

Global Book Fund Feasibility Study: Final Report

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List of acronyms

ACR GCD	All Children Reading Grand Challenge for Development
ADB	Asian Development Bank
ADEA	Association for the Development of Education in Africa
AFD	Agence Francaise de Developpement (France)
AMC	Advanced Market Commitment
ARV	Antiretroviral
BRAC	Bangladesh Rural Advancement Committee
CC	Creative Commons
CHAI	Clinton Health Access Initiative
CIDA	Canadian International Development Agency
DepEd	Department of Education (Philippines)
DERP	Data for Education Research and Programming
DFAT	Department of Foreign Affairs and Trade (Australia)
DFID	Department for International Development (United Kingdom)
EMIS	Education Management Information System
EU	European Union
Gavi	The Vaccine Alliance
GBF	Global Book Fund
GER	Gross Enrollment Ratio
GFATM	The Global Fund to Fight AIDS, Tuberculosis, and Malaria
GPE	Global Partnership for Education
GPRM	Global Price Reporting Mechanism
ICT	Information and Communications Technology
ICT4E	Information and Communications Technology for Education
IEA	International Association for the Evaluation of Educational Achievement
IEP	International Education Partners
IFFIm	International Facility for Financing Immunizations
IP	Intellectual property
LEG	Local education group
LIC	Low income country
LLIN	Long-lasting insecticide-treated bed nets
LMIC	Lower middle income country
LMTF	Learning Metrics Task Force
LOI	Language of Instruction
M&E	Monitoring and Evaluation
MOC	Ministry of Culture
MOE	Ministry of Education
MOEST	Ministry of Education, Science, and Technology (South Sudan)

NER	Net Enrollment Ratio
NGO	Non-governmental organization
Norad	Norwegian Agency for Development Cooperation
OECD	Organisation for Economic Co-operation and Development
PISA	Programme for International Student Assessment
PPP	Pilot Project for Publishing
PQR	Price and Quality Reporting
R4D	Results for Development Institute
RBF	Results-based financing
RCT	Randomized control trial
RMNCH	Reproductive, Maternal, Newborn and Child Health
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SDGs	Sustainable Development Goals
SIDA	Swedish International Development Agency
SRM	Supplementary Reading Materials
SSA	Sub-Saharan Africa
TB	Tuberculosis
TLM	Teaching and Learning Material
TPR	Textbook Pupil Ratio
UIS	UNESCO Institute for Statistics
UMIC	Upper middle income country
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Glossary

Centralized pooled procurement	The practice of bulk ordering books at the national level for a country's entire public education system.
Digital rights management (DRM)	Technical protection mechanisms that use special computer code to protect copyrighted materials from being illegally copied or changed by users.
Dominant language	A language widely spoken and understood in a geographic area and used as a convenient medium for social, cultural, and economic communication between different ethnic and linguistic communities. A dominant language may be large or small and may be selected as an LOI if there is no obvious, singular mother tongue language available.
Early and late LOI exit policies	In some countries, a local or regional language may be used as the LOI in lower grades with a later transition to an international language as the LOI. If the transition to an international language as the LOI takes place within the primary grades (typically by P3 or P4), it is referred to as an ' <i>early exit policy</i> .' If the transition takes place at the end of primary (e.g., P7 in Tanzania), then it is referred to as a ' <i>late exit policy</i> .'
International language	A language widely used in many different countries as an official language, a common means of communication, or an LOI in a national education system – often in upper primary grades, secondary grades, and higher education (e.g., English, French, Portuguese, or Arabic in sub-Saharan Africa; Russian in Central Asian countries; Spanish in Latin America).
Language as a Curriculum Subject	A language which is not the LOI but which the national curriculum requires should be taught as a subject. Some of these languages may be specified as electives rather than mandatory curriculum subjects.
Language of classroom communication	The verbal language commonly used by teachers to communicate with their students in the classroom. This need not be the language of instruction or the textbook language unless these also coincide with mother tongue or dominant local languages. The language of classroom communication usually becomes, at least on a temporary basis, the language of speaking and listening for the students.
Language of Instruction (LOI)	The language in which ministries of education have decided that teaching and learning will take place. The language of instruction can change at different grade levels. In some countries there may be more than one specified LOI for a grade level (e.g., 12 different languages are specified as LOIs for P1-P3 in Uganda).
Languages children speak and understand	The most common languages that young children will be able to speak and understand upon joining primary school. This will often be their mother tongue language and/or a local dominant language. Children may not be able to understand the official LOI or the textbook language when entering primary school.
Local language	A language spoken and understood locally within a country. Local languages vary widely in their development and spread. Some local languages may be widely spoken and considered dominant languages. Others, however, may not be so widely spoken as to represent a potential LOI, and some may not even be so formalized to have developed an established orthography.
Mother tongue language	The language spoken by a child at home and normally the language of the parents. The process of urbanization can mean that school catchment area enrollments, particularly at primary levels, comprise more than one mother tongue. In this situation, the LOI is often a dominant language rather than a mother tongue

	language for a majority of students.
Readability	The ability of a student, or even a teacher, to read and understand the textbooks, teachers' guides, reading books, and other teaching and learning materials provided to support literacy and learning achievement in curriculum subjects.
Reading books	Attractive and stimulating story books, information books, and topic books – including big books – intended to provide reading practice, vocabulary acquisition, and comprehension as the essential basis for early literacy and the development of a lifelong reading habit.
Regional language	A non-international language widely spoken and understood in more than one country (e.g., Kiswahili, Hausa, and Amharic). On occasion, a regional language may take precedence over local languages or international languages as the LOI (e.g., Kiswahili in Tanzania).
Teaching and learning material (TLM)	The materials provided or recommended to teachers and students as essential aids to support learning. They can range from textbooks and teachers' guides to reading books, information books, reference books, atlases, flash cards, wall charts and maps, grammar books, anthologies of stories and poems, audio materials, software, and other digital materials.
Textbook	An organized and structured presentation, intended for use by students with teacher guidance of the prescribed subject content, key competencies, and main learning outcomes for a subject syllabus normally covering one year's work. It would normally be accompanied by a linked teachers' guide aimed at supporting teachers in the optimal use of the textbook
Textbook language	The language used in official textbooks and other learning and teaching materials. This is usually the same language as the LOI. The textbook language is normally the language of reading and writing in the classroom.
Underserved languages	Languages without sufficient textbooks, teachers' guides, or reading books available in the classroom to support the achievement of early literacy and learning outcomes. Underserved languages are usually local, mother tongue, or even regional languages which are not used as LOIs. Some underserved languages may not have an established orthography and may lack authorship capacity because the languages have never been taught as literary languages. However, in some cases, even international languages used as LOIs may be categorized as underserved if textbooks, teachers' guides, and reading books are not supplied to schools in sufficient quantities to provide required minimum levels of learning support.

Executive Summary

Despite advances in enrollment over the past 15 years, 250 million children of primary school age are unable to recognize basic letters and numbers.¹ Worryingly, 130 million of these children attend 4 years or more of school and still leave without basic foundational skills.² The learning crisis is thus acute, and it constrains the potential and growth of children around the world.

Because of this, global focus has begun to shift in recent years to the quality of education and learning, with Sustainable Development Goal (SDG) 4 specifically focused on inclusive and equitable quality education, including inclusive and effective learning environments. Improving education quality and learning outcomes requires a number of inputs for teachers to use, chief amongst which are teaching and learning materials. These are essential aids for supporting learning and include textbooks, reading books, teachers' guides, and reference books. Many studies document that these materials show the most impact in improving primary school outcomes in developing countries.³ Specifically, numerous studies indicate that textbooks are not only a necessary input, but are one of the most cost-effective investments for raising learning outcomes.^{4,5,6} Reading books -- which include leveled and decodable readers, story books, information books, or topic books to provide reading instruction practice -- are particularly important in building the foundational skill of literacy and in developing children's background knowledge in key content areas. Importantly, given the evidence of the benefits of mother tongue instruction⁷ and the value of teaching children in languages they speak and understand,⁸ particularly in early years,⁹ books in such languages are crucial.

However, despite this evidence on the role of books in improving learning and reading acquisition, many children lack access to both reading books and textbooks. For example, a recent UNESCO survey in Africa showed that in most countries primary school children have to share textbooks. In some countries, more than 4 pupils share 1 mathematics or reading book, and in Cameroon, on average, 14 pupils share 1 mathematics textbook.¹⁰ According to two recent World Bank publications on textbook provision, the primary causes of low book availability and usage include the following: shortage, unpredictability, and unsustainability of book and book systems financing; failure to apply cost-reduction strategies in procurement, resulting in high cost of books; insufficient book management information systems and lack of data on current teaching and learning material stocks in schools; poor planning; ineffective book distribution systems that often result in loss, damage, and delivery delays; and poor book management and care in schools.^{11,12} Corruption in the book chain is of particular

¹ UNESCO. (2014a). Teaching and learning: Achieving quality for all. *EFA Global Monitoring Report*.

² Ibid.

³ Boissiere, M. (2004). *Determinants of primary education outcomes in developing countries background paper for the evaluation of the World Bank's support to primary education*. The World Bank Operations Evaluation Department.

⁴ Ibid.

⁵ Lockheed, M., and Verspoor, A. (1990). *Improving Primary Education in Developing Countries*. A World Bank Study. Washington, DC: World Bank for the World Conference on Education for All in Jomtien.

⁶ Majgaard, K., and Mingat, A. (2012). *Education in Sub-Saharan Africa: A Comparative Analysis*. World Bank, 122–154.

⁷ UNESCO. (2015a). Education for all 2000-2015: Achievements and challenges. *EFA Global Monitoring Report*.

⁸ Read, T. (2015). *Where have all the textbooks gone?: Toward sustainable provision of teaching and learning materials in Sub-Saharan Africa*.

⁹ UNESCO. (2008a). *Improving the Quality of Mother Tongue-based Literacy and Learning: Case Studies from Asia, Africa and South America*.

¹⁰ UNESCO. (2015b). *School resources and learning environments in Africa: Key results from a regional survey on factors affecting quality of education* [PowerPoint slides].

¹¹ Read, T. (2015).

concern. In several instances, corruption issues have even halted nationwide textbook supply for multiple years.¹³

Although data about the availability of reading books in primary grades is not easily available, the magnitude of the challenge is at least as great as it is for textbooks.¹⁴ Our country studies confirm a significant undersupply of reading books, particularly in mother tongue languages, and even when books are available, there are major issues including poor quality and worryingly low usage.

Donors, including bilaterals and private foundations, have provided millions of dollars in funding and programmatic support to improve book provision and usage.¹⁵ Despite this extensive support, however, there continues to be an underfinancing of books, and the problem persists.

A transformative mechanism – the proposed Global Book Fund (GBF) – may thus be needed as a solution and could play a key role in increasing the effectiveness of the books chain. In this study, we analyze the feasibility and design of such a mechanism as well as gather evidence to inform the set of interventions needed to transform the book chain in order to improve reading outcomes. Our analysis was informed by data collection in 13 countries and global stakeholder consultations to apply relevant experiences from funds in health and other sectors and to learn from experiences in reading programs, commodity procurement, and provision of books.

Our recommendations are based on a detailed analysis which draws on:

- Evidence from interviews with expert stakeholders and our country studies
- Analysis of the merits and costs of a new mechanism
- Consideration of the functions and design of the GBF

A summary of our analysis is below.

Evidence from interviews with expert stakeholders and our country studies

In exploring the feasibility of a Global Book Fund, we considered the experience of health and other sector funds that have successfully revolutionized the development and provision of health and other commodities. Analysis of global health funds highlighted many differences between books and the services and commodities these funds were created to support. For example, when The Vaccine Alliance (Gavi) was created, the value of vaccines was already broadly appreciated by governments and households in most low and middle income countries, and immunization systems, though imperfect, were able to achieve 70% or higher coverage with basic vaccines in most countries. These conditions are not in place for reading books, especially in mother tongue languages.

¹² Fredriksen, B., Brar, S., and Trucano, M. (2015). *Getting Textbooks to Every Child in Sub-Saharan Africa: Strategies for Addressing the High Cost and Low Availability Problem*. Washington, DC: World Bank.

¹³ Read, T. (2015).

¹⁴ Global Partnership for Education. (2013). *A Reading Fund: Reading materials to 100 million children* [Internal note].

¹⁵ The exact amount of funding provided is difficult to quantify due to the complex nature of donor funds reporting, the mix of funding from partners (e.g. country governments, NGOs) that are often involved in book provision projects, and the fact that books provision is often integrated into larger education projects with multiple components. However, triangulation of data from a variety of sources leads to the conclusion that at minimum millions, if not billions, of donor dollars have been channeled to address the books problem over the past few decades. A review of donor-funded books projects, a selection of which are cited in Section 1.2 of the main report, feature many projects that independently total millions of dollars. The GPE grant of \$70 million to Rwanda is just one example cited in the main report.

However, although a straightforward attempt to replicate any of these mechanisms as a solution to the books problem is not recommended, there are useful lessons to be drawn from their experience. For example, there are relevant lessons in pooled procurement from various health products, catalytic flexible funding to accompany targeted technical support (UNITAID and Reproductive, Maternal, Newborn and Child Health [RMNCH] Trust Fund), and the importance of integrated, nationally-conceived programs (The Global Fund to Fight AIDS, Tuberculosis, and Malaria [GFATM]).

Although the scope of the feasibility analysis was primarily focused on reading books, the dearth of literature on reading books meant that much of the evidence cited relates to textbooks. Where possible, our findings specifically focus on reading books; in other instances, we infer the challenges in reading books using data from textbook provision practices. The findings along each line of inquiry are presented in Figure 1 below.

Line of inquiry	Finding
Demand, planning, and financing of books	1: Lack of awareness of the value of reading books in supporting literacy.
	2: Lack of data on book provision and learning outcomes limits the ability to assess progress, identify inefficiencies, and mobilize appropriate resources. A GBF could play a key role in (a) providing funding or technical support to implement improved in-country data systems, (b) making country-level data collection a requirement for GBF book funding, and/or (c) hosting or supporting an online data sharing platform.
	3: To meet a theoretical minimum book standard for all pre-primary and primary students, low and middle income countries need to spend between US\$3.1 billion - US\$3.9 billion yearly. However, research is needed to understand a more realistic, current, addressable market size.
	4: Analysis of primary education spending reveals an underfinancing of books, including textbooks and reading books. To meet minimum book standards, out of 32 countries studied, 18 face significant annual budget gaps that total nearly US\$200 million. However, improving spending efficiency, rather than raising absolute funds, is a priority for half of LMICs and all UMICs.
	5: There are three distinct categories of countries exhibiting different financing needs, thus requiring different types of support from a GBF: <ul style="list-style-type: none"> • Group 1 countries do not spend enough on both textbooks and reading books and do not have the capacity to increase spending • Group 2 countries also have significant funding gaps but improved efficiency could help counter some of the gap • Group 3 countries do not face funding gaps
Procurement and production of books	6: There is an inadequate supply of appropriate mother tongue reading book titles due to low awareness of the value of reading books, limited authorship capacity, and lack of content sharing arrangements. Given these challenges, the GBF could, at the global level, serve as or support a content repository to expand access to published titles, and at the country level, support the growth, sustainability, and quality of local publishing industries as needed.
	7: Public sector book procurement is not always optimized for cost, quality, and sustainable supply. A GBF could play a role in (a) disseminating and incentivizing the use of procurement best practices, (b) improving the consistency and predictability of demand, and/or (c) promoting centralized pooled procurement for reading books at the national level to lower book costs.
	8: The cost to implement a digital reading program based on a library model is about 12-13 times more expensive than the cost to implement a similar print reading program. However, for structured reading programs where each child is reading the same book at the same time, digital programs are less expensive per child than print programs.
	9: There are high technical, investment, and recurrent cost barriers to the adoption of digital reading materials, including a lack of sufficient infrastructure to support device use, and high intellectual property related (IP-related) transaction costs.
	10: Operational challenges also constrain the uptake of digital materials and include challenges related to education policy, content availability, and utilization.
Supply chain management of books	11: Supply chain and distribution issues vary by country, although common challenges include weak demand forecasting, poor management systems, inadequate financing, lack of trained staff, and inefficient distribution.
	12: Distribution can be centralized or decentralized, with the public, private, and NGO sectors playing a mix of roles. The effectiveness of the distribution model varies by context and is influenced by accountability measures and the capability of the responsible actor.
	13: Citizen accountability mechanisms to monitor distribution have been used successfully in some countries – for example, India and the Philippines – and may hold valuable lessons to reduce corruption in sub-Saharan Africa.
Usage of books	14: Although data on reading books is limited, research on textbooks reveals that book provision does not equate with usage.
	15: Many teachers are unaware of how to appropriately use books in classrooms and how to set up and run school and classroom libraries. Usage can therefore be optimized through ensuring pedagogical quality of books, teacher training on how to incorporate books into lessons, establishment of classroom libraries, and advocacy campaigns.
	16: Although complementary reading programs can improve reading achievement in students, uncertainties on the cost-effectiveness of these programs persist due to lack of data and agreement on the ideal number of titles needed per student or per class.

Figure 1. Summary of Findings

Analysis of the merits of a new mechanism

A new mechanism is needed to raise awareness about the high returns from books at the global and country level, to develop and disseminate best practices, and to mobilize funding. Our findings suggest a lack of awareness of the value of reading books in supporting early literacy, which inhibits demand from teachers, parents, and ministries of education. This in turn results in inadequate funding (or in many countries no funding at all) for reading books as well as textbooks, and for many low income countries (LICs), external financial mobilization is needed to close the funding gap. Additionally, there is a critical need for countries to rapidly access specialized technical knowledge for high-impact activities that can lead to the most significant opportunities for savings and quality improvements around the development, procurement, and supply chain management of books. Thus there is a need for a fast-moving entity to disburse targeted funding consistent with country plans.

An analysis of the benefits and costs of a *new* mechanism – specifically, a GBF – in contrast to using existing bilateral or multilateral channels indicates that the creation of a new mechanism is justified for three reasons:

- A new mechanism can play a critical role in harmonizing current funding for books and in ensuring greater effectiveness of funds. This may represent an opportunity to strengthen the coordination of funding and subsequently ensure greater transparency and predictability through the architecture of a new dedicated mechanism.¹⁶
- A new global entity is needed to break away from the traditional donor-project approach and instead play a system-strengthening role.
- Financing needs in this area are substantial, and although it may be difficult, a new mechanism could possibly mobilize dedicated funds.¹⁷

That said, establishing a new global mechanism is inherently a sensitive and political topic. One of the most significant potential criticisms is that new funds can contribute to increased fragmentation and may not be needed.¹⁸ There is also the danger that new funds can add transactional costs, not be well integrated within the relevant sector, and stall systemic change. Other concerns are that funds may be vulnerable to corruption and may lessen or replace domestic resource mobilization.¹⁹ Stakeholders consulted also cautioned that there is a low appetite for a new global fund, in contrast to the political climate that existed during the creation of health funds.

Despite these arguments, however, we find on balance that the severity and fundamental nature of the books problem requires the creation of a new mechanism. To guard against the aforementioned risks, careful attention has been paid to the proposed activities and design of the GBF.

Consideration of functions and design of the GBF

We propose that the GBF serve four functions. Careful consideration must be given to prioritization and sequencing, with specific activities expanded and refined over time.

At the global level, it would:

¹⁶ Sustainable Development Solutions Network. (2015). *The Role of Global Funds in a Post-2015 Development Framework*.

¹⁷ Ibid.

¹⁸ Bezanson, K. A., and Isenman, P. (2012). *Governance of New Global Partnerships*. CGD Policy Paper 014. Washington, DC: Center for Global Development.

¹⁹ Sustainable Development Solutions Network. (2015).

Function 1: Develop and disseminate knowledge and best practices on the effective development, procurement, distribution, and usage of all books. Influential donors and implementation partners are already supporting reading initiatives – for example, at the multilateral level, the GPE, World Bank; at the bilateral level, USAID and DFID; and at the regional level, the Working Group on Books and Learning Materials at ADEA. However, there does not exist at the global level a dedicated technical unit with the expertise to serve as a repository of knowledge and best practices and to enhance the effectiveness of support already provided in books provision. Nor do most of the agencies supporting reading themselves have sufficient staff familiar with the book market and supply chain. The GBF could thus serve as a repository and generator of information around all aspects of the book chain.

Function 2: Advocate and instill the importance of reading materials and gain buy-in from champions to spur long-term policy dialogue. Our consultations revealed a lack of awareness on the importance of reading books, particularly in mother tongue languages. It is crucial to ignite a culture of reading specifically focused on supporting children in learning to read and write and in reading to learn within school and home contexts.

At the country level, it would:

Function 3: Fund technical assistance to improve the development, procurement, distribution, and usage of books to improve learning outcomes. We propose that a country-driven exercise be used to identify needs and areas of support all along the books chain. This could form the basis for proposals to the GBF to request specialized technical support. We recommend that the GBF fund the provision of technical assistance but not itself assume responsibility for its provision. In addition, learning from the success of flexible program financing in the health sector, we propose that the GBF provide programmatic funding to complement the funds for technical support and address demand side barriers. For example, such funding could be used to raise awareness of the value of books, support teacher training, and foster accountability systems and other mechanisms to ensure that books are effectively used to improve learning outcomes.

Function 4: Fund reading books in mother tongue languages that correspond to languages of instruction (LOIs) where there is demonstrated financial need and country commitment. In countries that demonstrate need, we propose that the GBF provide multi-year funding to purchase books, increase demand predictability, and engage and build local publishing capacity. Amongst all experts consulted, there was agreement that it is ideal to have local publishing industries in all countries where it is feasible. Although the evidence base is limited, consulted stakeholders noted that local publishing is important to ensure that book content is culturally relevant. In certain circumstances, for example in emergencies or where government capacity is absent, the GBF might also procure reading books directly from publishers.

Our exploration of market-shaping opportunities reveals that the greatest opportunity for efficiencies is in increasing print run sizes to achieve economies of scale in book production. The three primary ways to achieve this would be (1) increasing funding and procurement volumes for reading books, (2) creating nationally standardized book lists to aggregate demand around a fixed number of titles, and (3) centralizing national procurement. Although there is currently insufficient funding and little procurement of reading books by governments, if funding is provided to countries that demonstrate need, then centralized national procurement is likely to be the most cost effective system. Specifically for reading books, facilitating the pooled procurement at the *national* level and moving from a 5,000 to 25,000 print run size corresponds to a 33% savings per book. However, pooled procurement at the *regional level* across countries with common languages would only be relevant if funding for reading

books remains limited in each country such that full-potential print run sizes are not realized.²⁰ As part of Function 3, the GBF could thus fund technical support to countries to develop a system where there is local autonomy over book choice within centralized national procurement, while through Function 4, it could require and support pooled procurement at the national level.

All functions of the GBF have been purposely designed to take on the broader challenge around access and provision of all books. However, we propose that in its initial stage, Function 4 prioritizes the funding of pre- and primary grade reading books in mother tongue languages that correspond to the language of instruction, given the critical role that this plays in improving literacy. Over time, the GBF might also move to fund the provision of textbooks in certain circumstances, and expand its scope to regional and international languages of instruction and to higher grade levels. However, this is not proposed initially, due to the more urgent need to provide reading books in languages that children speak and understand.

We outline below six structural and operational considerations for the design of the fund:

- (i) **Funding and implementation model:** We propose that the GBF provide cash *grants* and fund *technical assistance* to eligible countries in response to *country proposals* which would be assessed by a technical committee and then approved by a governance body. There likely is scope for experimenting with using results-based financing (RBF) techniques for books, in order to help tackle the huge issues associated with ensuring that books are supplied, distributed, and used. Specifically, if payments were to be tied to results at the different stages of the book supply chain, considerable efficiencies could result.
- (ii) **Country eligibility, “graduation,” allocation across countries:** We propose that eligibility to apply for technical assistance from the GBF be quite broad, perhaps including all low and middle income countries. To receive funding for books, however, countries should have to demonstrate both need and government commitment, and poorer countries should have priority.
- (iii) **Country co-financing:** Both Gavi and GFATM require countries to share the cost of funded programs to ensure that programs which are started or expanded through their support are sustained (Gavi does this by independently procuring an agreed fraction of vaccines, GFATM by demonstrating that a certain share of program costs are coming from domestic resources). We propose that some form of co-financing also be central to the GBF strategy, with the required share dependent on country income and other considerations.
- (iv) **Monitoring and evaluation:** The GBF will need to have its own robust Monitoring and Evaluation (M&E) system, and will need to support country M&E systems. A robust GBF M&E system can assure quality, safeguard against fund diversion, and demonstrate project effectiveness and efficiency. Additionally, a strong M&E system will be crucial in evaluating country performance. Meanwhile, at the country level, systemic data on books provision, collected through M&E systems, can also serve as an important global public good. The GBF’s M&E structure must address the tension between balancing the benefits of M&E with the often high transaction costs of gathering robust data. We propose that the GBF align its

²⁰ Full-potential print run size is defined as roughly 50,000 copies, as per-book savings are marginal above this amount (Finding 7, Section 2.2.2). As previously examined, if reading book funding increases significantly such that 50,000 print run sizes can be realized in each country, pooling volumes across countries would provide limited benefit, given that cost savings are marginal above this volume level.

- M&E as much as possible with not only its host organization but also with information that countries are already collecting. In order to support a robust system at the country level, we recommend that the GBF provide sufficient funding for technical support to countries in order to build internal capacity and country ownership in M&E and data management
- (v) **Institutional structure:** It would be preferable for the GBF to be hosted by an existing organization, if an appropriate and willing host can be found. The main advantages of this option are cost (as the GBF would not have to develop all the necessary structures and capabilities of a free-standing financing organization) and greater integration (in that it would be easier to ensure that the GBF's investments are well coordinated with complementary investments in the education sector). Given considerable reluctance to create new international mechanisms, it would also be essential that the GBF be as lean an operation as compatible with its functions, and housing it within an existing organization should help contribute to this.
- (vi) **Governance:** The appropriate governance model depends on whether the GBF is hosted by another organization and, if so, on how that organization is governed. If the GBF is hosted by another institution, these arrangements would be subject to and circumscribed by the governance structures of the host organization, and the exact division of responsibility between the host organization's structures and that of the GBF would have to be negotiated.

Further areas of exploration and analysis

Based on our consultations, potential next steps for the advancement of the GBF include:

Fund concept development and refinement

1. **Refine operational and governance structures:** Based on the institutional structure ultimately decided for the GBF, the governance structure will need to be carefully developed and assessed through consultations with technical experts.
2. **Refine the model for fund disbursement:** A number of areas still need to be further explored around this process, including how country proposals will be developed and submitted, eligibility criteria, appropriate results-based financing techniques, and coordination of GBF funding with other education support.

Political support and buy-in

3. **Consultations to generate political buy-in for a new mechanism:** Opportunities to build political support (e.g., through the activities of the new International Commission on Financing Global Education Opportunity or through the G7) need to be explored, as does the fit with other international educational priorities such as helping educate refugees and the promotion of global citizenship.

Deeper analysis in a select number of areas

4. **Further analysis on the feasibility and provision of reading materials to targeted populations:** More analysis and exploration of the specific needs of children in distinct contexts (for example, children living with disabilities) is needed to better understand how the GBF could effectively support reading in such circumstances.

Test approaches

5. **Test and explore specific approaches to demonstrate proof of concept:** Small-scale pilots in a select number of countries to test specific approaches should be undertaken in the first phase of the GBF.

Preface

The Results for Development Institute (R4D) and International Education Partners Ltd. (IEP) partnership was formally contracted in July 2015 to analyze the feasibility and design of a proposed Global Book Fund (GBF). As stated in the Terms of Reference, the objective of the fund (a term used to capture a set of interventions but not necessarily to imply one global fund) would be to transform authorship, book development, publishing, procurement, distribution, and classroom usage to improve reading outcomes.

Our work in Phase 1 (July 2015 – January 2016) focused on gathering the evidence to inform the set of interventions needed to improve learning outcomes through a more expansive use of reading materials at the pre-primary and primary level. Phase 2 (February 2016 – June 2016) of the work will be decided following the Phase 1 report and may include measures for refining the fund’s specifications and structures, designing specific approaches to demonstrate proof of concept, and building momentum and buy-in from a range of stakeholders.

