruction in a foreign language (i.e., English or French) before the end of primary school.

First language (L1)—The language that an individual speaks best, often referred to as a mother tongue or home language. In the context of education, L1 refers to the language that students understand and speak proficiently when they first enter school, which make that language particularly well suited for learning both concepts and content in the early grades. Individuals tend to have a lifelong advantage in proficiency in the L1 learned at home through natural interactions with caregivers, family, friends, and community members. People living in multilingual contexts may have more than one L1, and they may have a greater proficiency in one language or another at different points in their lives and in different contexts.

Foreign language—A language that is not spoken in an individual's immediate environment and to which he or she would not have been exposed through familiar media. In many African countries, former colonial languages (English, French, and Portuguese) are often foreign languages to a large proportion of the population, particularly those in rural areas.

Informational text—Prose writing that informs the reader about a topic in the natural or social world that is based on facts without using storytelling devices. Examples of informational texts are textbook chapters that describe real-world phenomena or brochures about a place or an organization. For example, texts describing malaria transmission, volcanoes, or dinosaurs (assuming the absence of a story structure) fit under this category.

L1-based instruction—A model for language use in education in which children's L1, or mother tongue, is the LOI throughout most, if not all, levels of school. L1-based instruction is the most common LOI model used in much of the world (Europe, the United States, Latin America, and parts of Asia) and is highly successful in producing strong literacy and learning outcomes in general, along with excellent foreign language learning. This model allows children to learn in a familiar language, usually through the tertiary level, with foreign languages taught by specialist teachers.

Language of instruction (LOI)—The language used to teach curricular material. Teachers may use more than one LOI intentionally throughout the day as part of a bilingual or multilingual program. In most of the literature, the term "LOI" is used interchangeably with "medium of instruction"; however, LOI is used in this report for consistency.

Language of wider communication (LWC)—A language used as a common means of communication between different language groups, sometimes referred to as a lingua franca. For some speakers, the LWC will be their L1; for other speakers, it will be an additional language (e.g., Wolof in Senegal, Amharic in Ethiopia, or Kiswahili in Kenya).

Late exit transitional—A model for language use in education in which the L1 is used as the LOI through the end of primary school (and possibly beyond). In some cases, the L1 is taught as a subject throughout secondary school.

Literacy—The skills and practices of reading and writing, which are the concrete forms of a language in which one communicates. Reading combines decoding (the association of written symbols with sounds) with meaning-making (the understanding of and interaction with what is decoded). Writing is the productive skill of encoding sounds into symbols to create meaningful communication that others can read.

Narrative text—Prose writing that tells a story, which may be completely fiction (imagined) or based on fact. Elements that are basic to narrative text include the following: setting, characters, plot, conflict, and a resolution/ending. All narrative fiction (e.g., stories, folk tales, fairy tales, fables, myths, and legends) fit under this category. Texts that tell the story of someone's life (biography) or retell an event from history or the Bible using storytelling devices, such as characters and plot, also fit under this category.

National language—In the context of this report, the term "national" language refers to the endoglossic (indigenous) languages that have been accorded a special, recognized status by government decree in addition to the "official" language. The sanctioned uses of a "national" language may or may not overlap with those of the "official" language. A language may be named as both "official" and "national." In many, but not all, cases, the African languages with the largest speaker populations are chosen as the "national" languages.

Official language—In the context of this report, the term "official" language refers to the languages that have been sanctioned by government decree (usually in the Constitution) for use by the government in its official business, including in the administration, legislature, and courts. There may be more than one official language, and it may be endoglossic or exoglossic.

Orthography—The rules for the representation of the sounds of a language through written symbols or the rules of the writing system.

Phonics approach—This approach focuses on the connection between written letters and the sounds they represent in speech. A phonics approach may include exercises on sound recognition and manipulation, blending sounds into syllables or words, segmenting syllables and words into individual sounds, and others.

Reference text—A dictionary, glossary, or reference grammar text (a technical, linguistic analysis of a language).

Second language (L2)—A language that someone learns in addition to his or her L1. A L2 may be learned formally (at school) or informally (such as by working in a market).

Shell book—A book intended and authorized to be translated and adapted for use in other languages.