The scope of our work covered all materials facilitating primary grade reading in children. The focus was specifically on reading books in languages of instruction (LOIs), or curriculum languages that are created to match the age-grade level interest and reading ability of early readers, and included both print and digital materials. However, given the commonalties in issues facing reading books and textbooks, a broader lens was applied when considering the scope and activities of a GBF.

1. The strategic context

The strategic context presents an evidence-based illustration of the learning crisis, as well as lessons that could be learned from the experience of health funds that have revolutionized the development and provision of health and other commodities. Section 1.1 discusses the current learning crisis, the critical need for books in order to boost learning, and the reasons for low levels of book availability despite the essential benefits of books. Section 1.2 provides a brief overview of past and current government, donor, and NGO-led initiatives aimed at increasing book provision. It explores why these interventions have proven insufficient thus far. Lastly, Section 1.3 discusses lessons from funds in health and other sectors that may be valuable when considering solutions for increasing access to books in schools.

1.1. The context and evidence

The link between books and learning

Despite advances in enrollment over the past 15 years, the recent Education for All Global Monitoring Report warns that 250 million children of primary school age are unable to recognize basic letters and numbers. 130 million of these children attend 4 years or more of school and are still leaving without basic skills in reading and math.²¹ The learning crisis is thus acute and constrains the potential and growth of children around the world.

Raising education quality and learning outcomes requires a number of inputs for teachers to use, chief amongst which are teaching and learning materials (TLMs). These are essential aids to support learning and can range from textbooks and teachers' guides to reading books, information books, reference books, atlases, flash cards, wall charts and maps, grammar books, and anthologies of stories and poems (Box 1). One meta-review of studies that evaluated the effectiveness of educational inputs, published by the World Bank Operations and Evaluation Department, notes that TLMs "show the highest incidence of impact for improving primary school outcomes in many developing countries" even when evaluated by studies that adopted a range of research methodologies.²²

Specifically within TLMs, studies^{23,24,25} affirm that textbooks are one of the most cost-effective investments for raising learning outcomes. Indeed, an empirical study of 22 sub-Saharan African countries found a 5-20% increase in student achievement in class subjects where each child was provided a textbook.^{26,27}

²¹ UNESCO. (2015a). Education for all 2000-2015: Achievements and challenges. *EFA Global Monitoring Report*.

²² Boissiere, M. (2004). *Determinants of primary education outcomes in developing countries: Background paper for the evaluation of the World Bank's support to primary education*. World Bank Operations Evaluation Department.

²³ Lockheed, M., and Verspoor, A. (1990). *Improving Primary Education in Developing Countries*. World Bank. Washington, DC: World Bank for the World Conference on Education for All in Jomtien.

²⁴ Read, T. (2015). *Where have all the textbooks gone?: Toward sustainable provision of teaching and learning materials in Sub-Saharan Africa*.

²⁵ Majgaard, K. and Mingat, A. (2012). *Education in Sub-Saharan Africa: A Comparative Analysis*, 122-154. World Bank.

²⁶ Michaelowa, K., and Wechtler, A. (2006). *The cost-effectiveness of inputs in primary education: Insights from the literature and recent student surveys for Sub-Saharan Africa*. Paper presented at the Association for the Development of Education in Africa – Biennale on Education in Africa.

²⁷ Plonski, P. (2010). *Providing books for schools and libraries in Africa: What is the impact on literacy?*

Box 1.

Teaching and learning materials are materials provided or recommended to teachers and students as essential aids to support learning. These include textbooks and reading books.

Textbooks are defined as organized and structured course materials that corresponding to an often year-long subject syllabus and are designed to facilitate the acquisition of learning outcomes specified by the curriculum.

Reading books can be leveled and decodable readers, story books, information books, or topic books intended to provide reading practice, vocabulary acquisition, and comprehension as the essential basis for early literacy and the development of a lifelong reading habit.

Reading books – including story books, information books, and topic books, and also referred to as supplementary reading materials (SRM) or readers – are particularly important to building the foundational skill of literacy and may be even more essential inputs than textbooks in the early grades. Reading is a prerequisite for student achievement, and children who do not learn to read early face extreme difficulty learning in other subjects and at higher grades.²⁸ In addition, research shows that literacy has positive impacts well

beyond learning outcomes – affecting cognition, income, employment, and health amongst other factors.²⁹ Thus, the improvement of literacy is critical to both education and human growth, and reading books by association are essential for that very reason. Although literature specifically on reading books is sparse, two World Bank studies spanning 89 African education projects identify reading books as cost-effective and important components to boosting literacy.^{30,31}

However, studies caution that textbooks and reading books – collectively referred to as books – alone do not improve learning outcomes. Careful attention must also be paid to the systems surrounding the books. For instance, a randomized control trial (RCT) in Kenya found that textbooks were not effective in improving learning outcomes, noting that textbooks written in languages children did not understand and the orientation of the overall education system towards strong students contributed to their ineffectiveness.³² This and other studies highlight the importance of book quality and relevance of content as well as the continued need to develop education systems as a whole for books to be effective inputs.^{33,34} Teacher training in the use of books and access to books once procured or delivered to schools are also key to ensuring improved learning outcomes.^{35,36,37,38}

²⁸ UNESCO. (2014a). Teaching and learning: Achieving quality for all. *EFA Global Monitoring Report*.

²⁹ Kirsch, I., de Jong, J., Lafontaine, D., McQueen, J., and Monseur, C. (2002). *Reading for change: Performance and engagement across countries: Results from PISA 2000*. Organisation for Economic Co-operation and Development.

³⁰ World Bank. (2002). *World Bank support for provision of textbooks in Sub-Saharan Africa: 1985-2000*. Africa Region Human Development Working Paper Series.

³¹ Plonski, P. (2010).

³² Glewwe, P., Kremer, M., and Moulin, S. (2009). Many Children Left Behind? Textbooks and Test Scores in Kenya. *American Economic Journal: Applied Economics*, 1(1), 112-135.

³³ Boissiere, M. (2004).

³⁴ Snilstveit, B., et al. (2015). *Interventions for improving learning outcomes and access to education in low- and middle-income countries: a systematic review*. International Initiative for Impact Evaluation (3ie).

³⁵ Ibid.

³⁶ Sabarwal, S., Evans, D. K., and Marshak, A. (2014). *The permanent input hypothesis: The case of textbooks and (no) student learning in Sierra Leone*. Washington DC: World Bank Group Education Global Practice Group & Africa Region.

³⁷ Das, J., Dercon, S., Habyarimana, J., Krishnan, P., Muralidharan, K., and Sundararaman, V. (2013). School inputs, household substitution, and test scores. *American Economic Journal-Applied Economics*, 5(2), 29-57.

³⁸ Read, T. (2015).

Box 2.

“[A study by Walter and Cho (2010) showed that] in Cameroon, children taught in their local language, Kom, showed a marked advantage in achievement in reading and comprehension compared with children taught only in English. Kom-educated children also scored twice as high on mathematics tests at the end of grade 3. However, these learning gains were not sustained when the students switched to English-only instruction in grade 4.”

Sources:

UNESCO. (2014a). *Teaching and learning: Achieving quality for all. EFA Global Monitoring Report.*

Walter, S. L. and Chuo, K. G. (2012). *The Kom Experimental Mother Tongue Education Pilot Project: Report for 2012.* Dallas, Tex.: SIL International.

As the Kenya RCT underscores, the selection of textbook and reading book language is of particular importance to ensure books are facilitating learning. Amongst the education community, there is widespread recognition of the benefits of teaching children in languages they speak and understand.³⁹ One form of this is the widening acceptance of mother tongue instruction and teaching children in their home language.^{40,41,42} Studies show the marked gains that can be achieved in educational outcomes when children learn in languages they speak and understand (Box 2). Additional benefits include cognitive development, ease and speed in learning a second language, improved self-identity, and stronger parental involvement.⁴³ Studies also show that dropouts, repetition, and low achievement are reduced when mother tongue instruction is adopted in schools.^{44,45} Mother tongue or first language instruction is particularly crucial in early years⁴⁶ and sets the foundation for further learning achievement. Importantly, instruction needs to be

accompanied by books in the same languages.⁴⁷ The same study on Kom-educated children (Box 2) also cautions that careful attention must be paid when early exit LOI policies require children to transition to a second language within the primary grades. Learning gains from mother tongue education can be easily lost if appropriate support, including books, is not provided to aid the shift.

In order for children to learn in languages they speak and understand, the languages of instruction (LOIs) in schools must correspond to these languages. While this scenario is the reality in some situations, teaching in languages that children speak and understand (i.e. mother tongue) may not always be possible due to political or practical constraints. The process of urbanization can mean that school enrollments, particularly at primary levels, comprise more than one mother tongue. In Uganda, for instance, this phenomenon has made it more difficult to identify distinct mother tongue languages which could serve an entire community due to intermixing of vocabulary, phrases, grammar, and syntax between previously distinct languages.⁴⁸ In these circumstances, some research suggests that selecting

³⁹ Ibid.

⁴⁰ UNESCO. (2015a).

⁴¹ UNESCO. (2008b). *Mother Tongue Matters: Local Language as a Key to Effective Learning.*

⁴² RTI International. (n.d.) *Improving Learning Outcomes through Mother Tongue-Based Education.*

⁴³ Ibid.

⁴⁴ Global Campaign for Education. (n.d.). *Global Campaign for Education Policy Brief: Mother-tongue education: policy lessons for quality and inclusion.*

⁴⁵ RTI International. (n.d.)

⁴⁶ UNESCO. (2008a). *Improving the Quality of Mother Tongue-based Literacy and Learning: Case Studies from Asia, Africa and South America.*

⁴⁷ UNESCO. (2014a).

⁴⁸ Uganda Ministry of Education, Science, Technology, and Sports. (2002). *Uganda Draft School Library Policy.*

another common language that is familiar to children may suffice as a practicable option.⁴⁹ A dominant local language may thus be selected as a language of instruction; however, the risk is that the dominant language selected as an LOI may disadvantage learners from more marginalized ethnic or linguistic groups.⁵⁰ LOI policies may thus encompass mother tongue, dominant languages, and international languages, and the degree to which each is enforced varies, causing further complication for mother tongue LOI adoption in practice. For example, in Nigeria, the default LOI in lower primary school is English, but schools can use a mother tongue of their choice such as Hausa, Yoruba, or Igbo; however, this option is not actively encouraged by the Ministry of Education (MOE) and is widely disregarded by schools due to a number of implementation constraints, including a lack of both mother tongue instructional materials and teacher training in mother tongue instruction.⁵¹ There is thus an urgent need to ensure that sufficient learning materials and teacher training is provided where mother tongues are offered as an LOI.

A final consideration is that in some countries a local language – which could be a mother tongue language or a dominant language – may be used as the LOI in lower grades with a later transition to a regional or international language as the LOI. Although analysis of the timing and learning effects associated with this transition transgresses the scope of this study, careful attention must be paid to ensure that there are sufficient teaching and learning materials in later grades in other LOIs so that learning gains are not lost.

The lack of high-quality, affordable books

Despite clear evidence that textbooks and reading books are a cost-effective means of supporting learning, significant variability in books provision persists between and within developing countries. With regard to textbooks, for example, in 2014 in 10 countries in Francophone Africa, reading textbook availability in early primary grades ranged from 61.7% of children having their own textbooks in Senegal to just 3.9% in Burundi.⁵² Similarly, Figure 2 (below) estimates textbook-pupil ratios (TPR) for urban, rural, and remote locations and highlights the variability of textbook levels within six African countries.^{53,54} Textbook accessibility also differs across other factors such as gender, with girls often having fewer books than boys.⁵⁵

⁴⁹ UNESCO. (2008a).

⁵⁰ Global Campaign for Education. (n.d.).

⁵¹ Duze, C.O. (2011). Implementation of the Mother Tongue/Language Component of the National Policy on Education in Nigeria. *Latwi: A Journal of Contemporary Research*, 8(1).

⁵² PASEC. (2015). *PASEC2014 Education System Performance in Francophone Sub-Saharan Africa: Competencies and Learning Factors in Primary Education*. Dakar: PASEC.

⁵³ Read, T. (2015).

⁵⁴ In interpreting these numbers, it is important to note not only the scarcity of books in certain geographies but also that quality and use may still be a concern even where books are available in sufficient quantities.

⁵⁵ UNESCO. (2009). *Promoting Gender Equality through Textbooks: A methodological guide*. Paris: UNESCO.

Country	Urban	Rural	Remote
Benin	1:10	1:10	1:10
Burundi	2:3	1:3	1:10
Cote d'Ivoire	1:1	1:1	--
Kenya	1:2	1:3	1:5
Namibia	1:5	1:10	1:15
Rwanda	1:3	1:3	1:3

Note: Compare to ideal textbook-pupil ratios of 1:1 or 1:2.

Figure 2. Estimated textbook-pupil ratios in urban, rural, and remote locations

Source: Read, T. (2015). *Where have all the textbooks gone?: Toward sustainable provision of teaching and learning materials in Sub-Saharan Africa.*

Although data for the availability of reading books in primary grades is not easily available, the magnitude of the challenge is at least as great as that for textbooks.⁵⁶ Our consultations with stakeholders also reinforced the magnitude of the problem, and they spoke of reading books as far more or completely neglected compared to textbooks.⁵⁷ The 13 country studies conducted by our team yielded similar stark results: not one of the 13 countries had adequate supplies of reading books in classrooms.⁵⁸ For instance, in Sindh, Pakistan, we found that less than 1% of government primary schools have school libraries, even fewer have classroom libraries, and reading books are altogether scarce.⁵⁹ While there is no large-scale global data on book availability in local languages, low availability of these materials can be deduced from a USAID study that surveyed African language TLM titles in 11 countries and found that even for languages that had more than a million speakers, there was an extremely limited number of titles.⁶⁰

Reasons for low availability are similar for both textbooks and reading books as they are provided through similar channels with the involvement of many of the same actors, and while they vary across countries, some common themes are observed. According to two World Bank publications on textbook provision, the primary causes of low book availability and usage include: book shortages; unpredictable and unstable book and book systems financing; failure to apply cost-reduction strategies in procurement resulting in higher cost of books; insufficient book management information systems and lack of data on current teaching and learning material (TLM) stocks in schools; poor planning; ineffective book distribution systems that often result in loss, damage, and delivery delays; and poor book management and care in schools.^{61,62} The Read publication lays additional emphasis on limited teacher incentive or knowledge in the usage of books as a barrier to effective books provision,⁶³ while the Fredriksen, Brar, and Trucano book notes that the added factor of rapid population growth in sub-Saharan Africa (SSA), as compared to Asia, has increased family size and student populations, limiting book availability by further constraining government and familial budgets.⁶⁴ A publication by Crabbe and Nyingi identifies the lack

⁵⁶ Global Partnership for Education. (2013). *A Reading Fund: Reading materials to 100 million children* [Internal note].

⁵⁷ Crabbe, Richard. (2015). World Bank. Interview conducted by R4D. 4 December 2015.

⁵⁸ Country Case Studies – see Annex 3.

⁵⁹ Pakistan Case Study – see Annex 3.

⁶⁰ RTI International. (2015a). *Data for Education Research and Programming (DERP) in Africa. Reading Materials Survey. Final Report.* USAID | Africa Bureau Education Division.

⁶¹ Ibid.

⁶² Fredriksen, B., Brar, S., and Trucano, M. (2015). *Getting Textbooks to Every Child in Sub-Saharan Africa: Strategies for Addressing the High Cost and Low Availability Problem.* Washington, DC: World Bank.

⁶³ Read, T. (2015).

⁶⁴ Fredriksen, B., Brar, S., and Trucano, M. (2015).

of a national policy framework to support books provision and political economy concerns⁶⁵ as further primary challenges.

Corruption in the book chain is of particular concern. In several instances, corruption issues have even halted nationwide textbook supply for multiple years. For instance, in South Sudan, corruption in textbook provision was so severe that donors cut off funding for textbooks from 2009 to 2011, resulting in 1.9 million children being left without textbooks annually.⁶⁶ Millions of dollars of funding poured into books provision, involvement of numerous stakeholders, multiple layers in the books chain, and high stakes for some stakeholders make it an attractive target.⁶⁷ Corruption can take many forms, involve diverse actors, and contribute to low availability in several ways. Crabbe notes that procurement processes provide avenues for corruption,⁶⁸ and Read puts forth increases in textbook costs and stock losses as examples of subsequent effects on books provision.⁶⁹

1.2. A review of interventions to address the books gap

Over the past few decades, numerous developing country governments, donors, and NGOs have tried to address the causes of low book availability. Millions of dollars of aid funding have been allocated towards TLM provision and usage by a host of bilaterals (e.g. CIDA, DFID, Norad, SIDA, USAID), multilaterals (e.g. World Bank, UNICEF, ADB, DFAT, AFD, GPE), and private foundations (e.g. Aga Khan Foundation, Save the Children, Skoll Foundation, BRAC).⁷⁰ However, the exact amount of funding provided is difficult to quantify due to the complex nature of donor funds reporting, the mix of funding from development partners (e.g., country governments, budget support programs, and NGOs) that are often involved in book provision projects, and the fact that books provision is often integrated into larger education projects with multiple components.

Despite this, an indication of the level of donor funding that has been provided to TLMs can be drawn from various data. One study estimates that 72% of the 110 education projects that the World Bank financed in 40 SSA countries between 1985 and 2000 included support for textbooks.⁷¹ Developing country governments also allocate financing for TLM budgets. However, the current level of spending on TLMs is less than 2% of education spending in most LICs, at the lower end of the 5% -26% spending range that is recommended for LICs through our analysis (further elaborated upon in Section 2.2.1/Finding 4).

The funding channeled into books has been used for programmatic interventions by a combination of donors, developing country governments, and NGOs (e.g., CODE, Room to Read, Save the Children, Worldreader, eKitabu) to increase TLM provision and usage. While impossible to cover the decades of

⁶⁵ Crabbe, R. A. B., Nyingi, M., and Abadzi, H. (2014). *Textbook development in low income countries: A guide for policy and practice*. Washington, DC: World Bank.

⁶⁶ Read, T. (2015).

⁶⁷ Crabbe, R. A. B., Nyingi, M., and Abadzi, H. (2014).

⁶⁸ Ibid.

⁶⁹ Read, T. (2015).

⁷⁰ Triangulation of data from a variety of sources leads to the conclusion that at minimum millions, if not billions, of donor dollars have been channeled to address the books problem over the past few decades. A review of donor funded books projects, a selection of which are cited in Section 1.2, feature many projects that independently total millions of dollars. The GPE grant of US\$70 million to Rwanda is just one example cited later in the text.

⁷¹ Fredriksen, B., Brar, S., and Trucano, M. (2015).

projects undertaken by these actors, the broad buckets of activities that have been typical of TLM projects include initiatives around: (i) direct funding, technical assistance, and provision of equipment to strengthen the development, production, and supply chain of TLMs; (ii) support for TLM management and usage at the school and classroom levels; and (iii) advocacy, knowledge dissemination, and fostering shared dialogue.⁷²

First, initiatives to strengthen the development, production, and supply chain of TLMs have involved direct funding of content development, physical production, distribution, and storage of TLMs. For example, Basa Philipinas is a four year project initiated in 2013, funded by USAID, and implemented in collaboration with the Philippines Department of Education. This flagship project contributes US\$1.5 million in teacher guides, read-aloud books, leveled readers, and reading books in Filipino, English, and selected mother tongues in two regions of the country. The project additionally constructed textbook storage facilities at 78 county education offices and supplied book storage boxes for 3,000 schools.⁷³ In South Sudan, the DFID Textbook project, at the request of the MOEST (Ministry of Education, Science, and Technology), provided US\$15.7 million to (i) procure and supply to schools primary textbooks, teachers' guides, reading books, and other supplementary learning and teaching materials, (ii) undertake the construction of textbook storage facilities at 78 county education offices between 2012 and 2015, and (iii) fund the distribution of the TLMs to counties and schools.⁷⁴ In Ethiopia, the General Education Quality Improvement Project 1 similarly provisioned 78.1 million textbooks and teachers' guides for primary and secondary schools. Books were made accessible in five mother tongues and a student-to-book ratio of 1:1 was achieved as a result of this project in seven and thirteen subject areas in primary and secondary schools, respectively. Such initiatives have also provided and funded technical assistance to strengthen TLM supply chain components. For instance, with the support of a US\$70 million grant from the GPE, the Rwandan Ministry of Education has implemented a transformative TLM tracking system that allows access to data on all aspects of book procurement, stock levels, and book usage in classrooms. The advent of this system is aimed at improving the government's TLM planning and management capacity.⁷⁵ A separate intervention, the Tanzania Children's Book Project, focuses its efforts on a combination of direct funding and technical assistance by offering capacity training to writers, illustrators, publishers, and booksellers and adopting a unique reading book purchasing model. Through this model, the organization guarantees to purchase half of print runs at cost while requiring publishers to sell the remainder for their own profit, in order to increase access to local language reading books in the marketplace.⁷⁶

Second, many interventions have focused on TLM management and usage at the school and classroom levels, including the development of school libraries and teacher training in TLM use. For instance, Room to Read, a nonprofit organization dedicated to inculcating a lifelong reading habit in primary school children, develops classroom libraries and trains teachers and librarians in TLM and library management in addition to producing the reading books to stock them. With over 17,000 libraries, this NGO has reached 10 million children in 10 countries.⁷⁷ The Library Hub Project is another library model established by the Philippines Department of Education in 2005. Funded and implemented through

⁷² Projects referenced in this section are meant to serve as examples and not to individually be taken as representations of the status quo.

⁷³ Philippines Case Study – see Annex 3.

⁷⁴ South Sudan Case Study – see Annex 3.

⁷⁵ Global Partnership for Education. (n.d.). *Books for All: Rwanda's Innovative Textbook Distribution Program*. GPE.

⁷⁶ Tanzania Case Study – see Annex 3.

⁷⁷ Room to Read. (2015).

national-local government collaboration, the initiative creates non-traditional book centers to make reading books accessible to multiple schools in a catchment area through a shared book bin model that rotates on a monthly basis.⁷⁸

Third, advocacy, knowledge dissemination, and fostering shared dialogue are other significant areas of focus for literacy interventions. For example, the Global Reading Network spreads best practices on title development, access, procurement, financing, and supply chain management, while also engaging in limited advocacy on the importance of literacy acquisition in the primary grades. At a country level, *Rwanda Reads* is an example of a government-initiated advocacy campaign. This four-year MOE initiative brings together donors, NGOs, faith-based organizations, and private sector partners with a common commitment to literacy, and a nation-wide public awareness campaign aims to develop a culture of reading.⁷⁹ At a regional level, the Association for the Development of Education in Africa (ADEA) hosts a working group on TLMs, advocates for sector improvements, and creates forums for policy dialogue.⁸⁰

The limited number of rigorous, publically-available evaluations makes it difficult to draw strong conclusions about these past interventions. However, the evaluations that are available suggest some evidence of success does exist. For example, an evaluation of Room to Read's approach to book provision and usage demonstrated an impact on children's reading habits in three of five countries in which the evaluation was conducted.⁸¹ Additionally, a review of the Book Flood experiments that have been tried in Fiji, Singapore, Sri Lanka, South Africa, Solomon Islands, and several other countries suggests that this approach may be able to double the rate of literacy acquisition.^{82,83}

Despite these varied efforts and some successes, low textbook and reading book availability remains a concern. Many reasons may exist including that often these efforts have been limited in scale or timeframe, thus unable to instigate systemic change. They may not be efficiently implemented or may lack coordination with other education projects aimed at improving education quality overall. They may also not be designed with full consideration towards creating an environment for sustainable provision (e.g., incorporating capacity building of the marketplace and book chain actors).⁸⁴ The most common causes of poor TLM availability are inefficient spending, higher than necessary costs, under-financing by governments in some cases, and high levels of loss and damage in distribution and school storage and management.⁸⁵

Many of the larger-scale examples and the evidence on barriers to books provision come from textbooks, given the limited evidence in reading book provision to date. However, any reading book intervention can and should draw upon the valuable lessons learned from textbook provision. These long-standing barriers to books provision suggest that a business-as-usual effort is no longer a viable

⁷⁸ Philippines Case Study – see Annex 3.

⁷⁹ Rwanda Case Study – see Annex 3.

⁸⁰ Sow, M. Aliou. (2015). Association for the Development of Education in Africa (ADEA). Interview conducted by R4D. 2 December 2015.

⁸¹ Room to Read. (2014). *Annual Report 2014: Solving the puzzle: Children's literacy and girls' education*.

⁸² Elley, W.B. (2000). The Potential of Book Floods for Raising Literacy Levels. *International Review of Education*, 46(3), 233-255.

⁸³ The Book Flood approach combined the provision of a high interest reading book library, regular silent reading periods and storytime, and teacher training to facilitate reading acquisition for early grade children.

⁸⁴ Read, T. (2015)

⁸⁵ The most common causes of low reading book availability are further elaborated upon in section 2.2.

solution, whether for textbooks or for any new initiative in reading books. A fundamental shift is needed, and the proposed “Global Book Fund” (GBF) could provide that transformational opportunity.

1.3. Building on experiences from funds in health

A transformational change has been seen in the last fifteen years in the architecture of global health, with the creation of many new institutions, partnerships, and initiatives accompanied by an unprecedented increase in both funding for and attention to health issues in low and middle income countries.⁸⁶ In particular, a number of new mechanisms for raising and channeling development assistance for health have emerged. These new mechanisms, which we will refer to loosely as “global health funds,” may offer useful lessons for the value, feasibility, and design of a new international mechanism for increasing access to books in schools in developing countries.

Relevant global health funds identified as potential useful models include:

- Gavi
- GFATM
- UNITAID
- The RMNCH Trust Fund
- Middle-Income Countries Strategy for Immunization
- Power of Nutrition
- Global Financing Facility

To capture lessons from financing mechanisms in the health sector, consultations were held with several prominent experts in global health financing who have considerable knowledge of and experience with the global health funds (see Annex 2 for list of experts consulted). In addition to many specific points, several broad themes emerged from these conversations:

- Do not neglect *demand*: without strong demand from end-users and relevant government departments, donor-driven efforts to increase the availability of an intervention or commodity will have little impact. In the case of books, a lack of awareness about the value of books which results in a lack of demand from teachers and parents and low priority accorded by ministries of education may be root problems in most countries.
- Consider a commodity or intervention in the context of a broader *system*: books will do little good if teachers are not trained to use them and other prerequisites of quality education are not in place.
- Focus on *distribution systems*: making supply chains work may be more important than reducing the purchase price of a commodity in some settings. Some progress has been made in improving supply chains for health commodities, and some of the successful approaches may be applicable to books.
- Prioritize better *data*: without good data—on procurement, on distribution, on availability in schools, and on use—it will be difficult to identify and address bottlenecks and to show that strategies are working.

These lessons, their applicability to the books chain, and a more systematic analysis of the applicability of global health fund models for a GBF are discussed further in Section 2.3.

⁸⁶ Szlezak, N.A., et al. (2010). The global health system: actors, norms, and expectations in transition. *PLoS Med*, 7(1).

2. Findings from country studies and consultations with stakeholder

We present our findings in three sections. Section 2.1 explains the methodology used in this report. Section 2.2 presents our findings along each line of inquiry of the books chain. Analyses considered that were found to be low-priority or having lower potential for impact are also noted. Finally, section 2.3 presents our analysis of global health funds models and their applicability to the scope and design of a GBF.

2.1. Methodology

Primary data collection in a pre-selected group of countries was used to provide evidence and to contribute context-relevant data to strengthen the overall GBF business case and approach.

Country studies were undertaken in 13 countries:

- **Bangladesh**
- Ethiopia
- **Haiti**
- India (specifically, West Bengal)
- **Kenya**
- **Niger**
- Nigeria (specifically, the Hausa-speaking regions)
- Pakistan (specifically, Sindh province)
- **Philippines**
- Rwanda
- **South Sudan**
- Tanzania
- Uganda

The six countries indicated in bold were selected for in-depth study, with country consultants conducting on-the-ground research and gathering data for analysis from a range of stakeholders. In the remaining countries, the R4D-IEP team conducted a mix of desk study and primary research; brief research visits were used to interview key stakeholders, and any themes or questions raised during the desk research were clarified.⁸⁷

Some very limited inventory work was also undertaken in five of the six countries selected for in-depth study to illustrate the availability and gaps in reading books for primary grades.⁸⁸

Our analysis covered the following key lines of inquiry:

- *Demand channels and usage*: Consultations at the country and regional level attempted to better understand the various factors influencing demand, sources of demand, and the magnitude and size of each.
- *Procurement*: Data on current procurement practices, lead time, and associated considerations were gathered to identify opportunities for savings and efficiency gains.
- *Distribution*: Conversations with reading book distributors at the country and regional level focused on the processes for distributing reading books to schools through both the private and the public sector, the cost and efficiency of current distribution practices, and potential areas for improvement.

⁸⁷ Note that logistical circumstances and timing meant that in Pakistan and Ethiopia interviews were conducted remotely and not in-person.

⁸⁸ Inventory work was not undertaken in Kenya where it was already been completed through the DERP study (RTI International. [2015a].).

- *Publishing*: Consultations covered content availability, costs of authorship, and the implications of copyright and licensing issues for reading books.
- *Printing*: Questions were posed to global, regional, and local printers on the current pricing breakdown of reading books based on different specifications, to shed light on the scope for the lowest cost printing options consistent with required quality and reliability.
- *Financing*: Consultations with MOEs, policymakers, and donors were used to try to estimate the approximate annual expenditure on books.

The lines of inquiry described above provided the basis for standardized protocols (i.e., questionnaires) which were developed and tailored to the different stakeholder categories to be consulted including policymakers, donors, publishers, printers, and implementers. The use of protocols also served to ensure that consistent lines of inquiry were being probed in all countries. Extensive interviews were then conducted at the country level with multiple respondents consulted within each stakeholder category, ensuring that we had a range of data points and perspectives. A total of 288 stakeholders were consulted at the national and local levels: 62 publishers, 21 printers, 25 representatives from donor and multilateral institutions, 34 individuals from NGOs and implementers, 75 government agency staff and policymakers, 45 school teachers and administrative staff, 14 distributors and booksellers, and 12 individuals from other relevant organizations. Details can be found in Annex 1. Where possible, respondents were also asked to provide research and other material. The data obtained from the country studies was also carefully analyzed by the authors to assess quality and accuracy.

In addition to the country studies, global stakeholder consultations with fund experts in health were conducted to enable us to apply relevant experiences from other sectors – both globally and at the country level – when building a business case for a fund for books. Interviews were also conducted with other regional and international experts who have knowledge in procurement and provision of books and other commodities, as well as in implementation of reading programs and deep knowledge of the evolution of funds in other sectors.

Over 100 expert stakeholders were identified for consultations. Of these, 70 were interviewed through in-depth in-person and phone interviews (Figure 3). The full list of global stakeholders is available in Annex 2.



Figure 3. List and categories of interviewed global stakeholders

2.2. Findings along each line of inquiry of the books chain

Although the scope of the feasibility analysis was primarily focused on reading books, the dearth of literature on reading books meant that much of the evidence cited relates to textbooks. Where possible, our findings specifically focus on reading books; in other instances, we surmise the challenges in reading books using data from textbook provision practices.

2.2.1 Demand, planning, and financing of books

Finding 1: Lack of awareness of the value of reading books in supporting literacy.

One common issue in low and middle income markets is skepticism about the value of reading books, especially in local languages. For example, in Kenya, teachers widely opt to use English as the LOI from nursery through to all other levels, often with strong support from parents who perceive English to be the language of economic advantage.⁸⁹ Our research found that the value placed on reading books is often lower than that on textbooks, and there is an alarming lack of understanding amongst MOEs and other developing country government actors on the importance of reading books to early grade literacy. One expert stakeholder commented that MOEs often focus on textbooks before considering reading books,⁹⁰ creating a crucial gap in building literacy and developing a culture of reading.

Box 3.

“The importance of a good supply of reading books in improving reading and literacy is not widely appreciated by lower primary teachers...”

Source: India Case Study – see Annex 3.

Parental and teacher understanding of the value of reading books (Box 3) also remains low in many countries. Anecdotal evidence shows parents in Asia and Africa have been reluctant to buy reading books for young readers – regardless of language and format (print or digital) – because of the few number of words on each page.^{91,92} Where awareness of the role of reading books does exist, both parents and governments also promote languages such as English or French over local languages, due to the perceived lower value of local language titles. High parental illiteracy rates (projected at 62% for women and 76% for men in SSA in 2015) that hinder the understanding of the importance of books as well as high poverty rates that make books unaffordable in some cases are other factors contributing to limited demand, especially when combined with high book costs as mentioned in section 1.1.⁹³

Publicity and advocacy campaigns to increase awareness of the importance of reading books, and subsequently raise demand, are therefore essential components of literacy initiatives and any new global mechanism.^{94,95}

Finding 2: Lack of data on book provision and learning outcomes limits the ability to assess progress, identify inefficiencies, and mobilize appropriate resources. A GBF could play

⁸⁹ Kenya Case study - see Annex 3.

⁹⁰ Crabbe, Richard. (2015).

⁹¹ Berger, Alisha. (2015). Room to Read. Interview conducted by R4D. 18 August 2015.

⁹² Cahjadi, Robbi. (2015). ProVisi Education. Interview conducted by R4D. 5 August 2015.

⁹³ Fredriksen, B., Brar, S., and Trucano, M. (2015).

⁹⁴ Berger, Alisha. (2015).

⁹⁵ Zacarias, Dani, Tam, Tina, and Lowe, Zev. (2015). Worldreader. Interview conducted by R4D. 24 September 2015.

a key role in (a) providing funding or technical support to implement improved in-country data systems, (b) making country-level data collection a requirement for GBF book funding, and/or (c) hosting or supporting an online data sharing platform.

Unlike the health and agriculture sectors which have publicly available data on both inputs and outcomes, there is extremely limited data in the education sector to track key indicators of progress.^{96,97} Such indicators are not well-defined, let alone tracked, in a systematic way at the country or global levels. The result is an extremely limited evidence base from which to assess progress, identify inefficiencies, and advocate for the resources and policy changes needed to address them.

There are currently efforts underway to improve the collection and availability of key education indicators. Most notably, the GPE has made the development of harmonized education metrics a key part of its strategy. In collaboration with the Learning Metrics Task Force (LMTF),⁹⁸ the GPE is in the process of developing a proposal for an international platform to fund and provide technical support for regional and national learning assessments, with the perspective that such assessments should be a public good.⁹⁹

However, because this effort appears to be focused on high-level outcome and financing indicators, there is still a gap relating to data collection and management, specifically for book provision. Our country case studies and other research¹⁰⁰ indicate that nearly all countries studied (with the possible exception of Rwanda) lack essential education management information system (EMIS) data with which to plan and deliver adequate supplies of textbooks and reading books. Gaps in EMIS provision vary from country to country but include up-to-date lists of schools and their grade-level enrollments, school-based data on TLM stocks and loss rates, and the annual budget required to achieve and sustain textbook and reading book targets. Where mother tongues are used as LOIs, there is typically inadequate data on the location and grade-level enrollment of different languages, thus making print runs and distribution matters of guesswork. Efforts to increase the availability of books will be hampered if such data is not available to forecast demand, plan procurement, and identify bottlenecks and inefficiencies along the book value chain.

Given these issues, a GBF could play a key role in (a) providing funding and/or technical support to countries to implement improved data systems, (b) making country-level data collection a requirement for GBF book funding, and/or (c) hosting or supporting an online data sharing platform.

a) Fund technical support for in-country data system design and implementation. As a complement to the work of the GPE and LMTF, the GBF could work in parallel to support the design, implementation, and/or improved use of data systems for book provision. This could include EMIS and TLM management systems to plan book spending and to track procurement and availability, as well as “track and trace” and other supply chain management systems which are crucial to addressing sources of loss.¹⁰¹ Indeed, in some countries donors are providing this type of support.

⁹⁶ UNESCO. (2016a). Every Child Should Have a Textbook. *Global Education Monitoring Report*, Policy Paper 23.

⁹⁷ Fredriksen, B., Brar, S., and Trucano, M. (2015).

⁹⁸ For more information, see <http://www.uis.unesco.org/Education/Pages/learning-metrics-task-force.aspx>

⁹⁹ Global Partnership for Education. (2014). *Results for Learning Report 2014: Basic Education at Risk*.

¹⁰⁰ Read, T. (2015).

¹⁰¹ Yadav, Prashant. (2015). William Davidson Institute (WDI) at the University of Michigan. Interview conducted by R4D. 1 December 2015.

For instance, as mentioned in section 1.2, the GPE recently provided funding for the Rwandan Ministry of Education to create a TLM tracking system that allows access to data on book procurement, stock levels, and book usage in every classroom.¹⁰²

- b) Make country data collection a requirement for GBF book funding.** Assuming that the GBF takes a role in funding books, country requirements to receive such funding could include reporting book procurement data. In the health sector, organizations like the GFATM have taken a similar approach which has significantly improved transparency in the markets for key health commodities and underpinned various market-shaping interventions. As mentioned above, data gathering could also be directly supported by the GBF, at least initially, depending on the capability of countries to undertake this on their own.
- c) Fund or host an online data sharing platform.** Lessons from health may be instructive when considering how to publically share data. For example, after the GFATM collects procurement data from recipient countries, it makes this data available publicly in aggregated form through its online Price & Quality Reporting (PQR) tool. Similarly, the World Health Organization (WHO) hosts a database called the Global Price Reporting Mechanism (GPRM) which aggregates data from the

Box 4. Minimum Standards for Text and Reading Books in Primary School and Cost Parameters

Textbooks: 5 textbooks per pupil per grade. 1:1 Pupil to Textbook Ratio. US\$2 unit textbook cost and 3-year book lifespan. Annual per student textbook cost of US\$3.3

Reading books: 42 book titles per school year per pupil. US\$ 1.74 unit cost. Annual per student book cost of US\$1.74

Sources:

Various expert interviews

Fredriksen, B., Brar, S., and Trucano, M. (2015). *Getting Textbooks to Every Child in Sub-Saharan Africa: Strategies for Addressing the High Cost and Low Availability Problem*. Washington, DC: World Bank.

Notes:

a. These are very rough estimates: in most developing countries, 5 textbooks per students would not meet upper primary requirements. For example, Vietnam requires 5 textbooks per pupil per grade in Grades 1-3 and 9 in Grades 4-5.

b. Reading book annual per student costs assumes that the book life is only one year. If longer, the cost would drop.

GFATM and various other purchasers. These public procurement databases have underpinned market-shaping interventions by allowing for more accurate and nuanced analysis of evolving market conditions (e.g., prices, volume levels, product mix). A similar mechanism in the education sector could similarly help with identifying and addressing market inefficiencies, and the GBF could play a direct (hosting) or indirect (funding) role in creating this public good. This database could start with procurement data similar to the health examples, though could also potentially expand in coordination with GPE, LMTF, and other partners to include additional relevant data (e.g., around usage, title availability, book-to-pupil ratios, and funding).

Importantly, the data emerging from these systems must be effectively used by decision makers. Specifically, such systems could be linked to book budgeting and policy making processes to ensure that the data gathered is appropriately utilized when making decisions related to book provision.¹⁰³

¹⁰² Global Partnership for Education. (n.d.).

¹⁰³ Naidoo, Jordan. (2016). UNESCO. Interview conducted by R4D. 24 March 2016.

Finding 3: To meet a theoretical minimum book standard for all pre-primary and primary students, low and middle income countries need to spend between US\$3.1 billion - US\$3.9 billion yearly. However, research is needed to understand a more realistic, current, addressable market size.

Sizing the amount of resources needed to fulfill the largest potential need for books is critical to assess whether there are sufficient funds available and to identify key savings drivers from interventions to improve efficiencies.

For the textbook and reading book market, a significant amount of resources is required -- US\$3.1 to US\$3.9 billion annually for book costs alone¹⁰⁴ -- to meet the theoretical minimum standard needs (see Box 4) in the target population. The range is from US\$1.9 to US\$2.6 billion when accounting for low income and lower middle income countries only (Figure 4.) The need for textbooks comprises two-thirds of this market, while reading books make up the remaining one-third.

The figures are calculated by multiplying annual per student book cost with pre-primary and primary enrollment for low income, lower middle income, and upper middle income countries. Appendix 1 contains details on our methodology.

It is important to note that this market size represents theoretical *need*, which does not equate to the actual market size. To gain a realistic understanding of the resources required to meet *current demand* for such books more in-depth studies are required. Current publicly available data neither robustly nor comprehensively accounts for school, teacher, or student demand for textbooks and reading books. However, as presented in Finding 1, the lack of awareness about the importance of reading books means that there is currently weak demand in low and middle income markets. Therefore, we caution that calculating the *current actual* market size may underestimate the true market demand which may only be revealed once there is greater awareness and advocacy around the value of reading books.

¹⁰⁴ This figure does not account for projections that include population growth or scale-up scenarios such as currently out-of-school children enrolling in formal education. Calculations are based on UIS enrollment data (UNESCO. [2015c]. UIS Database.) and annual per student book cost. The annual per student reading book cost is derived from DERP average price (RTI International. [2015a].). Annual per student textbook data is derived from Fredriksen, B., Brar, S., and Trucano, M. (2015).

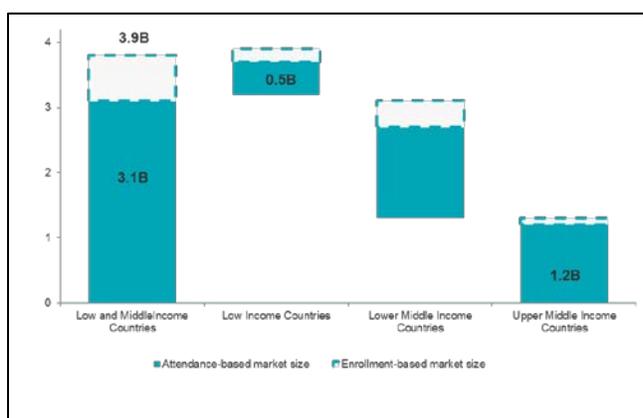


Figure 4. Theoretical market size of minimum standard needs for textbooks and reading books in target population^{105,106}

Finding 4: Analysis of primary education spending reveals an underfinancing of books, including textbooks and reading books. To meet minimum book standards, out of 32 countries studied, 18 face significant annual budget gaps that total nearly US\$200 million. However, improving spending efficiency, rather than raising absolute funds, is a priority for half of LMICs and all UMICs.

Past studies have attempted to measure the share of primary education budget needed for books. The Global Education Monitoring Report Policy Paper recommends that at least 3-5% of the primary education budget should be spent on textbooks.¹⁰⁷ In the mid-1990s, the (former) Organization of African Unity advised member states to allocate a minimum of 14% of the primary education budget on TLMs. However, analysis of primary education spending for 32 countries¹⁰⁸ indicates that average TLM spending as a percentage of primary spending is well below these proposed targets. TLM spending as a percentage of primary spending was 2% between 2010 and 2014, with little variance between country income levels.^{109,110,111} Mean TLM spending was 2% of primary expenditure for LICs and LMICs and 3% for UMICs.

Almost all our country studies reinforce the inadequate spending on primary reading books. For example, Tanzania, Bangladesh, and Pakistan make no provision for reading books in government budgets. In India, state governments rarely, if ever, fund the provision of reading books in any

¹⁰⁵ Enrollment data calculated using UNESCO Institute for Statistics data. UNESCO. (2015c).

¹⁰⁶ This comparison was made, as no additional investments in efforts to increase enrollment was assumed. Although not a perfect measure, attendance data is used to address the fact that enrollment data may sometimes over-report actual numbers of students in classrooms. Attendance estimates based on most recently available adjusted new attendance rates for primary education reported by UNESCO Institute for Statistics. An average attendance rate was calculated from the range of attendance in all available countries and for each World Bank region. For low income countries, attendance is estimated as 67.5%; for lower middle income countries attendance is estimated as 76.5%; for upper middle income countries, attendance is estimated as 92%. UNESCO. (2015c).

¹⁰⁷ UNESCO. (2016a).

¹⁰⁸ As can be seen in Appendix 4, 32 LIC, LMIC, and UMIC countries were selected for analysis based on data availability.

¹⁰⁹ Primary education spending and TLM spending averages between 2010 and 2014 were used in the analysis.

¹¹⁰ It should be noted that governments include textbook and reading book budgets under TLM spending. Even though TLM expenditure includes spending on materials other than books, it remains the closest indicator of government book spending.

¹¹¹ As explored later in the section, it should be cautioned that one explanation for this low figure is that donor aid for TLMs, which accounts for a considerable portion of book financing, is often excluded from government budget lines altogether.

language.¹¹² Other recent literature also confirms this. For example, underfinancing of books has also been seen in Zambia, Malawi, and Guinea.¹¹³ Moreover, it is widely believed that even when governments budget for TLMs, spending is completely directed to textbooks, which leaves little or no domestic financing for reading books.^{114, 115,116}

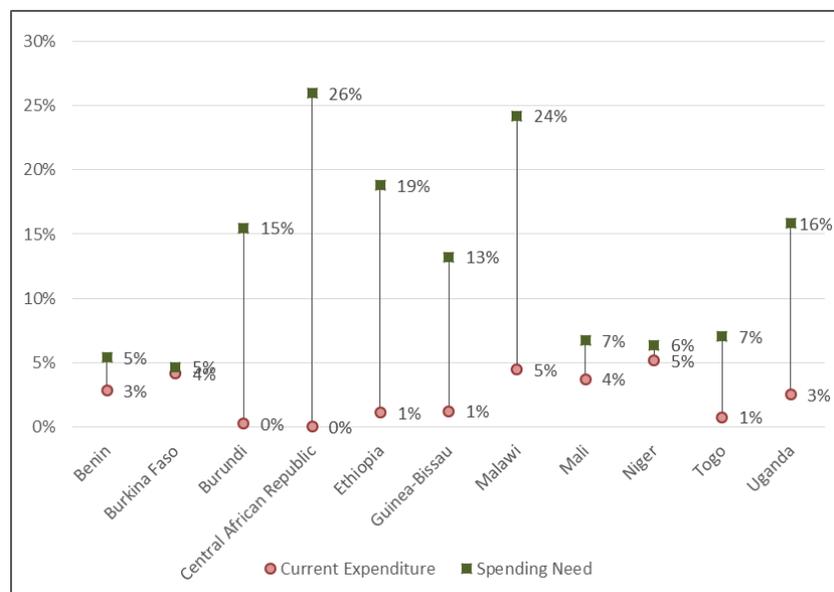


Figure 5. TLM Spending Need as a percent of Primary Expenditure to meet minimum book standards, LIC¹¹⁷

In order to meet certain minimum standards recommended by experts (Box 4), analysis indicates that countries may need to spend between 0.6 to 26% of current primary education spending on TLMs; the wide range is a result of country income levels (Appendix 4).

LICs would need to spend between 5 and 26% of primary spending on TLMs to meet minimum standards of book provision (Figure 5).¹¹⁸ Comparing actual TLM spending (2010-2014 average) with total estimated costs for text and reading books reveals a funding gap of nearly of US\$162 million for the 11 LICs in our sample.^{119,120} Six countries in particular would need to spend over 10%. These are Burundi,

¹¹² India Case Study - see Annex 3.

¹¹³ Read, T. (2015).

¹¹⁴ Fredriksen, B., Brar, S., and Trucano, M. (2015).

¹¹⁵ Read, T. (2015).

¹¹⁶ Synthesis from global expert interviews and Country Case Studies – see Annex 3.

¹¹⁷ UNESCO. (2015c).

¹¹⁸ As described in Box 4, our calculation assumes a conservative reading book life of one year. Countries would need to spend a lower share of primary spending on TLMs if the assumed book life is increased.

¹¹⁹ Government TLM spending data was provided by UIS. However, figures should be interpreted with caution for the following reasons: (1) Not all countries track expenditure on TLM in a separate budget line, which partly explains the low coverage of countries in the data set. When countries do track expenditure, it may not follow comparable definitions or be done properly, which means the data may not be of the highest quality; 2) The data set only captures TLM spending reported under current expenditure. Some countries classify TLM spending as capital expenditure; and 3) In some developing countries, expenditure on TLM may be funded quite heavily by donors. Donor expenditure, which is often not part of government budgets, may not be included in the data.

¹²⁰ Estimates of required TLM spending as a percentage of primary spending are calculated as follows: (Total cost for text and reading books (minimum standards)) / (Actual Primary spending (2010-2014 average)) x 100"

Central African Republic, Ethiopia, Guinea-Bissau, Malawi, and Uganda. Details on individual spending requirements for textbooks and reading books separately can be found in Appendix 4. In general, the required spending for textbooks is nearly double that for reading books.

For UMICs and LMICs, the median TLM spending as a percentage of primary spending needed to meet minimum standards is lower. For LMICs, between 1 and 2.8% of primary education spending is needed for adequate TLM provision. For UMICs (excluding Kazakhstan), the estimated spending need is around 0.2 to 1.1% of primary education spending. Five LMICS have a funding gap totaling US\$30 million.¹²¹

For many LIC countries, closing the funding gap entirely through domestic resources appears difficult in the short term (see Figure 6). It would take over 5 years or more for Burundi, Ethiopia, Guinea-Bissau, and Togo to meet minimum standards if the share of TLM spending remains constant to the growth rate of primary education spending. For example, even with primary spending growth rates of 11% and 31%, it would take Ethiopia and Guinea-Bissau 17 and 10 years, respectively, to meet their current required spending needs if TLM spending remained at 1%.

Country	Annual growth in primary education spending		Expected TLM spend	Funding gap	Years to meet
Burkina Faso	17%		13,166,403	13,160,348	-
Burundi	0.4%		202,046	10,384,068	51
Cameroon	1%		8,314,350.93	21,017,679	3
Ethiopia	11%		4,729,623.90	79,820,154	17
Guinea-Bissau	31%		140,017	1,414,902	10
Malawi	33%		5,713,798	20,783,488	4
Mali	30%		8,468,402	11,068,070	1
Niger	44%		13,043,116	11,552,087	-
Togo	16%		1,176,855	7,169,675	6

Figure 6. Years to meet minimum standards given current budget projections, LIC

However, results should be interpreted with caution. As noted by UNESCO Institute for Statistics (UIS), “not all countries track expenditure on TLM in a separate budget line, which partly explains low coverage, and when countries do, it may not follow comparable definitions or be done properly, which means the data may not be of the highest quality.”¹²² Block grants and donor aid for TLMs, which account for a considerable portion of book financing, are often excluded from government budget lines altogether. Many countries do not have national education accounts and governments have been hesitant or unable to share their budget/spending in our attempt to collect primary data.

Identifying levels of external financing for books has been equally if not more challenging. Even though global and country level stakeholders interviewed repeatedly stated that reading books are funded almost entirely by donors, the exact amount of donor assistance is unclear.

The DAC-Creditor Reporting System database, which provides comparable data on donor funding, does not disaggregate disbursements by books. Donor book projects are often financed under larger

¹²¹ Funding gap breakdown: US\$167 million for LICs, US\$30 million for LMICs, and US\$3 million for UMICs.

¹²² UNESCO. (2015c).

education projects making the delineation of book financing difficult to report.¹²³ Moreover, major education donors were unable to provide data on their textbook or reading book spending for this study.

As a result, there is only scattered evidence on levels of donor spending. It is estimated that 72% of the 110 education projects financed by the World Bank in 40 SSA countries between 1985 and 2000 included support for textbooks.¹²⁴ USAID is spending more than US\$1 million per year on book procurement for a single grade in just one country.¹²⁵

Finding 5: There are three distinct categories of countries exhibiting different financing needs, thus requiring different types of support from a GBF:

- **Group 1 countries do not spend enough on both textbooks and reading books and do not have the capacity to increase spending.**
- **Group 2 countries also have significant funding gaps but improved efficiency could help counter some of the gap.**
- **Group 3 countries do not face funding gaps.**

Analysis shows that there are three distinct categories of countries. Group 1, consisting of all LICs and five LMICs in our sample selected for analysis, do not spend enough on both textbooks and reading books to meet any kind of minimum standard. As explored in Finding 4, comparing actual TLM spending (2010-2014 average) with total estimated costs for text and reading books shows a funding gap of nearly of US\$162 million. For some of these countries, relying on domestic sources of financing to meet minimum standards remains difficult as shown above. As discussed later in the report (Section 2.3), adopting country eligibility practices from health funds such as RMNCH which targeted a subset of countries may be most applicable for a GBF. The GBF may therefore need to help these countries fully finance the purchase and delivery of books for some time, until economic or budget growth makes the necessary expenditures affordable. Examples of these countries include Burundi, Ethiopia, and South Sudan.

Group 2 consists of LICs and LMICs that have significant funding gaps, but required spending levels may be achievable given past primary spending growth rates. For the majority of LMICs and UMICs, current spending already meets the cost of minimum standards, suggesting that improved efficiency in spending rather than increased absolute spending should be encouraged. These countries should be urged to increase their spending on books, along with other measures. The GBF can help with advocacy, co-financing, technical support, but not long-term funding to supplement book budgets. Examples of countries in this category include Burkina Faso, Mali, and Niger.

Group 3 countries are mostly LMICs and UMICs that already spend more than the estimated required amount. For these countries, absolute availability of resources is not the main problem, and instead, greater efficiencies and policy changes may be needed to allow them to meet their book needs from current spending. Examples include Colombia, Dominican Republic, and South Africa.

¹²³ Donor organizations were unable to provide quantitative data on textbook or reading book financing from their organizations.

¹²⁴ Fredriksen, B., Brar, S., and Trucano, M. (2015).

¹²⁵ Bender, Penelope. (2015). Correspondence with Shubha Jayaram. March 2016.

2.2.2 Procurement and production of books

Finding 6: There is an inadequate supply of appropriate mother tongue reading book titles due to low awareness of the value of reading books, limited authorship capacity, and lack of content sharing arrangements. Given these challenges, the GBF could, at the global level, serve as or support a content repository to expand access to published titles, and at the country level, support the growth, sustainability, and quality of local publishing industries as needed.

Despite the existence of local publishing capacity in nearly all surveyed countries,¹²⁶ production of children’s reading books in many countries is lacking in both quantity (number of available titles)¹²⁷ and quality (alignment with best practice pedagogical principles). The use of mother tongues as LOIs in early grades in some countries makes the availability of reading materials particularly acute for certain local languages. As seen in Figure 7, there is wide variability across countries and languages in terms of the number of available titles, with only 14 titles identified in one language in Malawi on the low end. Data from this same study also reveals many “neglected” languages for which no titles were found, though it is unclear how many of these languages are LOIs.

The quality of titles is more difficult to quantify; however data in Figure 8 shows that there is also large variation amongst countries in the percentage of textbook-related materials that include best practice pedagogical approaches. When considering the example of phonics,¹²⁸ only 9% of titles identified in Mozambique used a phonics approach vs. 70% of titles in Ethiopia and Nigeria. Though phonics is just one of several approaches to the teaching of reading and writing, and MOEs decide whether or not phonics is their selected vehicle, this highlights the wide variability in content and pedagogical standards across countries.

¹²⁶ Country Case Studies – see Annex 3. Exception is South Sudan which has local authorship but not publishing capacity.

¹²⁷ Global Partnership for Education. (2013). As noted in the report, data on availability of reading materials in mother tongue for early grades is extremely limited. However, implementing NGOs such as Room to Read, Save the Children, and others have consistently reported a lack of reading materials such that they have had to publish their own to populate their libraries.

¹²⁸ Davidson, M. (2013). *Books that Children Can Read: Decodable Books and Book Leveling*. Washington, DC: USAID.

Country	Three African Languages with the Most Titles Surveyed in Country	ISO Language Code	Estimated Population of Native Language Speakers in That Country	Number of Titles Surveyed in That Country	Percentage of Titles Surveyed in That Country
DRC	Lingala	lin	2,040,000	105	22.9%
	Koongo (Congo/Kikongo)	kng	3,000,000	88	19.2%
	Ngbaka	nga	1,010,000	70	15.3%
Ethiopia	Amharic	amh	21,600,000	366	61.2%
	Afan Oromo	gaz	8,920,000	52	8.7%
	Bench	bcq	347,000	36	6.0%
	Suri	suq	26,900	36	6.0%
Kenya	Swahili	swh	111,000 ^a	424	41.5%
	Kamba	kam	3,893,000	70	6.8%
	Maasai	mas	842,000	54	5.3%
Malawi	Chichewa	nya	7,000,000	309	87.3%
	Tumbuka	tum	2,200,000	18	5.1%
	Yao	yao	2,200,000	14	4.0%

Figure 7. Number of reading book titles found in a sampling of 4 countries¹²⁹

Country	Phonics	Vocabulary	Reading Passage	Comprehension Questions	Writing	Grammar	Other
DRC	46.0%	19.0%	93.0%	32.0%	17.0%	11.0%	15.0%
Ethiopia	70.0%	86.0%	79.0%	61.0%	77.0%	13.0%	17.0%
Kenya	36.0%	47.0%	24.0%	15.0%	31.0%	30.0%	36.0%
Malawi	42.0%	61.0%	79.0%	42.0%	40.0%	7.0%	49.0%
Mali	58.0%	27.0%	72.0%	34.0%	19.0%	20.0%	12.0%
Mozambique	9.0%	29.0%	81.0%	81.0%	73.0%	40.0%	5.0%
Nigeria	70.0%	79.0%	79.0%	70.0%	57.0%	36.0%	5.0%
Senegal	54.0%	39.0%	60.0%	39.0%	43.0%	26.0%	30.0%
Tanzania	20.0%	35.0%	38.0%	34.0%	33.0%	7.0%	54.0%
Uganda	28.0%	76.0%	65.0%	30.0%	12.0%	6.0%	20.0%
Zambia	37.0%	89.0%	66.0%	46.0%	46.0%	28.0%	6.0%
OVERALL	43.0%	60.0%	66.0%	41.0%	36.0%	20.0%	19.0%

Figure 8. Percentage of Textbook-Related Materials with Specific Pedagogical Components¹³⁰

These challenges with the quantity and quality of reading book titles result from low awareness of the value of reading books (which constrains demand, as described in Finding 1), lack of financing, inadequate specification by MOEs, and limited authorship capacity to develop decodable, leveled, and culturally appropriate reading books – particularly in mother tongue languages. In some countries, NGOs more so than publishers are undertaking content generation for reading books given that the demand and funding for new material, particularly in mother tongues, does not allow for sufficient publisher profits. (It is important to note that this is more often the case for mother tongues and local languages than for international and regional languages.) NGOs, donors and language institutes currently provide

¹²⁹ RTI International. (2015a).

Note: According to the Ethnologue – a web-based publication by SIL International that provides statistics on more than 7,000 languages – there are only 111,000 native speakers of Kiswahili in Kenya; in reality, the total number of speakers (L1 and L2) must be larger, as it is a national language of Kenya and a lingua franca within Kenya and Southeast Africa. The total number of Swahili speakers in Africa is estimated by Ethnologue to be at 15,437,390. No other sources with estimates of the total Swahili-speaking population in Kenya could be found for this study. SIL International. (2015). Ethnologue.

¹³⁰ RTI International. (2015a).

authorship services in an uncoordinated manner and often from one-time, donor-funded projects that fail to sustain continued authorship once funding ends.^{131,132,133}

Amongst the titles that are published, access is far lower than it could be due to a lack of coordination and content sharing amongst donors, NGOs, and MOEs. For example, NGOs such as Room to Read and Save the Children commission local authors to develop culturally appropriate stories in indigenous languages, but these titles are only available in each NGO's program sites plus occasional donations to other NGOs.¹³⁴ One expert also noted poor digital archiving practices,^{135,136} resulting in significant loss of titles.

Finally, intellectual property arrangements are not set up to facilitate content sharing. Use of Creative Commons (CC) licensing is low,¹³⁷ and copyrights are often unclear or cumbersome to manage, which prevents titles from being translated and/or reprinted for wider distribution. Even amongst established international publishers (e.g., Scholastic), there can be a reluctance to license content due to a fear of uncontrolled illegal reproduction.¹³⁸ Furthermore, setting up content sharing schemes would require high transaction costs, as content access would need to be negotiated with individual authors and illustrators who typically retain copyrights.

Importantly, these challenges are specific to the reading book market and appear much less relevant for textbooks. Government funding for textbooks, while still inadequate, is significantly greater than for reading books, and content development processes and standards are better developed.¹³⁹ In certain countries, textbooks are still produced by state-run publishing houses (e.g., India), as was the trend in the 1960s-1980s; however, increasingly this is being replaced with private publishing of multiple, competing textbooks from which schools or governments can place orders.^{140,141} In a typical case, the government will bid (as is typically done in Anglophone Africa) or commission (as is typically done in Francophone Africa) textbook development from local, private publishers and/or authors according to defined curricular standards; evaluate textbooks for quality before content is finalized and approved; and retain copyrights which allows for easy content updates and reprinting. However, even with better defined content generation processes, quality issues persist in many countries with respect to textbook's adherence to pedagogical guidelines, integration into broader instructional strategies, and efforts to neutralize gender biases.^{142,143,144}

¹³¹ Butcher, Neil. (2015). Neil Butcher and Associates. Interview conducted by R4D. 19 November 2015.

¹³² Baker, Judith. (2015). African Storybook Project. Interview conducted by R4D. 16 November 2015.

¹³³ RTI International. (2015a).

¹³⁴ Global Partnership for Education. (2013).

¹³⁵ Butcher, Neil. (2015).

¹³⁶ Baker, Judith. (2015).

¹³⁷ RTI International. (2015a). Amongst titles in 11 sub-Saharan African countries, only three countries had 10% or more content that was published under Creative Commons licensing.

¹³⁸ Sakoian, Carol. (2016). Scholastic. Interview conducted by R4D. 2 March 2016.

¹³⁹ Fredriksen, B., Brar, S., and Trucano, M. (2015).

¹⁴⁰ Crabbe, R. A. B., Nyingi, M., and Abadzi, H. (2014).

¹⁴¹ Fredriksen, B., Brar, S., and Trucano, M. (2015).

¹⁴² Crouch, L. (2013). *New Approaches to Title Development and Book Procurement: A Book Fund?* Presentation at Comparative and International Education Society annual conference 2013.

¹⁴³ Sperling, G., Winthrop, R., and Kwauk, C. (2016). *What Works in Girls' Education: Evidence for the World's Best Investment*. Washington, DC: The Brookings Institution.

¹⁴⁴ Benavot, A. (2016). Gender bias is rife in textbooks. *World Education Blog*. Global Education Monitoring Report. UNESCO.

Given these various challenges in book production and particularly for reading books in mother tongue and local languages, the GBF could (a) serve as or support a content repository to expand access to published titles, or support other content sharing mechanisms, and (b) at the country level, support the growth, sustainability, and quality of local publishing industries as needed.

- a) Measures to improve content sharing at both in-country and global levels should be further explored given the fragmentation of reading book development and restricted availability of titles. A number of stakeholder interviews also pointed to content sharing as an important step toward increasing access to mother tongue and local language reading books,^{145,146,147} particularly where financial incentives for commercial publishers are limited or nonexistent and donors, governments, and NGOs are filling the gap. Some options to consider include: increasing collaboration amongst donors, NGOs and MOEs; supporting growth of open license models, both for existing and new content (e.g., through pilot projects or catalytic grants); using technological innovations to support or host a content sharing platform, such as the All Children Reading Grand Challenge for Development (ACR GCD) and the Norad-funded Global Reading Repository (currently being designed); facilitating the co-publishing of books across countries with common languages; or providing technical assistance to publishers to implement more effective licensing practices. However, additional exploration will be needed to determine the most appropriate strategies for content sharing.

Content sharing of existing titles alone could make a significant difference in reading book availability, particularly in mother tongue and local languages. Even for the language with the least published titles (Yao in Malawi, according to Figure 7), increasing availability of the 14 titles identified would represent significant progress. Thus, expanding access to existing titles – assuming they are of appropriate quality – should be prioritized above development of additional titles from a sequencing perspective.

With respect to open licensing models, although experts interviewed did not have concrete recommendations, a handful of existing efforts provide a starting point for examining how this can be done. For example, the African Storybook Project leads content development workshops at teacher colleges and aggregates finished titles in an open-source platform; users from any country in the world can then download, translate, and print the titles of their choosing.¹⁴⁸ Though this is a donor-funded initiative, other organizations such as the Molteno Institute are attempting to create content development models that are commercially viable.¹⁴⁹ The results of this exploration – some of which are already underway¹⁵⁰ – should help inform a GBF content development and distribution strategy.

- b) At the country level, the GBF could support the growth, sustainability, and quality of local publishing industries on an as-needed basis, depending on country context. Amongst all experts consulted, there was agreement that it is ideal to have local publishing industries in all countries

¹⁴⁵ Berger, Alisha. (2015). .

¹⁴⁶ Nhan-O'Reilly, Joseph. (2015). Save the Children. Interview conducted by R4D. 14 August 2015.

¹⁴⁷ Baker, Judith. (2015).

¹⁴⁸ Ibid.

¹⁴⁹ Butcher, Neil. (2015).

¹⁵⁰ An ongoing research project led by Neil Butcher and Lisbeth Levey examines how open licensing can be integrated into the book value chain. Initial findings are expected in mid-2016.

where it is feasible. Stakeholders interviewed highlighted that children need access to both reading books that “mirror” their cultural realities as well as books that serve as “windows” to expose them to foreign worlds,^{151,152,153} and that local publishing is important to ensure that there are culturally relevant books available in appropriate LOIs. Although the importance of local publishing is difficult to quantify, consulted stakeholders noted that international publishers sometimes sell textbooks originally made for their native countries and therefore are not country- or culture-specific. It would therefore be “fundamental to increase local creation of these books to attend [to] local needs.”¹⁵⁴ In addition, publishers play the critical role of coordinating all other actors in the book value chain – a role which is more easily done by actors with local market knowledge and access.

While a long-term goal of developing sustainable local publishing industries is important, this must be balanced against the short-term need to publish a greater number of reading books, which international publishers are currently better equipped to do. Skills in editorial, design, marketing, and bookselling tend to be underdeveloped within African publishing houses.¹⁵⁵ For local language publishing, the skills gap also includes pre-authorship activities like basic language research and ethnographic gathering of stories. A GBF mechanism and/or existing education donors could support the development of publishing industries by funding capacity-building projects with local publishers and authors, potentially first prioritizing languages that correspond to LOIs in schools. This approach was undertaken in Tanzania’s Pilot Project for Publishing (PPP) – a SIDA-funded initiative to strengthen the textbook sub-sector.¹⁵⁶ The PPP included writing workshops for authors to help them develop high-quality content that met curricular standards, as well as technical assistance for graphical, pedagogical, technical, and management aspects of textbook production. The PPP was considered to be generally successful in improving the quality of textbooks in Tanzania and in helping the country to develop a sustainable textbook sector, and the GBF could seek to adapt this model in other countries.

Capacity building with publishers should be pursued in tandem with measures to increase awareness and demand (e.g., securing greater and more consistent book funding), because a sustainable publishing industry cannot exist without sufficient demand and viable market opportunities.

For primary grade reading books in mother tongue and local languages where funding is often limited, it is important to highlight the tension between optimizing current content generation models – which are predominantly NGO-driven in many countries – and supporting the development of sustainable private sector publishing. It has been widely noted that subsidizing demand rather than production is better for the sustainability of publishing industries,^{157,158,159} a perspective that is supported by examples of donor-

¹⁵¹ Walter, Scott. (2015). CODE. Interview conducted by R4D. 18 November 2015.

¹⁵² Sakoian, Carol. (2016).

¹⁵³ Bonilla, E. (2006). Presentation at the International Board on Books for Young People congress in Macau, 2006.

¹⁵⁴ Milliet, Pedro. (2016). Correspondence with Penelope Bender. March 2016.

¹⁵⁵ Greaney, Vincent. (1996). *Promoting Reading in Developing Countries*. International Reading Association.

¹⁵⁶ Grahm, L., and Pehrsson, K. (2004). *Textbooks for all PPP – The first step on a long journey. Evaluation of the Pilot Project for Publishing in Tanzania*. SIDA Evaluation. Department for Democracy and Social Development.

¹⁵⁷ Ibid.

¹⁵⁸ Greaney, Vincent. (1996).

¹⁵⁹ Walter, Scott. (2015).

funded publishing which have been noted to negatively impact local publishers (e.g., Kenya's Tusome project,¹⁶⁰ particularly in its preliminary phases). For this reason, a GBF role in directly funding content development was considered but discouraged by various stakeholders. However, as local publishing industries in some countries in sub-Saharan Africa do not currently have the capabilities to produce lower level reading books, supporting NGO-led content development may make sense in the short term. Ultimately, a content generation strategy will need to be developed by the GBF which takes into account this tension and considers a phased approach to achieving sustainable private sector publishing.

Another model from the health sector that was contemplated was providing advanced market commitments (AMCs) to incentivize the development of reading book titles. AMCs were developed to incentivize investment in new product development, particularly for products requiring substantial and risky R&D (e.g., GAVI uses an AMC to procure certain vaccines). For books, however, this model is not appropriate, as title development does not require large investments on the scale of drug or vaccine R&D. Assuming that new funding is made available for reading book procurement, a simpler approach of publicizing government book budgets and long-term demand forecasts (as is done for other health products, like HIV/AIDS drugs) would likely serve the same purpose but have much lower costs and complexity. The use of multi-year tenders would also be effective, particularly at the outset, in giving publishers and authors assurance that book procurement will be increasing.

Finding 7: Public sector book procurement is not always optimized for cost, quality, and sustainable supply. A GBF could play a role in (a) disseminating and incentivizing the use of procurement best practices, (b) improving the consistency and predictability of demand, and/or (c) promoting centralized pooled procurement for reading books at the national level to lower book costs.

Public sector procurement of both textbooks and reading books is characterized by irregular and unpredictable demand. As discussed in Finding 4, government budgeting for book provision is inadequate, with budgets typically consisting of leftover funds rather than deliberate planning around targeted outcomes. This is particularly true for reading books, however even textbook procurement and curriculum revision cycles are not well-defined and/or adhered to in most countries. Donor-funded projects can exacerbate the problem, as they typically consist of one-time surges in demand rather than long term, sustainable, and predictable funding streams.

The resulting inefficiencies are felt across the book value chain. Publishers lack demand forecasts to properly plan book development – a process which can take up to 18 months.¹⁶¹ Local printers cannot invest in more cost-effective technologies without an understanding of future volumes,¹⁶² and critically, schools cannot effectively plan or teach curriculum without knowing what books they will have and when they will arrive. In sum, a lack of consistent and predictable demand not only creates inefficiencies but also threatens the quality of instruction and the viability of local publishing and printing industries. To illustrate: in Kenya, Rwanda, Ethiopia, and Uganda, there is evidence to indicate local publishers are

¹⁶⁰ The USAID/DFID-funded Tusome project, implemented by RTI International, developed textbooks and provided them at low cost to Kenyan public schools. This led to complaints by publishers of large textbook overstocks, financial losses, and an overall weakened publishing industry (Kenya Case Study – see Annex 3). The project has since responded by working with the publishing industry and conducting trainings to strengthen their skills, with the aim of achieving sustainable development of higher quality materials.

¹⁶¹ RTI International and Varlyproject. (2015). *Research on Reading in Morocco: Analysis of Textbook Procurement Chain and Market for Supplementary Reading Materials*. Prepared for USAID.

¹⁶² de Jongh, Maggie and de Haas, Roel. (2015). blueTree Group. Interview conducted by R4D. 7 October 2015.

capable and willing to publish local language primary textbooks and readers so long as a viable market exists.¹⁶³

A separate but related issue is that of small print run sizes. With average print run sizes of reading books estimated at 500 - 5,000 copies,^{164,165} increasing the volume of print runs was consistently cited as the top cost reduction opportunity for reading books in secondary research¹⁶⁶ and stakeholder interviews, which is corroborated by book price data.^{167,168} In the Philippines, when the government orders in bulk, publishers are able to break the cost limitations of the first printing of 1,000 copies, offer better list prices and greater discounts to book jobbers and bookstores, and minimize stocking of unsold or slow-moving inventories.¹⁶⁹ In Bangladesh, it was widely agreed in research interviews that a significant extension of print runs via guaranteed bulk sales and fast payments could have the impact of reducing prices by more than 50%.¹⁷⁰ As shown in Figure 9, the price per book for large print runs of ~50,000 copies is roughly half of that for small print runs of 5,000 copies (assuming offset printing technology). This is particularly relevant for reading books vs. textbooks, given that reading books are currently not procured in bulk by governments and thus have small print run sizes.

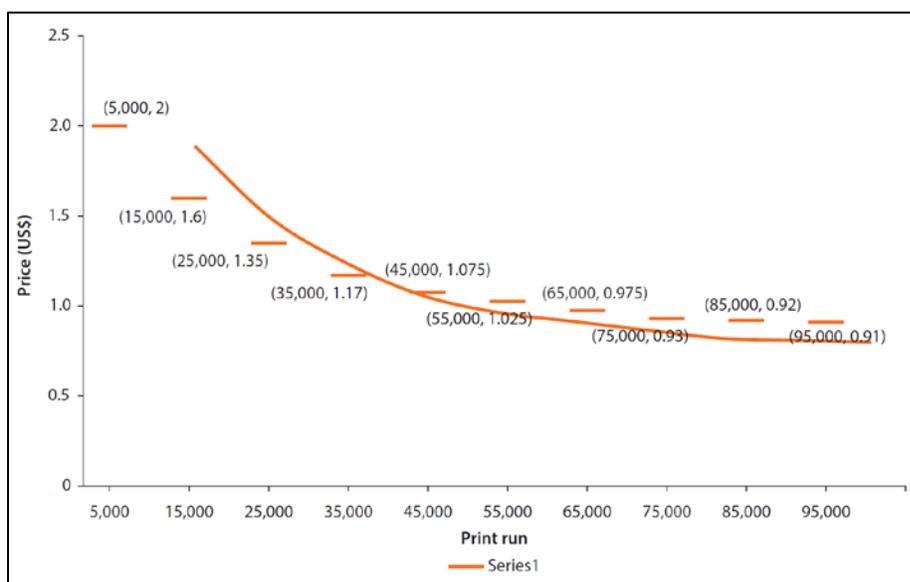


Figure 9. Book costs vs. print run sizes¹⁷¹

While volume-based price reductions for reading books may naturally result from increases in funding and procurement, it is important to note that large print runs are not always feasible, depending on the country and language. Data from R4D country case studies, shown in Figure 10, shows that across 36

¹⁶³ Kenya Case Study – see Annex 3.

¹⁶⁴ Niger Case Study – see Annex 3.

¹⁶⁵ Waweru, David. (2015). Kenya Publishers Association and WordAlive Publishers. Interview conducted by R4D. 20 November 2015.

¹⁶⁶ Crabbe, R. A. B., Nyingi, M., and Abadzi, H. (2014).

¹⁶⁷ Book price and cost data provided by David Waweru of WordAlive Publishers and Kenya Publishers Association.

¹⁶⁸ Fredriksen, B., Brar, S., and Trucano, M. (2015).

¹⁶⁹ Philippines Case Study – see Annex 3.

¹⁷⁰ Bangladesh Case Study –see Annex 3.

¹⁷¹ Read, T. (2015). Data is based on offset printing quotes from multiple printers in India, Mauritius, and Malaysia.

country-language combinations, 23 of them (64%) are estimated to have sufficiently large primary grade populations to support a print run of 50,000 or more copies. As reading book print runs in Africa are currently estimated at 500-5,000 copies,^{172,173} there appears to be significant savings potential across a majority of languages and countries from increasing print run sizes. This could be achieved through a combination of increased funding, nationally standardized book lists, and efficient centralized national procurement.

For textbooks, potential savings may be smaller depending on the country. Some countries (e.g., Vietnam and Uganda) already procure large volumes of textbooks centrally and, as shown in Figure 9, per-book savings are more marginal above 50,000 copies. However, in many Anglophone SSA countries, there has been a shift in recent years toward decentralized textbook supply systems based on government-approved textbook lists and school-based choices. While this decentralized approach can have the effect of fragmenting orders and reducing print run sizes, this need not be the case, as it is very easy to combine centralized procurement with decentralized selection. This has been demonstrated in Rwanda, where school orders are consolidated centrally and publishers are provided with consolidated print run requirements and detailed school-by-school distribution lists. A UNESCO report estimated a potential US\$1 billion in savings from centralizing national procurement across these countries.¹⁷⁴

¹⁷² Niger Case Study – see Annex 3.

¹⁷³ Waweru, David. (2015).

¹⁷⁴ UNESCO. (2016a).

Country	Languages	Est. print run size (theoretical)	Comments
Bangladesh	Bengali	1 million +	
	Chakma	5,000	
	Marma	2,500	
	Garo	2,500	
	Tripura	2,500	
	Shantali	2,500	
India	Bengali	500,000+	
	English	500,000+	
Kenya	English	750,000	Print runs for these languages are estimates
	Kiswahili	750,000	
	Kikuyu	75,000	
	Kikamba	50,000	
	Dholuo	50,000	
Nigeria	English	1 million +	
	Hausa	1 million +	
Pakistan	Urdu	500,000	Print runs based on Sindh school enrollments only
	English	500,000	
	Sindhi	500,000	
Rwanda	Kinyarwanda	600,000	
	English	600,000	
South Sudan	Dinka	100,000	No decisions yet taken on which local languages should be LOIs Information on local language enrollments is provisional only
	Nuer	100,000	
	Bari	70,000	
	Zande	30,000	
	English	300,000	
Tanzania	Kiswahili	800,000	Uncertainty over role of English as an LOI in the future
	English	800,000	
Uganda	Luganda	50,000	Print runs are estimates
	Lusoga	20,000 combined for the other languages	
	Leb-Acholi		
	Leb-Lango, Nga'karamajong		
	Runyoro/Rutoro		
	Runyankore/Rukiga Lumasaba		
	Lugbarati		
	Lugwere		
	Lukhonzon		
	Ateso		
English	100,000+		
TOTALS for languages spanning multiple countries	Bengali	1.5 million+	
	English	4.5 million+	
	Hausa	1 million+	
	Kiswahili	1.5 million+	
			= 50,000 or more copies

Figure 10. Estimated potential print run sizes for primary grades 1-3 based on existing enrollment data
Estimates based on the assumption that each school will receive 5 copies of each reader in the language of its specified LOI.¹⁷⁵

¹⁷⁵ Country Case Studies – see Annex 3.

A final set of inefficiencies in book purchasing stems from government tender practices and requirements. These issues, which affect both the cost and quality of books, fall into three areas:

- ***Selection of vendors that are not of the highest quality and/or most cost effective*** results from corruption, lack of transparency, and lack of quality audits in tender processes. Corruption was widely cited in research and stakeholder interviews to be an issue across countries,^{176,177} though even where it was not suspected, publishers noted that tenders are often not widely disseminated and selection criteria not transparent. Furthermore, selection processes are typically conducted without “integrity, due diligence” or audits on suppliers to ensure that they are reputable firms with recommendable backgrounds. At minimum, asking suppliers to provide a recent order history and also conducting reference checks would help mitigate these issues; though ideally this would be complemented with quality control and supplier performance tracking processes as well.
- ***Use of local printers, in contrast to international printers***, is generally more expensive in SSA except when print runs are very small. This is true for local printers in Africa and selected other countries, but not in countries such as India which have cost-competitive local printers and often serve as hubs for regional printing. It is important to note that while local *publishing* industries are important for producing culturally-relevant content (Finding 6), local *printing* does not have any positive impact on educational outcomes versus international printing. Furthermore, the cost savings possible from using international printers must be weighed against the positive effects that local printing companies have on the local economy.

Though price comparison data is sparse, anecdotal evidence from stakeholder interviews indicates that prices from local African printers are between 10% and 150% higher than international printers; the cost difference is highly context dependent and influenced by factors such as print run volumes, timeline, number of pages, location, etc.^{178,179,180} This price differential is primarily driven by two factors. First, smaller local printers cannot invest in more cost-effective, newer printing machines. Second, local printers in SSA pay approximately 15-20% more for paper due to lower purchase volumes and import taxes on paper,¹⁸¹ versus books printed overseas which are imported tax-free.¹⁸²

That said, R4D country case studies indicate that a majority of both textbooks and reading books in sub-Saharan Africa are already being printed internationally – given lower costs, better quality and greater reliability. Even in countries with well-developed printing industries like Kenya and Nigeria, publishers prefer to buy a majority of their books from international printers. This finding is based

¹⁷⁶ Barth, Christophe. (2015). Burda Druck. Interview conducted by R4D. 1 October 2015 and 15 November 2015.

¹⁷⁷ de Jongh, Maggie and de Haas, Roel. (2015).

¹⁷⁸ Piper, Ben. (2015). RTI Kenya. Interview conducted by R4D. 4 December 2015.

¹⁷⁹ Waweru, David. (2015).

¹⁸⁰ de Jongh, Maggie and de Haas, Roel. (2015).

¹⁸¹ USAID. (2014). *Best Practices for Developing Supplementary Reading Materials*. USAID.

¹⁸² Exceptions to this exist and include Vietnam, where the government buys paper in large quantity on the international market then provides it to various local printers (Fredriksen, B., Brar, S., and Trucano, M. [2015].). There are also countries (e.g. South Africa) that have eliminated import taxes on paper used to print educational materials.

on country stakeholder interviews, however has not been corroborated by data and was contradicted by one expert in Kenya.¹⁸³

- **Book specifications** may not be optimized for quality and cost-effectiveness. This includes visual and linguistic standards that affect learning outcomes (e.g., word density, font size, use of color – see Box 5);¹⁸⁴ printing specifications which affect book durability and cost (e.g., cover material, binding, paper quality); and design/layout specifications which affect paper wastage and therefore costs (e.g., number of pages, paper size). While there is limited data to assess current book specifications, R4D-IEP country case studies indicate that most countries opt for durable production specifications to achieve a 3-5 year book life. However, some specifications may not be optimized. There is also not universal agreement amongst experts as to which printing specifications are optimal.

Box 5: Textbook format and visual effects on learning to read in young children

What does evidence from vision science tell us about textbook format?

- First and second grade textbooks should be printed taking into consideration that the child’s visual system is still developing. We have learned that the text size should measure 24 pt., double-spaced lines with three letter spaces between words. Furthermore, Courier is the most effective font type for Latin script.
- First grade textbooks should start with single letters, proceed to bigrams, and then to words of increasing length. Results from visual psychophysics indicate that, contrary to the whole word approach, starting from letters can substantially help word decoding.
- Evidence indicates that several pictures on a page may actually prove detrimental and impair reading. By contrast, one informative picture, positioned in a consistent position in the page layout, may improve comprehension and information retention.
- Colors can impact the learning process if applied functionally and effectively. Consistent use of particular colored texts can help children to quickly memorize a pattern of words and sounds, and use of colored overlays and paper may increase the readability of textbooks.

*Excerpts from GPE literature review on “Visual and linguistic factors in literacy acquisition”*¹⁸⁵

Importantly, inefficiencies in book specifications appear to have minimal impact on overall book prices. A majority of stakeholders consulted did not believe significant savings were possible from optimizing print specifications, a conclusion which is supported by book cost data. As shown in Figure 11, printing comprises ~30% of a book’s final price for publishing and printing tenders and ~90% for printing-only tenders, with only half of that cost coming from manufacturing and raw materials. Thus, even a 15% savings in manufacturing costs – which most stakeholders would consider high – would yield only a 2-7% savings on the final book price.

¹⁸³ David Waweru of WordAlive Publishers and Kenya Publishers Association estimated that 75% of primary grade SRMs are printed locally.

¹⁸⁴ Marinelli, C.V., et al. (2013). *Visual and linguistic factors in literacy acquisition: Instructional Implications For Beginning Readers in Low-Income Countries*. Prepared for the World Bank by the Global Partnership for Education.

¹⁸⁵ Ibid.

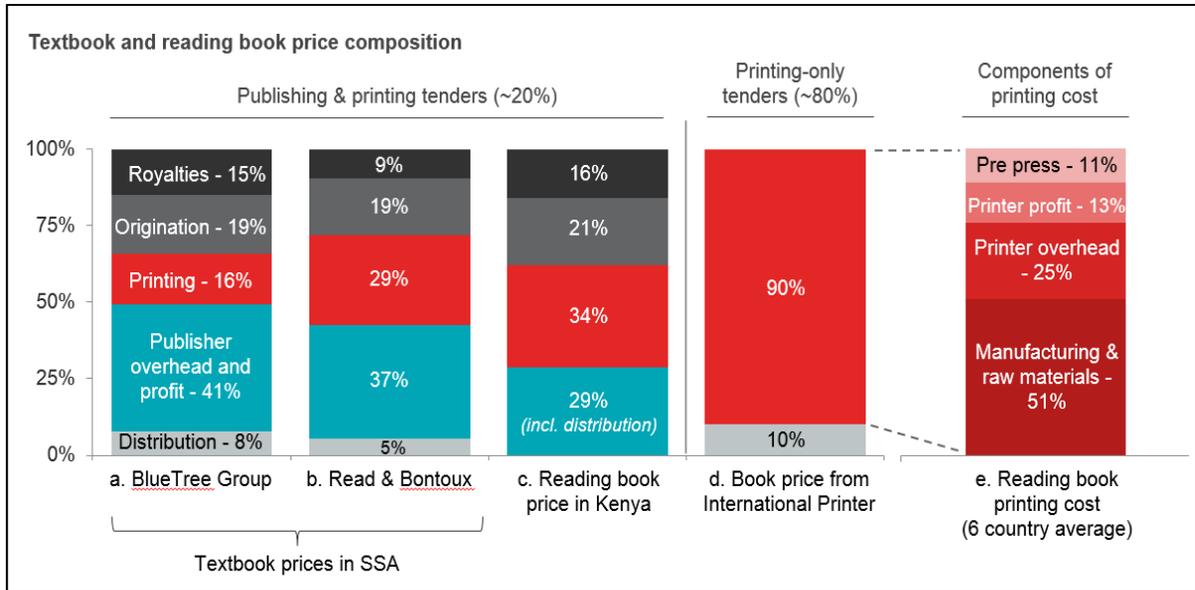


Figure 11. Breakdown of textbook and reading book prices in sub-Saharan Africa¹⁸⁶

Book specifications are important to consider, however, for quality and durability reasons. To illustrate, book destruction due to poor construction was believed to be the greatest driver of Tanzania's 50%+ book loss rate.¹⁸⁷ Durability is most affected by binding, cover materials, and paper type. As shown in Figure 12, using higher quality specifications for each dimension – leading to a four-year book life – is associated with only ~20-40% higher costs than using lower quality specifications for a one-year book life. This clearly illustrates that durable specifications are more cost effective; paying 20-40% more for a book to last three additional years is much less expensive than paying 300% more to replace the entire book each of those years. This conclusion is corroborated by data from a recent World Bank report which showed that increasing durability from 1 to 3 years can reduce the annual per-pupil cost of textbooks by approximately two-thirds.¹⁸⁸

¹⁸⁶ a. blueTree Group. (2012). *Community of Practice Workshop: Getting the right books to the kids. Book Costs Across the Book Chain.*

b. Fredriksen, B., Brar, S., and Trucano, M. (2015). Averages data from Read and Bontoux (2015) and World Bank 2002 survey of 21 publishers in 12 SSA countries.

c. Publisher cost breakdown from David Waweru of WordAlive Publishers and Kenya Publishers Association. Publisher overhead includes financing and distribution costs.

d. Average costs across 14 printers in 6 countries (Bangladesh, India, Niger, Nigeria, Philippines, Tanzania) from Country Case Studies – see Annex 3.

¹⁸⁷ Graham, L., and Pehrsson, K. (2004).

¹⁸⁸ Fredriksen, B., Brar, S., and Trucano, M. (2015).

Item	Title	Size	Cover pages	Text pages	Cover colors	Text colors	Text paper	Cover card	Binding style	Print run	US\$ price FOB
1	Primary TB	7.44 × 9.68"	4	96	4	4	62 gsm	180 gsm	Saddle Stitch	75,000	0.464
2	Primary TB	7.44 × 9.68"	4	96	4	4	80 gsm	250 gsm	Saddle Stitch	75,000	0.553
3	Primary TB	7.44 × 9.68"	4	96	1	1	62 gsm	180 gsm	Saddle Stitch	75,000	0.381
4	Primary TB	7.44 × 9.68"	4	96	1	1	80 gsm	250 gsm	Saddle Stitch	75,000	0.540
5	Secondary TB	7.44 × 9.68"	4	144	4	4	62 gsm	180 gsm	Perfect Bound	20,000	0.788
6	Secondary TB	7.44 × 9.68"	4	144	4	4	80 gsm	250 gsm	Section Sewn	20,000	0.969
7	Secondary TB	7.44 × 9.68"	4	144	1	2	62 gsm	180 gsm	Perfect Bound	20,000	0.624
8	Secondary TB	7.44 × 9.68"	4	144	1	2	80 gsm	250 gsm	Section Sewn	20,000	0.780

Note: FOB = freight on board; gsm = grams per square meter; TB = textbook.

Figure 12. Comparative prices for one- and four-year textbook specifications¹⁸⁹

- **Other issues:** Additional issues mentioned by a few stakeholders concerned government payment practices. One interviewee noted an issue with late payments,¹⁹⁰ while another emphasized the uncertainty of being paid at all, both of which were assumed to increase risk and therefore costs.

Given these issues, a GBF could play a role in (a) disseminating and/or directly incentivizing procurement best practices, (b) improving the consistency and predictability of demand, and/or (c) promoting centralized pooled procurement at the national (and potentially regional) level to lower book costs.

- a) Disseminate and/or directly incentivize procurement best practices.** A GBF entity (or another entity in the absence of a GBF) could play a role in creating normative standards for book procurement. This could include guidance around book specifications as well as standards for transparency, integrity due diligence, quality control, policy (e.g., approved national book lists, import duties on paper), and combatting corruption. A GBF could also go a step further and require adherence to some of these standards as a condition for funding eligibility, thereby directly incentivizing their use if they can use additional funding as leverage.
- b) Improving the consistency and predictability of demand** for books will require both increasing awareness of the importance of reading books and incentives for governments to prioritize book budgeting and planning. For the latter, a GBF could create such incentives by providing multi-year funding for books, with the requirement that governments provide matching funds and adopt certain management and operational best practices. These could be designed to address other procurement inefficiencies including combatting corruption, improving the transparency of tenders, developing evaluation criteria for books, and adhering to other procurement best practices.

To supplement this, the GBF could also fund technical assistance to countries to implement effective budgeting, planning, and book management practices. Given that many countries are not doing these activities at even a basic level, capacity building will likely be crucial to achieving broader literacy goals within public education systems. This type of capacity building was done in Tanzania as part of the aforementioned PPP, with positive effects at the central level (though mixed results were

¹⁸⁹ Read, T. (2015).

¹⁹⁰ de Jongh, Maggie and de Haas, Roel. (2015).

experienced at the district level).¹⁹¹ Importantly, we recommend that technical assistance be funded but not provided directly through the GBF, to avoid conflicts of interest and organizational bloat.

- c) Promote centralized pooled procurement at the national level to lower book costs.** We use the term “centralized pooled procurement” to refer to the practice of bulk ordering books at the national level for a country’s entire public education system. This allows for the largest possible print run sizes per title, thereby lowering per-book costs. It is important to note that pooled procurement aims to achieve cost-effectiveness. To ensure high-quality materials, separate, complementary mechanisms must be in place for book and vendor selection and quality assurance. While centralized pooled procurement is already standard practice for textbooks in most countries, it has not been implemented for reading books given a dearth of funding and, consequently, lack of national coordination around reading book selection and procurement.

Importantly, our recommendation to promote pooled procurement need not conflict with the trend towards decentralized book selection and purchasing at the school level. Such a system, with school based selection and ordering within the limits of a per capita purchasing budget, has been shown to better reflect individual school needs and not waste financial resources.¹⁹² Using a pre-approved list of titles that meet national curricular standards, a procurement system can be implemented that preserves school-level choice but aggregates individual school’s orders centrally to reap the benefits of pooled purchasing. Thus, this recommendation can be implemented regardless of a country’s policies relating to book selection and book quality.

The GBF could fund technical assistance to countries to help them build the capacity to manage national centralized procurement, even while maintaining local autonomy over book choice where this is relevant. In combination with national policies to standardize curriculum (e.g., single textbook policies,¹⁹³ approved lists of reading books), this would have a significant impact on print run sizes and costs for reading books as well as for textbooks in the many countries with decentralized supply systems.

The GBF might also consider funding organizations to undertake *regional level* pooled procurement and/or content development across countries with common languages; however, the economic case for this is less clear. This would only be applicable for a handful of languages (from our country case studies these would include Bengali, English, Hausa, and Kiswahili as seen in Figure 10) and, from a cost savings standpoint, would only be relevant if funding for reading books remains limited such that pooling could, for example, make the difference between a 5,000 and 25,000 print run size (corresponding to 33% savings on book prices, as seen in Figure 9). However, if reading book funding increases significantly such that full-potential print run sizes can be realized in each country, pooling volumes across countries would provide limited benefit given that cost savings are marginal above the 50,000 volume level.

In general, multi-country pooled procurement should be undertaken with extreme caution and only after careful analysis and intervention design. Examples from the health sector (e.g., Global Fund Voluntary Pooled Procurement, CHAI-UNITAID ARV Programs) teach us that pooled procurement

¹⁹¹ Graham, L., and Pehrsson, K. (2004).

¹⁹² Read, T. (2015)

¹⁹³ Fredriksen, B., Brar, S., and Trucano, M. (2015).

involves significant operational challenges, such as the coordination between countries of product selection, demand forecasting, and order & delivery timing. Management costs and complexity around such activities need to be weighed against potential benefits which may be minimal depending on non-pooled volumes. Furthermore, pooling procurement can negatively impact private industry if it is operationalized without considering local market dynamics (for example, if books are sold directly to schools in areas where booksellers are typically involved, or if procurement is done primarily through a single printer and/or publisher leading to a monopoly market). A more careful examination is needed to analyze the pros and cons of different options, ranging from centralized pooled procurement to country- or publisher-led initiatives to share titles and coordinate order timing.

Another potential solution that was examined was pooling procurement of paper for African countries that use domestic printers. While there is potential for such an approach to lower costs in relevant countries, this was deemed low priority given that (1) most books procured in surveyed countries are already being printed internationally, which limits potential savings, and (2) there would be significant complexities involved given that different paper types and sizes may be preferred or needed for certain types of printing machines. This type of solution may be more appropriate within a single country that uses domestic printers, as has been seen in Vietnam, and could potentially be an intervention for which the GBF funds technical assistance at a country level.

Finding 8: The cost to implement a digital reading program based on a library model is about 12-13 times more expensive than the cost to implement a similar print reading program. However, for structured reading programs where each child is reading the same book at the same time, digital programs are less expensive per child than print programs.

In order to compare the cost of implementing digital versus print reading programs, a theoretical model was developed to calculate the annual cost per student for both digital and print reading programs.¹⁹⁴ Per student costs were calculated based on two program models. The first is a library sharing model where students access reading books during an unstructured library period and are encourage to read at least 42 titles every year. The second is through a structured reading model where groups of students read the same title simultaneously.

In the print scenario of the library sharing model, a classroom library is assumed to have 50 books, each with a unique title (50 titles total), per classroom per year. This allows each child to read their own book simultaneously and access at least 42 titles per year. As a result, the school will only need to purchase 50 unique books per class. In the digital scenario, each child will also be able to access their own e-reader (50 e-readers) during the same unstructured library period. The benefit of an e-reader is that a single device can contain 252 titles (at least 42 titles per grade for 6 grades in a school) which can be shared for

Reading Program 1: Unstructured library model

Students participate in unstructured reading periods in a classroom library of 50 titles. Students have access to books during "library period" and are encouraged to read at least 42 titles every year.

Print scenario: 50 unique titles per grade per year, to allow every child in each classroom (50 children per class) to read their own book simultaneously. Classrooms will have a total of 50 books.

Digital scenario: 50 e-readers each containing 252 titles (42 titles per grade, for 6 grades) for up to 300 students in a school (each school has 6 classrooms with 50 children per classroom). 50 e-readers are circulated from class to class during reading period, allowing each child in a classroom to read their own title simultaneously.

¹⁹⁴ Our analysis is specific to digital reading books.

up to 300 students in a school (6 classrooms with 50 children per classroom). The 50 e-readers can be circulated from class to class during unstructured reading periods.¹⁹⁵ These scenarios were based on conversations with stakeholders such as Bridge International Academies and Worldreader regarding how programs are currently being implemented. Books being shared across classrooms was a common scenario described by implementers. While this model aims to be as comprehensive as possible, several costs have not been accounted for, including waste (e.g., disposing of e-waste), inefficient use (e.g., over-ordering print materials and disposing of extra copies), and peripheral devices (e.g., memory sticks for digital programs).¹⁹⁶ Further details on the methodology used to calculate these costs can be found in Appendices 3 and 4 of this report.

Based on the described unstructured library model, the provision of digital reading materials, estimated at US\$25.01 per student, is approximately 13 times more expensive than that of printed materials, estimated at US\$1.90 annually per student.¹⁹⁷ Even if first time device costs are omitted from the calculations (assuming that devices are donated or students and/or schools already have a digital device), the cost per student under a digital reading program, at US\$22.34, is still more expensive than the cost per student in a print scenario.

While the unstructured library model suggests that digital reading programs are significantly more expensive than print programs, a structured reading model yields different results (Figure 13). For example, in such a model, children are assumed to read the same title simultaneously. This requires multiple copies of the same book. Even if a book is shared among 4 children, the cost of purchasing multiple book copies of the same title can quickly rise for structured reading periods if each child is encouraged to read at least 42 titles a year. We find that in such a structured reading model, digital programs are less expensive per student than print programs. The provision of digital reading material, estimated at US\$10.23, is slightly lower than the provision of print, estimated at US\$14.17. If schools already own devices, the cost per student falls to US\$7.43 for digital programs.

Reading Program 2: Structured reading model

Students participate in structured reading activities, all reading the same title simultaneously. Groups of 4 students share a book. Students read 50 different titles every year.

Print scenario: 1 copy of each title is shared among 4 children per year.

Digital scenario: 1 e-reader containing 50 titles shared among 4 children per year.

Our findings suggest that the decision to implement either digital- or print-based reading programs will be dependent on the choice of reading program. However, our analysis indicates that print reading programs under an unstructured library model is the least expensive option given resource constraints.

¹⁹⁵ Methodology and assumptions for the print and digital financial feasibility models can be found in Appendices 2 and 3, respectively.

¹⁹⁶ In an effort to draw the most meaningfully similar comparison as possible, this analysis focuses on cost variables that differ between print and digital materials; thus while the costs of printing materials and licensing digital materials are included, the cost of authorship is omitted as it would be similar between print and digital reading materials.

¹⁹⁷ Comparison to print materials only included reading books and did not analyze the cost of textbooks.

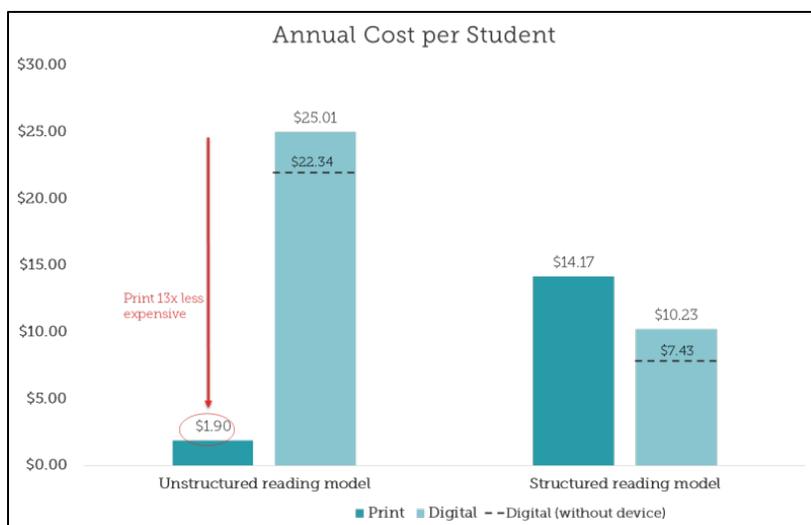


Figure 13. Comparative annual per student cost of providing print and digital materials, varied by student reading model

It is also critical to compare the learning outcomes resulting from print and digital reading materials to achieve a robust cost-effectiveness analysis. Existing research indicates that print materials may be more efficacious than digital ones; however, more studies for the target population are needed to draw compelling conclusions. For example, there may be specific populations for whom digital materials may be more beneficial than print, such as students with print disabilities¹⁹⁸ including severe visual impairments or dyslexia. While a cost-effectiveness analysis of this type of program was not in the scope of this report, there are a number of organizations, including Benetech¹⁹⁹ and UNICEF,²⁰⁰ working to improve access to digitally accessible texts²⁰¹ for students with print disabilities. The Accessible Books Consortium (ABC), a multi-stakeholder partnership, is also working to increase the number of books in accessible formats.²⁰² Additionally, stakeholder interviews suggest UNICEF will be commissioning a more extensive feasibility study on the expansion of digitally accessible texts for this population.

Digital devices may also be practical for providing access to reading materials for refugee populations, as these devices could allow for the use of both standard e-reading files and digitally accessible materials²⁰³ within camp environments where children of all ability levels may be learning together. Phase 2 may provide an opportunity to further explore specific populations and circumstances where digital reading materials may be more suitable than print materials.

Finding 9: There are high technical barriers to the adoption of digital reading materials including a lack of sufficient infrastructure to support device use and high intellectual property-related (IP-related) transaction costs.

¹⁹⁸ Defined as those with visual impairments, physical disabilities, and/or learning disabilities that prevent them from reading a printed book

¹⁹⁹ Benetech. (2016). Bookshare. Retrieved from: <http://benetech.org/our-programs/literacy/bookshare/>

²⁰⁰ UNICEF. (2016). *All Children learning and reading together: Using universal design for creating effective learning materials for all children*.

²⁰¹ Defined by Bookshare as texts accessible to those with print disabilities. These include texts for traditional assistive devices, as well as spoken texts for use on tablets, smart phones, and MP3 devices

²⁰² Accessible Books Consortium. (2016). *What does the Accessible Books Consortium Do?*

²⁰³ Jenna, Terry and Seaman, Robin. (2015). Benetech. Interviewed conducted by R4D.

There are various digital reading devices being used in low and middle income countries. For the purposes of our analysis, four digital reading devices are identified as being most relevant for children in pre-primary and primary schools: desktops, laptops, tablets, and e-readers. These devices also come with a range of operating models. Tablets, for example, can be multi-purpose and can be used for other classroom learning activities in addition to reading. These devices all have varying technical specifications, such as requirements for access to electricity and how digital reading files can be utilized. These differences have implications for how materials are used and what type of infrastructure is needed to support this use.

Two infrastructure features critical for consistent use of digital reading devices are found to be limiting in low-resource settings: access to electricity to charge devices and internet connectivity to download content in schools. Mobile devices such as laptops, tablets, and e-readers require between one and four hours of electricity to fully charge, while a desktop needs a constant power source.^{204,205,206} Additionally, while devices are sometimes pre-loaded with content or have the capacity to load content via flash drives or other physical drives, internet connectivity is required to support content distribution for most tablets and e-readers. Unfortunately, in low and middle income countries, including those in sub-Saharan Africa (SSA), only 25% of primary schools typically have access to electricity²⁰⁷ and even fewer – 15% – have access to the internet.²⁰⁸ Significant large-scale infrastructure improvements to ensure consistent access to power and the internet in pre-primary and primary schools are needed before education systems can begin scaling digital reading programs.

In addition to challenges with internet connectivity, content distribution in low-resource settings is complicated by the high IP-related transaction costs associated with downloading reading materials. Many reading books are copyrighted by a publishing house and a contract is required to establish the terms of access before these titles can be downloaded onto new devices. Purchasers, like Worldreader or eKitabu, often have to negotiate country-specific intellectual property (IP) rights with the publisher for each digital title to be used in a different country since there are few cross-border or regional agreements to distribute digital material. Contracts for distribution are also often either time- or device-dependent and thus have to be renegotiated for each new order. For example, local digital publishing houses such as the Kenya-based eKitabu often have to re-negotiate content access for each set of titles distributed, imposing high transaction costs for the distributor²⁰⁹.

While there are existing options to lower these transaction costs, they are often only tenable for large, international publishers. While Creative Commons²¹⁰ (CC) licenses enables a title to be freely distributed without repeated contract negotiations (and reportedly can benefit sales of the same title in print), this license also impedes publishers from making a profit from each book download. While large publishers with a significant roster of available titles can choose to make some of their content open access without risking a significant decrease in profits, smaller publishers may not have enough titles to risk the associated lost revenue. For example, Pratham Books, based in India, has open sourced over 50% of

²⁰⁴ Zacarias, Dani., Tam, Tina., and Lowe, Zev. (2015).

²⁰⁵ Novak, Matej. (2015). Beyond Access. Interview conducted by R4D. 30 September 2015.

²⁰⁶ Atuti, Richard. (2015). Kenya National Libraries Association. Interview conducted by R4D. 21 October 2015.

²⁰⁷ UNESCO. (2015c)

²⁰⁸ UNESCO. (2014b). WSIS Tables.

²⁰⁹ Utterback, Matthew. (2015). eKitabu. Interview conducted by R4D. 28 October 2015.

²¹⁰ Creative Commons copyright licenses help creators retain copyright while allowing others to copy, distribute, and make use of their work. Creative Commons. (2015).

their available titles; however, about 1,500 of their books remain under copyright and are in the process of being openly licensed. The organization is a mission-focused, nonprofit publisher and will trade off a potential income loss in the larger interest of providing greater access to books. However, it has conversely benefited with print book sales reportedly increasing two-fold after an open-source version of the book becomes available online.²¹¹

Finding 10: Operational challenges also constrain the uptake of digital materials and include challenges related to education policy, content availability, and utilization.

Education policy

One aspect of operational barriers is related to education policy, specifically whether education policies are updated to reflect the use of digital platforms for reading programs and if these policies are costed. Unfortunately, while approximately 50% of countries have Information and Communications Technology for Education (ICT4E) policies, they often fail to include specific references to digital reading components; very few ICT4E policies mention reading outcomes as a specific objective, while “literacy” is often discussed in terms of computer and technology literacy, not reading literacy.²¹² Further, it is not uncommon for ministries of education to consider printed and digital materials separately – with different units responsible for related planning, procurement and training, drawing on different budgets.²¹³ In some cases, responsibility for digital materials may even sit outside the ministry of education and with a specialized agency having dedicated ICT focus, or sometimes with a unit within the ICT ministry. This division of print and digital materials hinders digital content from being considered as part of a holistic education policy, and further limits the scalability of digital reading programs.

In order to facilitate the adoption of digital content into pre-primary and primary classrooms, there is a significant need to improve education policy to better account for the use and financing of digital reading materials.

Content availability

For pre-primary and primary grade readers to benefit from digital reading materials, appropriate content needs to be available for use on digital devices. As explored in Section 1.2, this includes both stories for appropriate reading levels and content in local languages, as it is beneficial for children to learn to read first in their native language before learning to read in other languages. Unfortunately, local language content only comprises approximately 25% of digital publisher databases;²¹⁴ stakeholder interviews reveal that the market for local language content is often too small to cover the costs of content generation, thus limiting the number of available titles. Some organizations, like Book Dash in South Africa, have addressed lowering the cost of content generation by using volunteer professionals to create open access African storybooks. Another option is to translate and digitize existing children’s books; however, interviews with publishers reveal that digitizing can cost anywhere from US\$20 to US\$300 per title,²¹⁵ and translating titles from English to local languages can cost as much as US\$10 per page.²¹⁶

Utilization

²¹¹ Shah, Purvi. (2015). Pratham Books. Interview conducted by R4D. 22 November 2015.

²¹² R4D analysis of national ICT4E policies

²¹³ Trucano, Michael. (2015). World Bank. Interview conducted by R4D. 13 November 2015.

²¹⁴ R4D analysis of Worldreader, Storyweaver, eKitabu, and African Storybook Project databases.

²¹⁵ Zacarias, Dani, Tam, Tina, and Lowe, Zev. (2015).

²¹⁶ Abebe, Alemu. (2015). CODE-Ethiopia. Interview conducted by R4D. 12 November 2015.

As with print books, considerable teacher training is required to ensure appropriate use of digital reading devices. In addition to training on how to integrate reading books in classroom lessons, teachers need training on how to adequately operate digital devices. On the other hand, students are reportedly more comfortable with digital reading devices and content. Interviews with implementers reveal that students learn how to use new education technology faster than many of their teachers.^{217,218}

Similar to printed books, varying student sharing models of digital reading devices exist; although there are limited studies that inform the most effective and cost-effective models. Research on how best to integrate digital reading materials alongside printed materials into pre-primary and primary school classrooms is lacking. While existing research shows that digital reading materials improve literacy for children more so than an alternative of no reading books, there is a lack of evidence comparing the efficacy of print materials with digital materials. However, digital reading devices can provide teachers with data on student progress, utilization, and other metrics for analysis. Pixatel Systems, for example, uses a novel tablet-based adaptive learning program that uses auto-generated metrics that allow teachers to target students most in need of attention in real time.²¹⁹ Some studies have shown that print materials may be more effective for early readers than digital: Chiong et al found that for children aged 3 to 6, enhanced e-books were less effective than print books in supporting the benefits of co-reading, a technique that helps children improve their vocabularies and overall language development.^{220,221} However, widespread evidence of learning outcomes across pre-primary and primary aged children is inconclusive thus far. For example, there is mixed research on the impact of digital reading devices on reading comprehension. A randomized control trial (RCT) conducted in primary schools in Kenya revealed that pupils with e-readers integrated in the classroom performed better than the control group in reading comprehension.²²² However, a recent Organisation for Economic Co-operation and Development (OECD) evaluation found no evidence of improved reading and mathematics skills amongst primary school children who received laptops and, in fact, showed lower reading skills among students with levels of computer use above the current OECD average.²²³ However, technology may have a role to play in matching teachers to student skill levels. One systematic review found that “pedagogical interventions that match teaching to students’ learning, including through the use of computers or technology” were quite effective.²²⁴ Lastly, the cost-effectiveness of digital devices remains limited at best. The same RCT conducted in Kenyan primary schools concluded that “the intervention was far less cost-effective than the status quo.” It will be important for additional research to be conducted on the utility and effectiveness of digital reading programs in pre-primary and primary school classrooms before taking these programs to scale; a Global Book Fund may be able to finance some of these studies.

²¹⁷ Petuchoviaite, Ramune. (2015). Electronic Information Libraries. Interview conducted by R4D. 15 October 2015.

²¹⁸ Brackin, George. (2015). Bridge International Academies. Interview conducted by R4D. 12 November 2015.

²¹⁹ Pixatel Systems for example uses a novel tablet-based adaptive learning program that uses auto-generated metrics that allow teachers to target students most in need of attention in real time. Pixatel Systems. (2015). *Pixatel-Reimagine Education*.

²²⁰ Chiong, C., and Shuler, C. (2010). *Learning: Is there an app for that? Investigations of young children’s usage and learning with mobile devices and apps*. New York: The Joan Ganz Cooney Center at Sesame Workshop.

²²¹ Parish-Morris, J., et al. (2013). Once Upon a Time: Parent-Child Dialogue and Storybook Reading in the Electronic Era. *Mind, Brain, and Education*, 7(3).

²²² RTI International. (2015b). *Kenya Primary Math and Reading (PRIMR) Initiative*. RTI International.

²²³ OECD. (2015). *Students, Computers and Learning: Making the Connection. PISA*. Paris: OECD.

²²⁴ Evans, D. and Popova, A. (2015). *What really works to improve learning in developing countries? Analysis of divergent findings in systematic reviews*. Washington DC: World Bank Group Africa Region & Office of the Chief Economist.

2.2.3 Supply chain management of books

Finding 11: Supply chain issues vary by country, although common challenges include weak demand forecasting, poor management systems, inadequate financing, lack of trained staff, and inefficient distribution.

Effective reading book provision requires a number of different activities and inputs to operate efficiently at the same time. As has been discussed, the key components of the books supply chain consist of: authorship and publishing, procurement, manufacturing, distribution, storage, and use. Replenishment and reporting systems complete the chain.

One of the final components, distribution, is often the largest source of inefficiency. The basic requirements for an effective books distribution system include the following criteria^{225, 226:}

- Adequate, timely, and predictable financing of books.
- Reliable information on school locations, student enrollments, and book requirements.
- A network of regional or local hubs to facilitate transportation of books across the country.
- Transport vehicles and operational transport systems, such as adequate roads, to allow for access to all areas and timely delivery.
- Effective and computerized management systems that incorporate accountability mechanisms to track book delivery. Accountability mechanisms could take the form of citizen accountability efforts (Finding 13), payment-based incentives such as payment upon delivery, etc.
- Storage facilities that are secure, spacious, and sheltered from the elements, humidity, insects, and rodents.
- Oversight of the distribution process by trained staff or professionals.

However, although the specifics may vary by the administrative structure of the country, challenges occur in distribution of books from the point of production (if overseas) to the national level; the national to the district/regional level; the district to the school level; and within the school level, where books are kept locked in cupboards.²²⁷

As already demonstrated in Finding 4, adequate financing is already a severe constraint, particularly for reading books. Our analysis also reveals that the majority of countries studied lack essential national comprehensive EMIS data with which to plan, deliver, and sustain adequate supplies of textbooks and reading books (Finding 2). The importance of demand forecasting and improving the consistency and predictability of demand is explored in Finding 7.

Loss and damage of books is a significant problem, particularly in sub-Saharan Africa. Research indicates a 67% stock attrition in warehousing and transportation in Guinea, 50-60% in Niger, and nearly 50% in Chad. The key reasons behind such alarming losses include an absence of funding for suitable transportation to schools, which leads to books being held at the district level; inadequate storage in

²²⁵ Seguin, R. (1989). *The Elaboration of School Textbooks Methodology Guide*. UNESCO Division of Educational Sciences, Contents and Methods of Education.

²²⁶ Read, T. (2015).

²²⁷ Crabbe, R. A. B., Nyingi, M., and Abadzi, H. (2014).

districts and schools; theft and corruption; and a lack of overall planning and management, with schools, parents, communities, and civil society unaware of when books are ready for delivery/collection.²²⁸

Similar to due diligence needed more broadly in procurement processes, more robust integrity and due diligence standards could be developed to curtail distribution losses. Reviewing distribution actors' previous performance, conducting reference checks, or following up with recipients on delivery status could help strengthen distribution processes.

Supply chain tracking improvements with the help of technology could also increase efficiencies in distribution. For example, supply chains for health commodities have suffered from similar problems, and stock-outs of essential medicines remain a persistent problem in many countries. But progress has been made in recent years, at least for certain commodities such as vaccines and HIV drugs, with sustained attention and technical assistance from donors and other partners. Improved systems for tracking commodities through the supply chain have been critical to these improvements, and some of the technologies developed for this purpose could be adapted to track books.²²⁹ For example, the European Medicines Agency is expected to implement a new "track and trace" mechanism and require unique identifier codes to be printed on all medicinal products manufactured in the EU by July 2016, and there have been discussions around a global barcoding program to harmonize the patchwork of different tracking systems and barcodes in place today.²³⁰ It is important to note, however, that the high transaction costs around these mechanisms would have to be balanced against the possibility of adding superficial buffer volumes to book orders.

Indeed, innovations in technology are already being piloted to improve the books supply chain. Specifically, a recent All Children Reading Grand Challenge for Development (ACR GCD) competition, "Track and Trace," is supporting the prototype piloting of low-cost tracking systems for books and learning materials to improve supply chain management for the book sector. In addition, content generation activities are also being undertaken through the "Enabling Writers Initiative" and the design of Bloom Software developed by SIL International with funding from the ACR GCD. This will help local authors develop high quality early grade reading material in low-resource environments. Lastly, title access is being supported via development of a Global Reading Repository, a digital library which will collect and house reading materials in a range of languages.

It is important to remember however that country contexts influence distribution costs and constraints, and challenges will need to be tackled on a customized basis. For example, South Sudan suffers from severe distribution problems for all TLMs intended for school deliveries. Major problems are insecurity, difficult terrain, lack of roads, and lack of management capacity. In contrast, though not an easily replicable system, Kenya probably has the most comprehensive national network of effective wholesale and retail booksellers in SSA, comprising at least three major wholesalers and up to a thousand retailers. If well monitored, it provides an effective and reliable delivery mechanism to schools and multiple outlets for the sale of textbooks and readers.

Finding 12: Distribution can be centralized or decentralized, with the public, private, and NGO sectors playing a mix of roles. The effectiveness of the distribution model varies by

²²⁸ Ibid.

²²⁹ Yadav, Prashant. (2015).

²³⁰ McKinsey and Company. (2012). *Strength in Unity: The promise of global standards in healthcare*.

context and is influenced by accountability measures and the capability of the responsible actor.

In a centralized distribution system, the MOE plays a central role: it determines school book needs, selects books and places orders to publishers or distributors and booksellers, and *delivers* books from central warehouses to districts and schools.²³¹ Payment is also made directly by the MOE to the publisher. Although it can work effectively in certain small countries, such systems have been noted to be “bureaucratic, inefficient, and prone to delays, leakage and corruption.”²³²

In contrast, in a decentralized model, book orders and payments come directly from schools or districts to the suppliers, who may be publishers, distributors, and booksellers.²³³ Decentralized systems can use a mix of public and private delivery channels for distribution. Many countries in sub-Saharan Africa have seen a shift towards decentralized supply systems, with school-based selection and ordering, and a growing role for the private sector in distribution.²³⁴

A comparison of centralized and decentralized models can be seen in Figure 14 below.

	Centralized	Decentralized
Point of delivery	One central point, often far removed from the users/students.	Multiple delivery points: schools or districts, nearer the students/users .
Responsibility for deliveries	Government is sometimes both implementer and supervisor.	Industry/suppliers /contractors deliver. Government is supervisor.
Capacity	Inadequate in many instances.	Depends on industry. Where vibrant industry exists, capacity is usually no problem.
Timeliness of delivery	Poor; no consequence for non-delivery, lateness or shortfall.	More assured if tied to payment on delivery.
Bureaucracy	High. No in-built incentive to deliver books to students.	Very low; private sector business is profit oriented and speed is essential.
Monitoring/Verification	Weak; shortfall may not be readily reported.	Enhanced if tied to payment of suppliers.
Cost	Masked, because cost of using Government employees, equipment, trucks, etc. usually not factored in.	Seemingly higher than centralized as handling and transportation costs are factored in.
Payment	Processing can be faster, since delivery is verified at one point.	Processing may be slow due to multiple points of delivery verification.
Leakage	Multiple points, difficult to detect.	Fewer opportunities; easier to trace (publisher, printer, distributor, bookseller). However, delayed payment for past deliveries may encourage leakage.

Figure 14. Comparison of centralized and decentralized models²³⁵

The effectiveness and efficiency of a distribution model varies by context, and is influenced by accountability measures and the capability and experience of the responsible actor. Our country studies reveal that centralized ordering and state distribution seem to work particularly effectively in South Asia

²³¹ Crabbe, R. A. B., Nyingi, M., and Abadzi, H. (2014).

²³² Ibid.

²³³ Ibid.

²³⁴ Fredriksen, B., Brar, S., and Trucano, M. (2015).

²³⁵ Crabbe, R. A. B., Nyingi, M., and Abadzi, H. (2014).

(specifically India, Pakistan, and Bangladesh). Our findings from India show that for government schools in India and West Bengal, free textbooks are distributed by state education ministries, with distribution – via cluster or block resource centers²³⁶ – reported to be quite efficient.²³⁷ Possible reasons for this success, including the effective use of awareness campaigns and citizen accountability mechanisms, are explored in Finding 13 below.

Meanwhile, decentralized ordering and private distribution has been shown to be successful in some countries in sub-Saharan Africa. In Rwanda, for example, there is competitive private sector distribution. The distribution has been accountable, efficient, and successful with completed deliveries at no cost to schools on over 98% of orders since 2010. The costs of distribution to schools are included in the bid prices submitted by bidding publishers.²³⁸

Interestingly, decentralized methods can also incorporate a mix of private and public delivery channels. For example, in Ghana, publishers deliver secondary textbooks directly to schools; this private delivery channel is reported to function well. However, primary school textbooks are delivered by publishers to district education offices, which in turn are responsible for delivery to schools. In this case, while the initial privately-managed aspect of the channel functions well, the involvement of the public sector in the onward delivery from district offices to schools has exhibited severe problems, with one survey indicating stock control issues in up to 50% of districts.²³⁹ A similar system is used in Uganda, with publishers effectively delivering books to district offices but distribution stagnating once books are handed off to the public channel for final distribution to schools.²⁴⁰ As a general rule, the weakness in state-controlled book distribution systems is the link between district offices and schools. District offices generally have inadequate storage, untrained staff, poor or non-existent management and operational systems, insufficient transport, and completely inadequate funding. District to school problems are regularly reported in Ethiopia, South Sudan, Uganda, Malawi, Zambia, Cameroon, Democratic Republic of Congo, Nigeria, and Ghana.²⁴¹ Ultimately, capability and accountability are crucial, and as Read notes: “If there is no accountable distribution system, then decentralized ordering can be negated by a distribution system that fails to provide the materials ordered by the schools.”²⁴²

Finding 13: Citizen accountability mechanisms to monitor distribution have been used successfully in some countries – for example, India and the Philippines – and may hold valuable lessons to reduce corruption in sub-Saharan Africa.

Consultations and research reveal that corruption is a widespread challenge across the value chain, seen all the way from the initial tendering process down to distribution to schools. Effective accountability measures are crucial to minimizing losses due to corruption. Measures may be built into the supply chain – for example, linking payment to delivery, as is the case in Rwanda – or may be a result of citizen-led movements. For example, stakeholder consultations reveal that in India, parents are aware of the timing of the distribution of free textbooks and personally await delivery trucks (Box 6); absent deliveries result in parental pressure on local officials and advocacy efforts through the media. Similarly, in the Philippines, Checkmyschool is a program where communities engage in monitoring the services of

²³⁶ Fredriksen, B., Brar, S., and Trucano, M. (2015).

²³⁷ India Case Study – see Annex 3.

²³⁸ Rutayisire, J., Buchan, A., and Delaney, H. (2016). *The Reform of Teaching Materials in Rwanda*. UNICEF.

²³⁹ Read, T. (2015).

²⁴⁰ Ibid.

²⁴¹ Ibid.

²⁴² Ibid.

the Department of Education (DepEd) such as textbook count, distribution, and usage. Parents or volunteers can report whether textbooks are being used in classrooms through the Checkmyschool website (checkmyschool.org) or through social media. Moreover, between 2000 and 2007, the Department of Education partnered with many civil society organizations, including election poll watchers and the Boy Scouts, whose members volunteered to witness textbook deliveries to schools. This multi-year effort succeeded in reducing textbook losses in transit. It also provided positive feedback that books in the right quantities arrived at their intended destination within an acceptable time period.²⁴³

While examples of citizen accountability mechanisms used specifically to monitor book distribution are limited, such mechanisms have been used to reduce losses in public funds and goods in other sectors. For example, a citizen-involved school grants monitoring campaign initiated by the Ugandan government in the late 1990s drastically reduced public fund losses from 80% to 20%.²⁴⁴ However, it should be noted that the evidence on these mechanisms is mixed.^{245,246} Success is often context dependent. Some studies have also suggested that factors such as salience of information, involvement of allies that apply top-down pressure, and leveraging a competitive environment are essential building blocks for such initiatives to be successful.²⁴⁷ Thus, citizen accountability mechanisms could be strong tools to counter corruption and losses in distribution, but their applicability should be carefully considered on a country-by-country basis.

Our analysis indicates that citizen-led measures to monitor distribution of books are largely absent in sub-Saharan Africa, potentially due to a combination of a lack of awareness of the importance of books and civil society and community knowledge of book distribution practices. There therefore exists an opportunity for a GBF to foster and strengthen participatory monitoring programs in some sub-Saharan African countries, drawing on lessons from other regions and sectors.

2.2.4 Usage of books

Finding 14: Although data on reading books is limited, research on textbooks reveals that book provision does not equate with usage.

Studies and interviews reveal that textbook delivery and provision do not equate with use. A study by the Swedish International Development Agency (SIDA) as part of the Pilot Project for Publishing (PPP) in Tanzania discovered that there were huge discrepancies between the availability of textbooks in schools

Box 6.

“Schools are informed about the arrival of new session's textbooks in November, and they in turn inform parents and students accordingly. Distribution of textbooks happens annually on 2 January, which is called 'Book Day.' Parents thus know when annual free textbook supplies are due to arrive in schools and expect their children to be issued with the required books on that day.”

Source: India Case Study – see Annex 3.

²⁴³ Philippines Case Study – see Annex 3.

²⁴⁴ Reinikka, R., and Svensson, J. (2004). *The Power of Information: Evidence from a Newspaper Campaign to Reduce Capture*. Policy Research Working Papers. Policy Services, Development Research Group.

²⁴⁵ McGee, R., Gaventa, J., et al. (2010). *Synthesis Report: Review of impact and effectiveness of transparency and accountability initiatives*. London: Transparency and Accountability Initiative.

²⁴⁶ Kosack, S. and Fung, A. (2014). Does Transparency Improve Governance? *Annual Review of Political Science*, 17, 65-87.

²⁴⁷ Ibid.

and their use in the classroom.²⁴⁸ A national survey undertaken in 1999 revealed that although almost 40% of schools surveyed had class sets of textbooks only 4% of schools were actually using them.²⁴⁹ Similar reports on poor textbook usage in the classroom and the reluctance to even issue textbooks to students have been reported in the Democratic Republic of Congo, Ethiopia, Ghana, Guinea, Namibia, Rwanda, Sierra Leone, and Uganda.²⁵⁰ A 2013 World Bank Uganda study also reported that despite the presence of textbooks in public schools, no textbooks were used by students in 86% of the classes.²⁵¹ Private schools—contrary to expectations—actually fared worse than public schools where use was even lower and virtually non-existent at 3%.²⁵²

These findings are very concerning given that the impact of provision of textbooks and reading books on learning outcomes is contingent upon usage. It highlights the important need to ensure that provision is carefully paired with measures to also improve usage.

Finding 15: Many teachers are unaware of how to appropriately use books in classrooms and how to set up and run school and classroom libraries. Usage can therefore be optimized through ensuring pedagogical quality of books, teacher training on how to incorporate books in lessons, establishment of classroom libraries, and advocacy campaigns.

Box 7.

“Teachers who know how to use books will facilitate their usage in classrooms and encourage students to use them outside of schools.”

- Alisha Berger, Room to Read

Source: Berger, Alisha. (2015). Room to Read. Interview conducted by R4D. 18 August 2015.

According to our case studies and stakeholder interviews, there are three key barriers to usage: poor book quality, a lack of teacher training, and teacher reluctance to issue textbooks to students. Each is discussed below.

Lack of training

Almost all our country studies revealed that teachers were uncertain how to use textbooks and reading books effectively in class. Even the most basic classroom techniques in the use of reading books are not widely known, and in our interviews, teachers almost universally requested in-service teacher training in the effective use of

learning and teaching materials. In some countries like South Sudan, teachers have been without TLMs for so long that they no longer know how to use them.²⁵³ During our consultations, teachers also requested pre-service teacher training and a simple handbook on the effective use of textbooks and reading books in class from MOEs and donors.

Poor book quality

Although teachers remain responsible for effective use of books in classrooms, research suggests that low pedagogical quality and readability of books has led to poor usage. For example, a study in Pakistan revealed that the lack of clarity and inadequacy of information in textbooks caused teachers to forgo

²⁴⁸ Graham, L., and Pehrsson, K. (2004).

²⁴⁹ DFID. (2011). *Guidance Note: A DFID Practice Paper – Learning and Teaching Materials: Policy and Practice for Provision*.

²⁵⁰ Read, T. (2015).

²⁵¹ Wane, W., and Martin, G. (2013). *Education and health services in Uganda: data for results and accountability – November 2013*. Service delivery indicators. Washington DC: World Bank.

²⁵² Ibid.

²⁵³ Read, T. (2015).

using textbooks in classrooms.²⁵⁴ A review of existing reading materials in Hausa revealed that content in textbooks was organized inefficiently, thus hampering appropriate teaching and reading acquisition. The report concluded that most reading materials were not found suitable for early grade Hausa instruction. Most books were poorly designed and incorporated few pedagogical techniques such as blending, decodable words, or connected text.²⁵⁵ Similarly, a study on readability of Arabic early grade reading textbooks found that grade 1 textbooks introduce too many new words and have too few repetitions of words for appropriate word learning.²⁵⁶ There is less data available on the quality and use of reading books because so few reading books exist in schools, but high quality and appropriate language levels and content are equally needed in reading books as they are in textbooks. Even with strong teacher training, books will not be appropriately used if a premium on quality is not ensured.

Teacher reluctance to issue textbooks to students

A majority of lower primary teachers in developing countries are inexperienced, only partially trained, or even not trained at all. Research shows that these teachers fear that providing students with textbooks containing the same subject information they have themselves will undermine their authority. For example, Arabic speaking teachers in South Sudan would not issue English language textbooks to students in case they were asked questions about English that they could not answer.²⁵⁷ Textbooks are specifically noted here as many classrooms do not have reading books; however, it is likely that this reluctance may also extend to reading books. Indeed, our country studies revealed that teachers' lack of written and reading fluency in some mother tongue and local languages emerged as a challenge preventing proper usage of books.

Given these barriers, four opportunities exist to bolster usage. Programmatic elements of these opportunities could be supported by a GBF and co-financed through government commitments or joint arrangements with bilateral or multilateral donors.

First, quality assurance standards can be used to ensure appropriate usability of books. Minimum quality standards could help stakeholders select or develop books that support or enhance curricula and are of an appropriate language level. For example, early grade books designed for instructional reading should be made up of decodable text and include sentences and vocabulary that are in line with syllabuses of each grade level. Quality standards could also ensure that books are culturally appropriate and gender sensitive.

A GBF could provide leadership in developing and disseminating quality assurance standards for textbooks and reading books that are agreed upon by technical experts and endorsed by countries. Furthermore, a GBF could introduce standardized monitoring tools that could be used at the country level. Although monitoring mechanisms could be adapted per country and incorporate citizen accountability initiatives, the fundamental tools and guidance for monitoring and managing books could be determined by the GBF.

²⁵⁴ Kumari, R., and Mohammad, R. (2007). Effective Use of Textbooks: A Neglected Aspect of Education in Pakistan. *Journal of Education for International Development*, 3(1).

²⁵⁵ RTI International. (2014). *Nigeria Reading and Access Research Activity: Review of Existing Reading Materials to Support Hausa Literacy Instruction*. USAID|Nigeria.

²⁵⁶ USAID. (2010). *Early Grade Reading Textbook Analysis*. USAID|Egypt.

²⁵⁷ Read, T. (2015).

Second, teacher training is needed to ensure usage of books (Box 8). MOEs and some NGOs encourage usage by training teachers how to store, manage, and care for books as well as how to teach reading and encourage student participation. A few also provide brief instruction in mother tongue and local languages when teachers do not fluently speak, read, and/or write in the language to begin with, but this instruction is often not sufficient when it is needed. Interviews suggest that teacher training needs to be continuous, with pre-service and in-service training necessary to increase book usage. It is important to note that these different types of trainings are distinct from each other, and all must be considered in a given context to ensure usage.

Box 8.

“[Training related to reading books provision and use] should be part of primary pre-service teacher training as well as the subject of intensive in-service teacher training.”

Source: India Case Study – see Annex 3.

Box 9.

“In 2005, DepEd launched the Library Hub Project, forging a partnership between [local government units], which provided physical facilities for the local library hub, and DepEd, which provided personnel, training, and materials for the operation of the hub. DepEd procured children's reading books from local publishers and packaged sets [...] in carry-out hard plastic bins for the library hub. Schools within a hub's catchment area could borrow a bin full of reading books for use in school for about one month. The school would take out another lot of books after returning the previously borrowed bin. From a pilot of four hubs, the project has expanded to 206 hubs, with brisk traffic in book bins.”

Source: Philippines Case Study – see Annex 3.

In addition to teacher training, the availability of teaching materials such as teachers' guides, scripted lessons that directly support teachers' use of materials, and other TLMs have been shown to improve book usage. According to a study by Levin and Lockheed, teachers' guides that are well integrated with textbooks or other instructional materials can have a positive impact on student achievement. While teachers' guides for textbooks are specified in many countries (e.g., Ethiopia, Uganda, Kenya, Tanzania, Rwanda, etc.), they are unfortunately not available in all developing countries.²⁵⁸ While we do not propose that the GBF itself provide teacher training or teacher' guides at the country level, the GBF could provide technical support and/or programmatic support to ensure that once delivered, books are adequately leveraged to boost literacy.

Third, classroom, community, and school libraries can also provide an opportunity for children to have dedicated spaces for reading as well as the ability to choose their own book titles. Although evidence on the effectiveness of libraries is sometimes mixed – for instance, an evaluation of Room to Read's libraries model found positive impact on children's reading habits in only three of five countries²⁵⁹ – there is much research to suggest

that libraries have a positive impact if implemented well. According to the Florida Center for Reading Research, “reading centers” can allow students to practice and become more fluent in a reading skill under supervision of the teacher.²⁶⁰ Students who choose what they read and have an informal environment in which to read are more motivated, read more, and show greater language and literacy

²⁵⁸ Levin, H., and Lockheed, M. (2012). *Effective Schools in Developing Countries*. Routledge Library Editions: Education.

²⁵⁹ Room to Read. (2014).

²⁶⁰ Florida Center for Reading Research. (2005). *Student center activities: Teacher resource guide*.

development.²⁶¹ Reading centers and classroom libraries also allow students to improve reading skills at their own pace and to be exposed to books at different reading levels. Additionally, libraries can serve as an important bridge to reaching children in informal education environments. In countries where traditional library models may not be financially or operationally feasible, innovative models such as the Library Hub Project implemented in the Philippines may hold promise (Box 9). Other innovative examples include mobile libraries in Zimbabwe and Kenya where donkeys or camels were used to transport books from the regional branch libraries to the interior communities.²⁶² Importantly, teacher training in setting up and managing classroom libraries is crucial – without this, libraries cannot be used to effectively support literacy (Box 10).

Libraries can also encourage children to take books home and read outside of traditional classroom environments. However, for this to be a viable and effective option, schools must pay special attention to book lending policies, loss and damage penalties, and adequate book budgets for replacements as these factors may help or hinder borrowing of books for home use. In Tanzania, although one of the schools interviewed had a small library, it had a “no lending” policy because of limited library stock and fears that borrowed books would not be returned or would be returned damaged.²⁶³ Encouraging reading at home through community or school libraries enables children to interact with books in a non-school environment and increase reading practice hours. According to Crabbe and Nyingi, allowing students to bring books home from libraries provides continuous exposure which leads to an increased number of practice hours. “Research has shown that ‘having books in the home has a greater impact on children from the least educated families. It is at the bottom, where books are rare, that each additional book matters most’.”^{264,265} In addition, a 2011 OECD PISA report stated that “students who are highly engaged in a wide range of reading activities are more likely than other students to be effective learners and to perform well at school.”²⁶⁶

However, reading centers and school libraries require that schools have necessary book storage systems. Unfortunately, rural classrooms in SSA are often overcrowded – lacking the necessary space for “reading centers” and the secure and weatherproof conditions needed to store books safely. In South Sudan, for

Box 10.

Our case studies reveal a lack of teacher knowledge in setting up and running school and classroom libraries. In Tanzania, there was a lack of any understanding about how school and classroom libraries could be organized and used to support reading and literacy. Some MOEs are reported to encourage school and classroom library development, but typically no guidelines are provided to schools. Ugandan primary schools were provided with primary school library guidelines 10 years ago, but deteriorating levels of primary reading book stock has inhibited the rapid development of school and classroom libraries as vehicles to encourage use of primary reading books.

Source: Uganda and Tanzania Case Studies – see Annex 3.

²⁶¹ Krashen, S. (1993). *The Power of Reading*. Englewood, Col.: Libraries Unlimited, Inc.

²⁶² Makotsi, R. (2004). *Sharing Resources: how library networks can help reach education goals*. Book Aid International.

²⁶³ Tanzania Case Study – see Annex 3.

²⁶⁴ Crabbe, R. A. B., Nyingi, M., Abadzi, H. (2014).

²⁶⁵ Evans, M. D. R., Kelley, J., Sikora, J., and Treiman, D. (2010). Family scholarly culture and educational success: Books and schooling in 27 nations. *Research in Social Stratification and Mobility*.

²⁶⁶ OECD. (2011). Do students today read for pleasure? *PISA In Focus*.

example, on average there are 125 pupils in each primary classroom.²⁶⁷ Basic infrastructure may also be lacking. School and classroom libraries in Indian primary schools in rural areas are largely non-existent, except where combined primary and secondary schools provide some kind of school library access for primary students.²⁶⁸

Lastly, NGOs and implementers have encouraged book usage through a variety of advocacy and citizen accountability campaigns such as hosting book days, festivals, and other community events that focus on the merits of reading. The Asia Foundation and Room to Read, for example, have conducted reading campaigns and community events that focus on literacy. A GBF could support advocacy campaigns to highlight the importance of books, especially reading books in local languages that correspond to LOIs.

Finding 16: Although complementary reading programs can improve reading achievement in students, uncertainties on the cost-effectiveness of these programs persist due to lack of data and agreement on the ideal number of titles needed per student.

While complementary learning materials, teaching materials, and teacher training have been shown to be effective in improving instructional practices and increasing the reading achievement of students, lingering questions still exist on the cost-effectiveness of complementary reading programs because of a lack of data.²⁶⁹ Patrick McEwan's meta-analysis of 76 randomized controlled trials on student learning in developing countries lamented that so few studies and programs report cost data. In his meta-analysis, nearly 56% of interventions reported no details on the costs of their programs, while the remaining programs provided minimal information on costs.²⁷⁰

Indeed, our stakeholder interviews confirm the range in teacher training costs for reading programs. One stakeholder noted that training costs for a new community library project totaled nearly 67% of program costs. These costs included training for advocacy, basic and advanced ICT skills building, impact evaluation and assessment, how to engage communities for needs assessment, project management, strategic visioning for libraries, etc.²⁷¹ Other stakeholders suggest that at least one third of complementary reading program budgets should be dedicated to training, although this rarely happens.

In addition, there is also a variety of recommendations on the number of titles a child should read in a year (Figure 15). According to a position statement by the International Reading Association, school libraries should have a minimum of 20 books per child, and classroom libraries should have about seven per child.²⁷² Fountas and Pinnell recommend a collection of about 300-600 books in a classroom library, depending on grade level and number of copies of each title. They calculate that first grade students should read between 100-125 books a school year and 50-75 longer books for students in grade 2.²⁷³ Room to Read seeks to have 5-8 books per child in each primary school library (separate or classroom),

²⁶⁷ Good Planet Foundation. (2013). *Accelerating Progress in 2015: South Sudan*. A Report series to the UN Special Envoy for Global Education.

²⁶⁸ India Case Study - see Annex 3.

²⁶⁹ Sailors, M., and Flores, M. (2014). Cost Effectiveness of a Complementary Reading Program. *Journal of Education and Human Development*, 3(4), 1-20.

²⁷⁰ McEwan, P. (2015). Improving Learning in Primary Schools of Developing Countries: A Meta-Analysis of Randomized Experiments. *Review of Educational Research*, 85(3), 353-394.

²⁷¹ Hoerner, Darren. (2015). Gates Global Libraries Project. Interview conducted by R4D. 23 September 2015.

²⁷² International Reading Association. (1999). Position statement.

²⁷³ Fountas, I., and Pinnell, G.S. (1996). *Guided Reading: Good first teaching for All Children*. Portsmouth, NH.

with a global average of about 1,500 books per library.²⁷⁴ Interviews with other experts resulted in a range of titles from 60 to 300 titles a year.

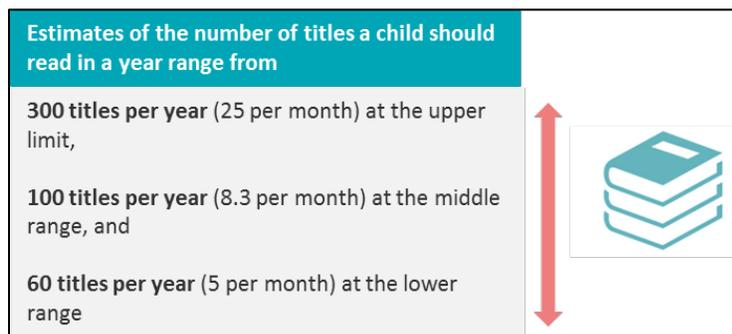


Figure 15. Range of estimated number of titles a child should read in a year²⁷⁵

Ideally, children should be able to access hundreds of titles over a course of a year with options of reading outside of their graded reading series components. In a US study, the average child growing up in a middle class family is exposed to 1,000 to 1,700 hours of one-on-one picture book reading before entering school.²⁷⁶ In primary classrooms, teachers should dedicate at least 45 minutes each day to uninterrupted reading and writing.^{277,278} The more practice hours a child has with a book of their own choice, the more proficient they become at reading.²⁷⁹ Unfortunately, both graded reading materials and instructional time itself are very constrained in many countries. In some schools in Uganda, for example, some fourth graders only effectively have about 1 hour and 52 minutes of the almost 7 scheduled hours a day of instructional time where the teacher is attending to the task of learning.²⁸⁰ A similar situation exists in Kenya, Senegal, and Tanzania.^{281,282,283}

Despite the challenges in identifying the number of titles needed per student, any ideal ratio of titles per student per year should consider various variables such as the type of library model used, the practice time a child has per book, student characteristics, and number of pupils in a class. Relatedly, the book per pupil ratio will also depend on curriculum requirements, funding, and book usage policy.

Given the variety of positions on ideal number of titles per child and number of practice reading hours, a GBF could develop and share recommendations for best practices. In order to do so, a GBF could fund studies on the cost-effectiveness of various reading book and practice time models within different country contexts. Such research activities would fit within a GBF's global public goods function, as will be further discussed in Section 4.1.

²⁷⁴ Berger, Alisha. (2015).

²⁷⁵ Interviews with various stakeholders.

²⁷⁶ McQuillan, J. (1998). *The Literacy Crisis: False Claims, Real Solutions*.

²⁷⁷ US Department of Education, America Reads Challenge. (1999). *Start Early, Finish Strong: How to Help Every Child Become a Reader*.

²⁷⁸ National Research Center on English Learning & Achievement. (1998).

²⁷⁹ Allington, R. (2002). *What I've learned about effective reading instruction from a decade of studying exemplary elementary classroom teachers*. The Phi Delta Kappan.

²⁸⁰ Wane, W., and Martin, G. (2013).

²⁸¹ World Bank. (2013b). *Tanzania – April 2012. Service Delivery Indicators*. Washington, DC: World Bank.

²⁸² World Bank. (2013a). *Senegal – April 2012. Service Delivery Indicators*. Washington, DC: World Bank.

²⁸³ Gayle, M., and Pimhidzai, O. (2013). *Kenya – July 2013. Service Delivery Indicators*. Washington, DC: World Bank.

2.3. Lessons from global health funds

Box 11.

“It’s hard to imagine products more different than global vaccines and Hausa-language reading books!”

- Ruth Levine, Hewlett
Foundation

Source: Levine, Ruth. (2015). Hewlett
Foundation. Interview conducted by R4D.
12 November 2015.

Analysis of the global health funds highlights the many differences between schoolbooks and the services and commodities the health funds were created to support (Box 11). It thereby argues against a straightforward attempt to replicate any of these mechanisms as a solution to the books problem. However, there are useful lessons, positive and negative, to be drawn from their experience.

Figure 16 below describes the different commodities or services supported by the health funds and compares them to some of the key findings presented in section 2.2.

	New vaccines	HIV treatment	Malaria bed nets	Zinc to combat diarrhea	Local language books	Legend
Relevant global fund	Gavi	GFATM/UNITAID	GFATM/UNITAID	RMNCH Trust Fund	“GBF”	
Demand for the service or commodity from users and ministries already in place	++	++	+	Little or no awareness or demand, need to build	+ Demand weak in many countries due to lack of awareness, especially for reading books (<i>Finding 1</i>)	+ Weak demand; demand has to be built ++ Strong demand +++ Very strong demand
Affordability of the commodity	+++	+++	++	Commodity is very cheap	+	+ Obstacle to some household and countries ++ Important obstacle +++ Severe constraint
Existing systems for distributing and ensuring appropriate use	++	Systems initially not in place	Systems initially not in place	+	+ (<i>Finding 11</i>)	+ Systems present but may be a major challenge ++ Systems are strong
Opportunities for substantial savings from global market-shaping and pooled procurement	+++	+++	++	In many cases probably best to procure locally	+ (<i>Finding 6</i>)	+ Weak opportunities ++ Some opportunities +++ Major opportunities
Opportunities for savings from national market-shaping and improved procurement	+	+	+	+++	++ Potential savings from better procurement and other measures (<i>Finding 6</i>)	+ Weak opportunities ++ Some opportunities +++ Major opportunities
Impact of increased access is well-established and easy to measure	+++ Good effectiveness data, consensus on health impact	++ Impact on individuals clear, program data not available initially	++	++	+ Evidence of importance of books, challenging to disentangle from other factors (<i>Finding 7</i>)	+ Weak or incomplete data measurement systems ++ Good systems +++ Very strong

Figure 16. Comparison of commodities or services supported by global funds

As Figure 17 illustrates, Gavi is perhaps the least relevant model for a GBF (see Box 12 for more background on Gavi). When Gavi was created, the value of vaccines was already broadly appreciated by governments and households in most low and middle income countries, and immunization systems, although imperfect, were able to achieve 70% or higher coverage with basic vaccines in most countries. The primary obstacle to the introduction of important newer vaccines was their high cost. Gavi was established to overcome this obstacle by procuring and providing these vaccines to countries that would otherwise have difficulty affording them. There were also substantial opportunities for cost savings through pooled procurement and other international market-shaping measures. These conditions are not in place for reading books, especially in local languages. However, Gavi's efforts to help countries improve distribution systems could provide lessons for a book fund. In addition, Gavi's policies on country eligibility and co-financing offer possible models, although we favor a less rigid approach to eligibility in particular (see Section 4.3.2).

Box 12. Overview of the Global Fund to Fight AIDS, TB, and Malaria (GFATM), and the Vaccine Alliance (Gavi)

The two largest and best-known health funds are the Global Fund to Fight AIDS, TB, and Malaria (GFATM) and the Vaccine Alliance (Gavi). GFATM, launched in 2002, disbursed about US\$2.9 billion in grants in 2014 for programs against the three diseases in more than 100 countries. Gavi, launched in 2000, spent US\$1.3 billion in 74 countries in 2014.

The two funds share important features: both are freestanding institutions, both pool resources provided by industrialized country governments and foundations, and both allocate funds in response to proposals submitted by recipient country governments—all three features representing departures from traditional bilateral or multilateral development assistance. However, the two initiatives differ in important ways as well. Probably the most important difference is that Gavi focuses narrowly on a particular intervention—immunization—and expends the majority of its resources on a commodity—vaccines, while the GFATM funds broad national strategies against the three diseases.

There is broad consensus that Gavi and GFATM have raised substantial additional donor resources for the health areas that they cover and have had very considerable impact. This has been achieved in part through strong support from major advocacy NGOs and through high-level buy-in by political leaders in donor countries. By their own estimates, programs that they have funded have saved several million lives. It is difficult to know, however, how this impact compares with what could have been achieved if these resources had been made available through traditional channels and thus to assess the success of these initiatives *as innovative financing mechanisms*. Both have also been criticized on other grounds, including for favoring vertical, disease-specific programs at the expense of broader health systems and for contributing to the proliferation of aid channels. The GFATM in particular has also suffered from revelations of large-scale fund diversion in some countries.

Another proposed mechanism for supporting national immunization programs, the Middle Income Countries Strategy for Immunization, although not yet operational, could be an interesting model for some aspects of a GBF.²⁸⁴ The MIC Strategy, as currently conceived, would not procure or fund vaccines

²⁸⁴ Middle-Income Countries Task Force. (2015). *Sustainable Access to Vaccines in Middle-Income Countries (MICs): A Shared Partner Strategy*. Report of the WHO-Convened MIC Task Force. Background paper for the SAGE's April 2015 meeting.

itself — this would be the responsibility of national governments — but would offer a menu of technical assistance to countries, including in improving vaccine procurement, reinforcing demand, and strengthening supply chains. As explored in Section 4.1, we envision a GBF playing a similar role at the country level, although the GBF might also fund book procurement in some circumstances. Of course the GBF would support the poorest countries as well as perhaps some middle income countries (Section 4.3.2). The relevant feature of the MIC Strategy is not its country focus but the nature of the support it proposes to offer.

The GFATM faced some of the same challenges that a GBF would face, including weak systems for delivering HIV and malaria treatment and distributing the necessary commodities as well as poorly developed demand for some interventions. From the beginning, however, the GFATM was set up to fund holistic programs rather than specific commodities. In this way, it is perhaps more analogous to the Global Partnership for Education (GPE) than to a new fund focused narrowly on books. Another important difference is that there are global markets for some of the most important commodities funded by the GFATM, including HIV and malaria drugs and malaria bed nets, and thus opportunities for savings through pooled procurement and market-shaping. However, the GFATM has made only modest use of pooled procurement.

That said, the GFATM's emphasis on funding integrated, nationally conceived programs can be seen as an important lesson for a GBF which will not succeed until access to books is accompanied by measures to ensure that they are well used. This does not mean that the GBF must itself address use and other essential elements of education systems, but that it must either be embedded in an entity that can provide complementary types of assistance or have strong links to other aid mechanisms that can do so.

UNITAID does not in general fund national programs or take on long-term commitments in any particular area but rather funds catalytic initiatives in new or previously neglected areas with focus especially on creating and shaping markets for important health commodities (drugs and vaccines). Thus, it is not a good general model for a GBF that would take a holistic and sustainable approach to the schoolbook challenge, but its market-shaping efforts at the national level may offer some lessons for books.

The RMNCH Trust Fund is in some ways a promising model for a GBF. Emerging from the report of a commission that highlighted lack of access to 13 important but neglected reproductive, maternal, newborn and child health commodities, the trust fund provides relatively modest funding to fill gaps in national strategies to increase access to these life-saving commodities. It funds the purchase and distribution of commodities in some cases, but as the commodities are mostly quite cheap, it focuses more on interventions to remove other obstacles to widespread use and in some cases aims to create sustainable local markets. It is not a freestanding entity, but was established by UNICEF, United Nations Population Fund (UNFPA), and WHO. However, the RMNCH Trust Fund is explicitly time-limited — it will expire at the end of 2016 — and so may not be an appropriate comparison. Moreover, its structure, based on working groups focused on particular commodities, would not be relevant to GBF.

Power of Nutrition is a new mechanism for channeling aid to national nutrition programs. It stands out for its focus on raising money from non-traditional donors and private-sector sources through schemes in which new donations are matched by funds from its implementing agencies, the World Bank and UNICEF, as well as from DFID, a traditional donor. This model, which in theory allows Power of Nutrition to “crowd in” funding from its host institutions and others as well as to improve the effectiveness of these institutions' broader nutrition programs, should be explored for a GBF if it is hosted within an

organization with existing education programs, as we recommend. Power of Nutrition's governance arrangements could also be a good model for a GBF.

Finally, the Global Financing Facility is an ambitious new World Bank initiative to fund the scaling up of reproductive, maternal, newborn, child and adolescent health services in 62 low and middle income countries. It resembles the GFTAM in its proposed scale (US\$57 billion by 2030) and scope as well as in its focus on national programs, though its institutional structure as a trust fund within the World Bank is an important difference. This structure is intended to allow it, like Power of Nutrition, to crowd in funding and integrate the programs it finances with broader World Bank programs. Again like the nutrition initiative, its governance is designed to facilitate harmonization with the host institution's policies and programs.

3. The case for a global mechanism to transform the availability and usage of books

Despite the clear evidence that books are vital to learning, our country findings and consultations with stakeholders suggest that issues and inefficiencies along the entire books chain prevent books from reaching children and increasing learning outcomes. As explored in Section 1.2, these challenges around books provision continue to persist despite the decades of funding by donors and governments alike.²⁸⁵

Our findings suggest that there is a need for a bold new intervention that transforms the sector. Traditional project-based approaches have not worked to solve the problem around the lack of high-quality books for children, and a new approach is needed. Two fundamental aspects distinguish how this proposed new intervention will be a departure from business as usual.

First, a new mechanism is needed to raise awareness on both the high returns to books at the global and country level and also to mobilize funding. As reflected in the Sustainable Development Goals (SDGs), global focus has increased on quality of education and learning in recent years. Section 1.1 highlighted the importance and cost-effective role books play in achieving this aim; however, our findings suggest that underlying demand, particularly for reading books in local languages, is significantly hindered by lack of awareness of the value of these books (Finding 1). There is also inadequate funding for reading books as well as textbooks, and for many LIC countries, external financial mobilization is needed to close the funding gap (Finding 4-5). Given this fundamental challenge, a mechanism is thus needed to raise awareness and also to fundraise for additional resources. Current knowledge dissemination efforts include research on books – mainly textbooks – by the World Bank, UNESCO, and think tanks. The Global Reading Network also advocates for the importance of reading books, provides open access to knowledge and best practices on the subject, and aims to increase dialogue between practitioners; however, it does not focus attention at the policy or community levels.²⁸⁶ In addition, ADEA's Working Group on Books and Learning Materials also supports awareness of TLMs and greater TLM policy dialogue across Africa, but success has been limited due in part to funding constraints.^{287,288} There is a need to leverage these efforts to ensure that governments and communities understand and value the importance of fostering a culture of reading and a concentrated effort is undertaken to prioritize advocacy and fundraising.

Second, there is a critical need for countries to access specialized technical knowledge for high-impact activities that can lead to the most significant opportunities for savings and quality improvements around the development, procurement, and supply chain management of books. Our findings show that technical assistance is also required to ensure that books are effectively used to increase learning. However, technical expertise to effectively address the underlying issues in the book chain is often lacking. Even though there are influential agencies already supporting reading initiatives, most do not have technical staff familiar with the book market and supply chain. For example, while the GPE has funded TLM related activities in some countries when requested by national governments, its strategy has not specifically focused on improvement of book provision and book chains.²⁸⁹ Meanwhile, although the World Bank has funded a number of TLM projects and even provides some technical assistance,

²⁸⁵ Read, T. (2015).

²⁸⁶ Global Reading Network. (2016).

²⁸⁷ ADEA. (2015).

²⁸⁸ Sow, M. Aliou. (2015).

²⁸⁹ Global Partnership for Education. (n.d.).

consultations reveal that technical assistance components were sometimes unable to deliver on expectations due to a lack of technical capacity in-country or within the Bank on select topic areas. Additionally, although many bilateral aid agencies have also provided technical support for TLM provision, these project-oriented efforts have limited systemic impact in the vast majority of cases (Section 1.2). Indeed, there are a few exceptions (such as Rwanda), but this finding holds more broadly.

An analysis of the benefits and costs of a *new* mechanism – specifically, a GBF – in contrast to using existing bilateral or multilateral channels indicates that the creation of a new mechanism is justified for three reasons:

- A new mechanism can play a critical role in harmonizing current funding in books and ensuring greater effectiveness of funds. Although a number of institutions – including the World Bank, UNICEF, and bilateral aid agencies – allocate funding and programming towards improved books provision (Section 1.2), no existing institution coordinates resources for this purpose. There may be an opportunity to create stronger coordination of funding and subsequently ensure greater transparency and predictability through the architecture of a new dedicated mechanism.²⁹⁰
- A new global entity is needed to break away from the traditional donor-project approach and instead play a system-strengthening role.²⁹¹ It takes a period of years to change systems, and long-term focus and sustained funding is needed to support these changes (Box 13). However, many existing donor institutions operate on short project timeframes, with funding allocated for only a few short years. Thus, there is an inconsistency in the type of focus and the funding window needed to achieve sustainable, large-scale change in book provision systems and the reality of existing institutional structures.
- As Finding 4 demonstrates, low income countries will not be able to meet financing needs for TLMs. A new mechanism can elevate the focus on TLM spending and mobilize dedicated funds.²⁹² Although the experience of health funds varies by region and focus area, both Gavi and GFATM have led to the additionality of funding. However, stakeholders consulted expressed concern that the current environment might be less supportive of a new global fund, and additionality to current funding may be unlikely. Indeed, a recent evaluation of the GPE found no strong evidence that it generated significant additional donor funding for basic education.²⁹³

Box 13.

“[In many countries in sub-Saharan Africa], donor, NGO, MOE demand is not usually stable but short-term and ad hoc. This prevents book chain actors from investing in book development and production... Initiatives that have lasted in the long run are usually tied to international NGOs that are working in the country long-term.”

- Richard Crabbe, World Bank

Source: Crabbe, Richard. (2015). World Bank. Interview conducted by R4D. 4 December 2015.

²⁹⁰ Sustainable Development Solutions Network. (2015). *The role of global funds in a post 2015 development framework*.

²⁹¹ Ibid.

²⁹² Ibid.

²⁹³ Results for Development Institute and Universalia. (2015). *Independent Interim Evaluation of the Global Partnership for Education: Volume I – Final Evaluation Report*.

Establishing a new global mechanism is inherently a sensitive and political topic and the benefits described above have to be weighed against the costs. One of the most significant criticisms is that new funds can contribute to increased fragmentation and may not be needed.²⁹⁴ There is also the danger that new funds can add transactional costs, not be well integrated within the relevant sector, and stall systemic change. Other concerns are that funds may be vulnerable to corruption and may lessen or replace domestic resource mobilization.²⁹⁵ Stakeholders consulted also cautioned that there is a low appetite for a new global fund, in contrast to the political climate that existed during the creation of health funds. Indeed, an agriculture fund expert cautioned that any new entity will have to “fight the idea” that a new fund will simply be “a new source of inefficiency.”

Despite these important considerations, our analysis indicates that the benefits of the creation of a GBF outweigh the costs. While a quantitative cost-benefit analysis may not be possible, our assessment is based on the context and long-standing nature of the problem. As indicated in Section 1.1-1.2, low availability of textbooks, reading books, and other TLMs is a persisting problem that has not been eradicated despite decades of interventions and millions of dollars in funding.

In order to mitigate against potential risks, careful attention has been paid to the proposed design of the GBF (Section 4.3). Monitoring and evaluation mechanisms for a GBF’s activities must be stringent in order to ensure safeguards against inefficiency, poor management and corruption. Additionally, recipient country co-financing requirements are proposed to ensure that domestic resource mobilization does not dwindle in the face of funding provided by a GBF. Crucially, as explained in Section 4.3.5, we do not propose a freestanding fund, but instead recommend that the GBF is hosted within an existing entity. This structure will help consolidate efforts and complement existing initiatives. For instance, we propose that the GBF work alongside GPE’s existing efforts and network, while harmonizing the book provision and awareness-raising initiatives of the World Bank, UNICEF’s Supply Division, bilateral aid agencies, NGOs, developing country governments, and others. This will help reduce fragmentation and transactional costs while making large-scale, systemic efforts more likely through unifying resources.²⁹⁶ These measures offer confidence that the benefits of sustainable, systemic change in books provision to improve the quality of education for all will far outweigh the prospective costs.

There are also significant risks in undertaking a large-scale launch of a new entity without any pilot, and this could risk undermining the credibility of the eventual mechanism. We therefore propose undertaking pilots in a start-up phase of the GBF to test and demonstrate proof of concept. As described in Section 5, such pilots can also provide evidence that will mobilize a broad range of funders, including additional donors, private sector and civil society organizations.

²⁹⁴ Bezanson, K. A., and Isenman, P. (2012). *Governance of New Global Partnerships*. CGD Policy Paper 014. Washington, DC: Center for Global Development.

²⁹⁵ Sustainable Development Solutions Network. (2015).

²⁹⁶ Ibid.

4. The Global Book Fund: recommendations and design

Our analysis suggests that there may be an important role for a new international mechanism, referred to as a GBF, to improve the provision and usage of books. Importantly, our findings show that many of the issues in the books chain are cross-cutting across both textbooks and reading books.

Section 4.1 outlines recommendations for the functions of the GBF, section 4.2 describes the Theory of Change, and Section 4.3 explores structural and operational considerations.

4.1. Recommendations for the functions of the Global Book Fund

We propose that the GBF focus its efforts on the broader books chain, leading targeted, high-impact activities to counter the challenges that prevent children from using both textbooks and reading books. The four functions outlined below form the basis of our recommendations for the GBF's activities. Careful consideration will need to be given to prioritization and sequencing, with specific activities expanded and refined over time. As will be discussed, the functions proposed below allow flexibility for the GBF to later expand its scope to other TLMs, move beyond primary grades, and consider regional and international LOIs. However, we caution that further research and analysis must be undertaken to determine the need and appropriateness of GBF support in these additional areas.

Our analysis indicates that the GBF could play a role at both the global and country level.

GBF at the global level

In order to transform books availability, the GBF must serve as a supporter and provider of global public goods relevant to books. At the global level, we propose that the GBF fill a critical gap by playing the role of a champion specifically committed to boosting the delivery and usage of all reading books and textbooks. We envision this covering a number of dimensions.

Function 1: Develop and disseminate knowledge and best practices on the effective development, procurement, distribution, and usage of all books.

Based on findings 2, 6, 7, 8, 13, 15, 16

Influential donors and implementation partners already support reading initiatives – for example at the multilateral level, the GPE, World Bank; at the bilateral level, USAID and DFID; and at the regional level, the Working Group on Books and Learning Materials at ADEA. However, there does not exist at the global level a dedicated technical unit with expertise to serve as a repository of knowledge and best practice, nor do most of the agencies supporting reading themselves have sufficient staff familiar with the book market and supply chain. Meanwhile, although many of the government stakeholders consulted were familiar with various books-related initiatives in their countries, political transitions and staff and policy turnovers have meant that institutional knowledge and technical knowhow are often missing.

The GBF could thus serve as a repository and generator of information around all aspects of the book chain. In addition to supply chain best practices, the GBF could aggregate specification and content quality guidelines that are crucial to ensuring that books are useable and accessible to all children. Guidelines could include shaping early grade reading books to be leveled and decodable, representing

and empowering both genders equally via characters, stories, and illustrations in learning materials,²⁹⁷ standardizing book specifications, etc. These guidelines and best practices could feed into the development of standardized documents that governments could reference and adapt to their unique national contexts. For instance, expert stakeholders noted the often ad hoc nature of procurement documents, with varying and sometimes outdated guidelines copied and reused from old tenders.²⁹⁸ To curtail this issue and improve the efficiency of book procurement, Senegal recently developed its own Standard Bidding Document by referencing the World Bank’s Standard Bidding Document.²⁹⁹ Indeed, the GBF could play a role in not only helping to create and disseminate normative procurement standards, but also require adherence to these standards as a basis for any sort of country-level funding. Research on policy environments that affect the success of books provision could also be undertaken or shared by the GBF. For example, the impact of early versus late exit LOI policies could be further studied, as these policies are critical to fostering sustainable reading and learning gains and affect the provision of books.

Consultations also reveal a lack of coordination and content sharing amongst donors, NGOs, and MOEs. Even where titles exist and are published, access is well below its potential due to a lack of coordination and content sharing among donors, NGOs, and MOEs. The GBF’s global function could improve synergies and coordination, thus reducing inefficiencies and supporting content sharing arrangements and open license content generation models. Further research will be needed to determine the most appropriate strategies for content sharing and open licensing.

The mechanism could also serve as a holding place and coordinator for all related activities and analyses already underway, including the content generation activities being undertaken by Bloom Software through the “Enabling Writers” competition; title access activities through Pratham Books’ StoryWeaver initiative, African Storybook Project, and the development of a Global Reading Repository; and the piloting of the “Track and Trace” initiative to improve supply chain management. Similarly, the GBF could facilitate data sharing on books-related investments and activities between donors, NGOs, and governments to improve coordination and provide a comprehensive global, regional, and national view of books initiatives. There is a need also to institutionalize workshops and technical forums to convene different types of stakeholders, including publishers. The GBF could possibly take on this role through a joint arrangement with the Global Reading Network, merging the GRN into it, or building on ADEA’s Inter-Country Quality Nodes initiative.

Function 2: Advocate and instill the importance of reading materials, and gain buy-in from champions to spur long-term policy dialogue.

Based on findings 1, 13

Our analysis shows that in many countries there is a lack of awareness on the value of reading books, particularly in mother tongue languages. For any books initiative to succeed, a priority must therefore be to raise the value and demand for books and to instill the importance of such reading materials.

²⁹⁷ Benavot, A. (2016).

²⁹⁸ Barth, Christophe. (2015).

²⁹⁹ Mbaye, Mamadou Mansour. (2016). World Bank. Interview conducted by R4D via email. 11 April 2016.

Box 14.

“A key issue is the need to convince the state ministry of education of the importance of reading books in class.”

Source: India Case Study – see Annex 3.

Limited awareness is seen at both the level of government and at the community level (Finding 1). For example, in India government actors lack understanding of the importance of reading books (Box 14). In Kenya, consultations indicate that enhancing the use of numerous underserved local languages will require an intensive public information campaign on the positive benefits of local languages and teacher training to increase teacher skills and knowledge in reading, writing, speaking, and listening in these languages.³⁰⁰

Thus, increasing the importance of books is a foundational step to engage and inform parents and communities, and in tandem, influence policymakers. The GBF could play a leading role in directly elevating the conversation at national levels, spurring policy dialogue with MOEs and other government actors. Additionally, as discussed in Function 3, the GBF could provide funding to country-level actors to undertake advocacy initiatives aimed at raising awareness of the value of books and fostering a culture of reading within communities, schools, and homes. For instance, similar to grants provided through the Reproductive Health Supplies Coalition Innovation Fund,³⁰¹ the GBF could consider awarding small grants to NGOs, either directly or as a component of country proposals, to rapidly boost awareness of the value of reading books and a reading culture. Specific consideration of populations with particularly limited access, such as girls and disabled populations, may be needed in messaging and outreach to ensure that they also benefit from the GBF’s advocacy efforts.³⁰² In addition to advocacy campaigns, such funding could also support regional book fairs and other events specifically focused on supporting children in learning to read and reading to learn within school and home contexts.

GBF at the country level

At the country level, we propose the following.

Function 3: Fund technical assistance to improve the development, procurement, distribution, and usage of books to improve learning outcomes.

Based on findings 4, 6, 7, 11, 12, 15

Country context and need will determine the precise nature of technical assistance and expertise required to strengthen the availability and use of books within a particular country.

We propose that each participating country, supported by in-country partners (e.g., NGOs and library organizations) and as needed by technical experts, conduct a comprehensive assessment to determine the ‘health’ of its books chain. Alternatively, countries could leverage existing national education sector plans to identify needs and areas for support. The GBF could provide guidance and technical support for such assessments. The country-driven assessments could then form the basis for proposals to the GBF to request specialized technical support. For example, this could include expert knowledge on the development of new titles in LOIs with inadequate titles, guidance on procurement best practices,

³⁰⁰ Kenya Country Report - see Annex 3.

³⁰¹ Reproductive Health Supplies Coalition. (2016). *Innovation Fund*.

³⁰² UNESCO. (2009).

distribution support to ensure books reach schools from district warehouses, and guidance on usage to ensure that books are used effectively in the classroom to boost learning levels.

Given that the new entity must get away from the current, ineffective business-as-usual approach and transform the books sector, we envision the GBF adopting a lean, nimble role. We therefore recommend that the GBF fund the provision of technical assistance but not itself assume responsibility for its provision. Instead, experts could be contracted by countries to provide technical support as needed. The GBF will need to have a select number of technical experts to oversee consultants and run its global activities – and can maintain rosters of consultants in the various stages of the books chain – but should not itself become a large-scale agency focused on technical provision.

Indeed, this is an important lesson from the health sector. While health funds finance technical support, few include technical assistance *provision* as part of their mandate. For example, the RMNCH Trust Fund spent nearly 50% of trust fund resources funding training and technical assistance.³⁰³

In addition, we propose that a GBF provide flexible program funding to complement funds for technical assistance. Such programmatic funding could be used specifically to bolster the demand side and to ensure that books are effectively used to improve learning outcomes. For example, such funding could be used to raise awareness of the value of books, support teacher training on book management and storage, and foster accountability systems and other mechanisms to ensure that books are effectively used to improve learning outcomes.

Again, the success of flexible program financing has been seen in the health sector. When Clinton Health Access Initiative (CHAI) launched its UNITAID program, few in-country staff knew how to run infant diagnostics tests for HIV/AIDS. UNITAID was able to very quickly allocate catalytic program funding to train ministry lab workers. By 2009, UNITAID had 4,600 sites testing infants across Africa, versus 200 in 2005. CHAI executives involved in this program cite the vital importance of the pairing of the product and the flexible product funding to achieving these results.³⁰⁴

As mentioned in Section 3, the GBF must move away from a project-by-project approach to effect systemic change. Numerous studies, spanning multiple sectors, recognize the failure of short-term technical assistance to catalyze sustainable change in national systems.^{305,306,307} These studies emphasize capacity building as a long-term process and highlight its misalignment with traditional support windows. Thus, the GBF's provision of technical assistance provision is envisioned to be a series of punctual, short-term assistance that is sustained over a long period of time.

Section 4.3.1 further explores our recommendations for the funding model and Section 4.3.2 explores criteria that could be used to allocate funding.

³⁰³ Pronyk, P. (2015). *UN Commission on Life Saving Commodities: Progress to date and the post-2015 agenda [PowerPoint slides]*. RMNCH Strategy and Coordination Team.

³⁰⁴ Schroder, Kate. (2015). CHAI. Correspondence with Kanika Bahl. August 2015.

³⁰⁵ World Bank Operations Evaluation Department. (2015). *Capacity Building in Africa: An OED Evaluation of World Bank Support*. Washington, DC: World Bank.

³⁰⁶ World Bank Task Force on Capacity Development in Africa. (2005). *Building Effective States: Forging Engaged Nations*.

³⁰⁷ De Grauwe, A. (2009). *Without capacity, there is no development*. Paris: UNESCO International Institute for Educational Planning.

Function 4: Fund reading books in mother tongue languages that correspond to LOIs where there is demonstrated financial need and country commitment.

Based on findings 4, 5, 6, 7

Our fiscal analysis (Finding 4-5) makes clear that LICs, in particular, have significant financing needs if they are to meet minimum textbook and reading book provision and use standards. Relying on domestic sources of finance to ensure basic standards of book provision will be difficult for the Group 1 countries in our analysis. For countries that demonstrate financial need, we propose that the GBF provide multi-year funding to supplement government resources to purchase reading books, increase demand predictability, and engage and build local publishing capacity. Governments could be required to provide co-funding and/or adopt certain management and operational best practices. As Finding 6 demonstrates, strengthening the local publishing industry may be very important for long-term, sustainable provision of books. The GBF would therefore need to engage with local publishers to strengthen the quality and efficiency of their production practices.

In certain circumstances, for example in emergencies or where government procurement capacity is absent, the GBF might directly procure books from publishers.

Our analysis of market-shaping opportunities suggests that facilitating pooled procurement of reading books at the *national* level could allow for significantly larger print runs and therefore drive cost savings: moving from a 5,000 to a 25,000 print run size corresponds to a 33% savings per book. However, pooled procurement at the *regional level* across countries with common languages would only be relevant if funding for reading books remains limited in each country such that full-potential print run sizes are not realized.³⁰⁸ As part of Function 3, the GBF could thus fund technical support to countries to develop a system where there is local autonomy over book choice in the context of centralized national procurement; through Function 4, it could require and support pooled procurement at the national level.

All functions of the GBF have been purposely designed to take on the broader challenge around access and provision of all books. However, we propose that in its initial stage, Function 4 prioritizes funding pre- and primary grade reading books in mother tongue languages that correspond to LOIs, given the critical role that this plays in improving literacy and the severe shortages of reading books in some languages and some countries. Over time, the GBF might, in certain circumstances, also move to fund the provision of textbooks and other TLMs, to expand its scope to regional and international LOIs to ensure that literacy and learning gains are not lost when language transition occurs, and to expand to higher grade levels. However, this is not proposed initially, due to the more urgent need to provide primary grade reading books in mother tongue LOIs.

4.2. The Theory of Change

The theory of change and pathways of impact envisioned in the GBF functions described in Section 4.1 are shown in Figure 17 below.

³⁰⁸ Full-potential print run size is defined as roughly 50,000 copies, as per-book savings are marginal above this amount (Finding 7, Section 2.2.2). As previously examined, if reading book funding increases significantly such that 50,000 print run sizes can be realized in each country, pooling volumes across countries would provide limited benefit given that cost savings are marginal above this volume level.

At the global level, the GBF's making available knowledge about books, book procurement, supply chains, and book use will represent a resource on which all countries can draw. Its advocacy efforts will contribute to changing the way that books, especially reading books, are thought about by educators and MOEs. Its global-level activities will provide a foundation for the success of country-level activities, which will fund targeted, high-impact support – and in some cases may entail funding reading books or procuring them directly – to improve the quality and efficiency of the book chain.

In order to ensure book quality and that provision of books translates to improved literacy outcomes, the GBF will need to pay careful attention to the inclusion of flexible program funding, particularly around pedagogical quality and usage. Three country scenarios are envisaged:

- a) Reading programs exist and are satisfactory, and high-quality books are being effectively leveraged in classrooms. Such instances may be rare, but where they exist, the GBF can focus on the book chain;
- b) Reading programs do not exist but are being installed through other donor-financed programs, for example, those of USAID's All Children Reading initiative (now active in 42 countries), the country reading programs now supported bilaterally by DFID, and the activities of other donors including the Global Partnership for Education. In such instances, the GBF can enter into trilateral arrangements with the government and the donor to ensure that the books it finances are used; and
- c) Reading programs do not exist or are inadequate: in such cases, the GBF can use flexible program funding to address issues around book quality and teacher training; where possible, training on the use of reading books will be integrated into broader teacher training programs.

Taken together, the GBF's efforts are intended to change the paradigm so that governments will finance and provide sufficient appropriate books for all teachers and children to use in primary school, resulting in improved reading and also in improved learning overall. As can be seen in Figure 18, the theory of change is not linear and the various outputs influence each other. The creation and development of best practices at the global level will also influence the technical assistance provided, and will serve to not only strengthen the book chain's effectiveness but also its quality. Similarly, a focus on advocacy and political buy-in at the global level, together with co-financing requirements at the country level, can serve to increase government spending and ownership.

At the global level, it will be difficult routinely to determine the results that will follow from the GBF's actions. The GBF's fundraising efforts could be measured by funds mobilized, but other monitoring efforts will be limited to recording requests for information, website hit rates, and the like, supplemented with regular following up with surveys of those using the resources to find out how they used them and what difference they found them to have made. The impact of the country-level work will be easier to measure. Its funding is expected to result in a greater supply of reading books, including new titles in languages where few currently exist; improved planning, budgeting and sustainable financing for textbooks and reading books; improved and more transparent book procurement and distribution, again for textbooks and reading books, with reduced losses and lower unit costs; greater use of reading books by teachers and students; and ultimately improved learning, especially improved reading.

The impact of the GBF's country-level financing will depend crucially on the extent to which there is political will to reform systems that often involve vested interests and sometimes also corruption.

Importantly, before entering into operations in a particular country (Function 4), the GBF will need to assess environmental factors, potentially through consultations with any existing donor efforts. Specifically, it will only be able to operate in a country if there is sufficient political will. If there is not, there will be substantial risks and the GBF will need to make clear to national authorities what needs to be done before it can support funding of reading books.

It will be important in the pilot phases of the GBF to test and develop its capability to operate under a mix of country scenarios, and in the process develop protocols for assessing country political will and reading programs. The need to influence and leverage existing reading and literacy efforts and ongoing initiatives also has implications for the institutional hosting of the GBF (Section 4.3.5).

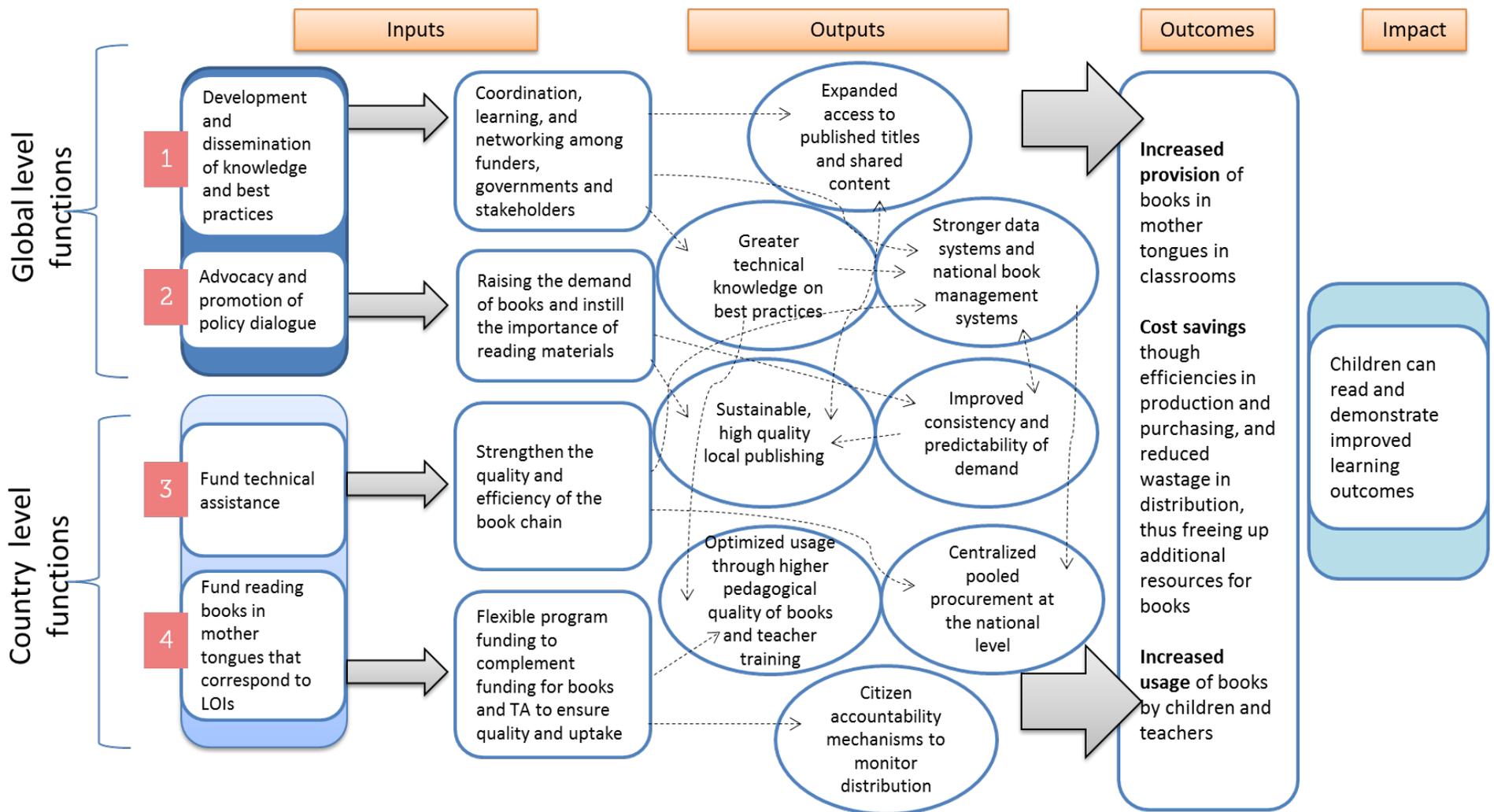


Figure 17. Envisioned GBF theory of change and pathways of impact

4.3. Structural and operational considerations

Following from our discussion in Section 4.1 on the activities of a GBF, we now put forward options and recommendations on design issues, including:

- Funding and implementation model
- Country eligibility, “graduation,” allocation across countries
- Country co-financing
- Monitoring and evaluation
- Institutional structure and governance

The proposals outlined here are influenced by lessons learned from global health funds.

4.3.1. Funding and implementation model

As indicated in Section 4.2, we recommend that at the country level, the GBF (a) fund the provision of technical assistance in a variety of areas and (b) provide funding for reading books in local languages that correspond to LOIs where there is demonstrated need and country commitment. We propose that the GBF provide cash *grants* and *fund technical assistance* to eligible countries in response to *country proposals* which would be assessed by a technical committee and then approved by a governance body. Among the questions that need resolving – which might be addressed in Phase 2 – are:

- Whether responsibility for the development and submission of funding proposals would reside with ministries of education or would be assigned to an entity at the national level bringing together other stakeholders. In countries supported by the Global Partnership for Education, this body would presumably be the Local Education Group (LEG). Although the performance of LEGs has been mixed—the recent GPE evaluation found that they were often quite active in proposal preparation but less so in monitoring implementation—it would be difficult to justify the establishment of a new stakeholder body at the country level. GFATM makes use of a similar group at the country level, the Country Coordinating Mechanism, to review proposals and oversee grants. In contrast, Gavi works directly with national governments while trying to ensure the involvement of other stakeholders at the national level in other ways. Whether the proposal comes from the MOE or another entity, technical assistance in assessing needs and preparing proposals may be useful, and it might make sense for the GBF to support this kind of assistance in some circumstances.
- Whether and in what circumstances the GBF would directly fund recipients other than national governments, such as local governments, NGOs, libraries, publishers, or other for-profit entities. The GBF could also consider how to foster public-private collaboration, particularly when such systems work in parallel without building on existing synergies. Options for different points of entry for books – for example, whether in classrooms or community libraries – should also be explored.
- To what extent GBF grants would piggyback on broader education sector programs of other donors and rely on implementation partners already engaged in these initiatives. This may depend on whether the GBF is hosted by an existing education funder (see below).
- In what cases and to what extent, if any, the GBF not only provides funding for countries to contract experts but also provides technical assistance itself. In order to ensure a country-driven process, we recommend that the GBF not itself assume responsibility for the provision of technical support except in exceptional circumstances.

The GBF would develop the capacity to carry out some of its global activities in-house, while pursuing others through grants and contracts.

Initial analysis also included consideration that a GBF might be able to use innovative financing techniques to raise funds and to procure books, building especially on the examples of the Advanced Market Commitment (AMC), used by The Vaccine Alliance (Gavi) to develop new vaccines, and the International Facility for Financing Immunizations (IFFIm), used to finance vaccination programs. The former encourages new vaccine development by committing to purchase them once they are created; the latter uses bond financing to raise cash for vaccination programs, the long-term bond and interest payments being covered by future payments from donor aid programs.³⁰⁹

However, the market for books is much smaller than that for vaccines, at about US\$4 billion a year for all primary textbooks and reading books in low and middle income countries and at only US\$1.2 billion for reading books (Finding 3). Moreover, there is no major financing need to generate new reading book titles. Such financing needs are relatively small and can likely be met simply by committing to purchase predictable quantities without the need for a complex new financing instrument.

By contrast, there may be scope for using results-based financing (RBF) techniques as part of the GBF's country funding model to help to ensure that books are supplied, distributed and used. By tying payments to results at the different stages of the book supply chain, well-designed RBF approaches might alter incentives and help to address the well-documented problems of distribution and use—books that are procured but do not reach schools, or reach schools but are not used. The challenge would be to define appropriate outcome measures to which funding could be tied. While it should be possible to monitor the timely arrival of books in schools, documenting appropriate use would be more challenging. RBF is no panacea—some initiatives have yielded promising results while others have not—and many results-based aid initiatives (where funds are specifically disbursed to governments) are still “cautious adaptations of conventional approaches.”³¹⁰ However, interest in RBF is expanding and this could be an important area of experimentation and innovation.

Indeed, the World Bank recently announced that it would commit US\$5 billion to RBF for education programs over the next five years; its Results in Education for All Children (REACH) trust fund, funded by Norad, USAID, and the Germany Federal Ministry for Economic Cooperation and Development via the World Bank Trust Fund, is testing RBF strategies.³¹¹ These projects could serve as models for further testing its scope within the GBF. We propose that this is further studied in Phase 2 of the analysis.

4.3.2. Country eligibility, graduation, and allocation

We propose that eligibility to apply for technical assistance from the GBF be quite broad, perhaps including all low and middle income countries, as the bulk of the world's poor are now increasingly in MICs, specifically LMICs.³¹² For upper middle income countries, however, support from the GBF should

³⁰⁹ A recent Global Education Monitoring Report paper argues that a Gavi-like mechanism could be useful for textbooks, including pooled procurement as well as innovative financing. UNESCO. (2016a).

³¹⁰ Perakis, R., and Savedoff, W. (2015). *Does Results-Based Aid Change Anything? Pecuniary Interests, Attention, Accountability and Discretion in Four Case Studies*. CGD Policy Paper 52. Washington, DC: Center for Global Development.

³¹¹ World Bank. (2016). *Results-Based Financing (RBF) and Results in Education for All Children (REACH)*. The World Bank Group.

³¹² UNESCO. (2015a).

be time-limited and these countries should perhaps be asked to contribute to the cost of the TA. To receive funding for books, however, countries should have to demonstrate both need and government commitment, and poorer countries should have priority. We do not recommend a hard eligibility cut-off based on country per capita income as used by Gavi, as such a rigid approach would foreclose the opportunity to play a useful catalytic role in somewhat better-off countries where the availability of some funding for books might be useful leverage for policy reform and help to unlock government funding for books on a larger scale. In fact, Gavi's engagement with India provides an interesting model. Gavi plans to provide short-term, partial funding to introduce three new vaccines before India graduates from Gavi support altogether. In return, the Indian government commits to providing the remainder of the necessary funding for introduction of the vaccine and to sustaining the new programs going forward. The Gavi support is expected to allow India to introduce the new vaccines sooner than would have been possible otherwise.³¹³

Book funding for relatively better-off countries (for example, Group 2 and 3 countries) could be time-limited to reflect the judgment that these countries have the fiscal capacity to pay for books but may need time to make the necessary budget adjustments. Funding for the poorest countries (Group 1) should not be explicitly time-limited but could be phased out if and when government ability to pay increases with economic growth. Gavi's innovative but still largely untested graduation policy could provide a model for such an orderly phase-out of support. Such a process may be necessary only for the subset of countries that receive funding for books, as opposed to technical assistance only.

Although eligibility would be quite broad, the GBF would almost certainly need a mechanism for allocating funding if resources are insufficient to fund all technically sound proposals. This could be done either by defining a maximum funding envelope or allocation for each eligible country, as the GPE does, or by using a mechanism for ranking country proposals. Gavi has a proposal prioritization mechanism but has not so far had to use it. In its new funding model, the GFATM has moved to an allocation system, in which country envelopes are defined by a formula that takes into account country income level as well as population and disease burden.

An allocation model for the GBF should also consider income or other measures of ability to pay for books—better-off countries should normally receive less support per pupil—but could also consider measures of government commitment to education and performance on previous grants. Proposal quality would still matter: the country envelope would set the upper bound, but countries would have to build a strong case to receive any support.

A proposal prioritization model can also take into account country income and need as well as other considerations. A disadvantage of this approach, however, is that its all-or-nothing nature makes funding unpredictable for countries.

It will be easier to decide which is appropriate once there is a better sense of available resources and demand for support from a GBF.

³¹³ It should be noted, however, that Gavi's support to India does not constitute an exception to its eligibility and graduation policy, as India has not yet crossed Gavi's GNI per capita threshold for eligibility.

4.3.3. Country co-financing

Both Gavi and GFATM require countries to share the cost of funded programs, in Gavi's case by independently procuring an agreed fraction of vaccines, in the case of the GFATM by demonstrating that a certain share of program costs are coming from domestic resources. The goal of these requirements is two-fold: to demonstrate and build national ownership and commitment to the programs in question, and to prepare countries for assuming full responsibility for funding them once donor financing is no longer available. These policies are thus a central part of the two organizations' strategies for ensuring that programs begun or expanded with their support are sustained. However, given that these policies are still relatively young, it is too early to say if these strategies will succeed.

We propose that some form of co-financing also be a central part of the GBF strategy. Gavi's system of parallel procurement is cumbersome and not appropriate for the GBF which will probably not procure books directly except in exceptional circumstances. Countries receiving support for book purchases should be required to contribute a meaningful share of the cost, however, and support should be contingent on putting in place budgetary processes that make reliable and timely funding possible. The required share should depend on country income and other considerations. For the poorest countries, it may make sense to fund books on a long-term basis, while in better-off countries, book funding should be explicitly time-limited, with an agreed schedule for replacing external with domestic resources.

4.3.4. Monitoring and evaluation and accountability

The GBF will need to have its own robust M&E system and will also need to support country M&E systems. A robust GBF M&E system can ensure quality assurance, safeguard against fund diversion, and demonstrate project effectiveness and efficiency. Additionally, a strong M&E system will also be crucial in evaluating country performance. Indeed, decisions on phasing out book funding for Group 1 countries and on country graduation and grant allocations will depend on the availability of robust performance data. At the country level, systemic data on books provision, collected through M&E systems, can also serve as an important global public good. Indeed, findings from our country case studies suggest that EMIS data is often unreliable or limited in nature. For instance, EMIS data in Nigeria was last published in 2003, and our country studies in South Sudan, Tanzania, and Ethiopia suggest that EMIS data is also in need of updating and lacks reliability. When reliable EMIS is present, it can often be limited in scope, not covering all data required for effective decision making.

A review of country-level M&E systems indicates that governments often face two key challenges in developing robust M&E systems: (i) limited funding and internal capacity to respond to increased requirements/demand for M&E and (ii) difficulty institutionalizing and coordinating M&E systems.³¹⁴ Careful attention and consideration must thus be paid to the structure and design of an M&E system.

First, the GBF's M&E structure must address the tension between balancing the benefits of M&E with the often high transaction costs of gathering robust data. Experiences from health funds indicate that the cost of collective M&E requirements can become extremely onerous for countries, with significant time, capacity, and attention invested in meeting information requests. To reduce some of this burden and to adhere to global aid effectiveness agreements (Paris, Accra, Busan), we propose that the GBF

³¹⁴ Biscaye, P., et al. (2015). *Evaluating Country-Level Government M&E Systems*. Prepared for the Development Policy and Finance team of the Bill & Melinda Gates Foundation. Evans School of Public Affairs, University of Washington.

align its M&E as much as possible with not only its host organization (as recommended in Section 4.3.5) but also with information that countries are already collecting. Where possible, M&E indicators should be common to donors and governments. In this way, the M&E structure should not only allow the GBF to track use and effectiveness of funds allocated but should be responsive to the needs of actors at the country level.³¹⁵

Gavi's M&E model may be a relevant example of an integrated and aligned system. Gavi uses a tiered M&E approach by gathering information from routine program monitoring, targeted studies, and full country evaluations. The tiered system leverages existing data collected through established monitoring systems (that report to WHO) with new data collected through targeted studies and country evaluations.³¹⁶

Second, in order to support a robust system at the country level, we recommend that the GBF provide sufficient funding for technical support to countries in order to build internal capacity and country ownership in M&E and EMIS data management. Government M&E systems often have weak standards for data collection and verification and infrequently train staff on data management and collection.³¹⁷

Third, we also discourage the use of rigid M&E frameworks. Given the expectation that a GBF will fund multiple activities, M&E systems need to be flexible enough to be able to track various indicators. Although it is too early at this feasibility study stage to consider possible indicators that may be relevant for books, it should be noted that indicators should expand beyond simply tracking enrollment and numbers to more closely monitor inputs and learning.³¹⁸ More work in this area will be needed if the decision is made to proceed with a GBF.

4.3.5. Institutional structure

The first choice that must be made is whether the GBF should be a freestanding entity or should be “hosted” by an existing institution or partnership that already provides assistance to education in developing countries. We conclude from our analysis, which weighed these options against a broad range of criteria (Appendix 5), that it would be preferable for the GBF to be hosted by an existing organization if an appropriate and willing host can be found. The main advantages of this option are cost—the GBF would not have to develop all the necessary structures and capabilities of a freestanding financing organization—and greater integration, in that it would be easier to ensure that the GBF's investments were well coordinated with complementary investments in the education sector, for example in teacher training. A hosted GBF would also be more consistent with aid principles (the Accra agenda), as it would not add to the already burdensome array of aid organizations with which countries must engage. Given considerable reluctance to create new international mechanisms, it will also be essential that the GBF be as lean an operation as is compatible with its functions; housing it within an existing organization should help contribute to this.

Not only does a self-standing option seem unattractive, so do those involving bilateral donors and the private sector, even when these are heavily involved in education. Bilateral aid agencies, even large

³¹⁵ Naidoo, Jordan. (2016).

³¹⁶ GAVI Alliance. (2015). *Monitoring and Evaluation Framework and Strategy*. Gavi.

³¹⁷ Biscaye, P., et al. (2015).

³¹⁸ Naidoo, Jordan. (2016).

ones such as USAID and DFID, limit the number of countries in which they operate and so are inappropriate for hosting a Fund that should potentially serve all countries, or at least all low and middle income ones. Private institutions fall into three categories: private firms, like international publishers, which would not be viewed as sufficiently neutral to host the Fund; private foundations, which might be considered appropriate but, like bilateral aid agencies, do not generally have a large enough global footprint; and international NGOs, which may also be viewed as insufficiently neutral.

By contrast, multilateral agencies, such as UN agencies, cover all countries or at least all countries in certain categories (as with the Global Partnership for Education that covers all low and lower middle income countries). They are also public and therefore less likely to be thought of as having particular viewpoints. The principal multilateral agencies involved in education are GPE, UNESCO, UNICEF, the World Bank, and the regional multilateral development banks. However, the regional banks, by definition, are not global and UNESCO does not typically handle large funds, although it may be well placed to support the global functions of a GBF given its UIS database and the fact that its research activities span textbooks and education curriculum.³¹⁹

Candidate host agencies are thus likely to be GPE, UNICEF, and the World Bank. In order to inform this study in a preliminary way, senior officials of each were interviewed to ascertain their willingness to consider hosting the Fund. These initial reactions will need to be probed more formally and carefully at a later stage. Our consultations revealed the following broad points:

- GPE is willing to explore the idea of hosting a GBF. Not only do the broad objectives of a GBF align with its mission of promoting basic education in low and lower middle income countries, but there exist a range of potentially useful collaborations, such as with UNICEF's Supply Division, that GPE is well placed to advance.³²⁰
- The World Bank is reluctant to serve as the host: the considerable internal change that it is undergoing at present means that it might not be able to focus appropriately on a new Fund. Additionally, senior management's current sentiment is not generally in support of new vertical funds. The Bank is, however, cautious about the idea of GPE taking on the role, given what it perceives as the need for GPE to focus on its core mission, and recommends thinking about separating the expertise and the financial aspects of the Fund into separate institutions.³²¹
- UNICEF does not rule out the possibility of such hosting, or supporting the implementation of the Global Book Fund, including exploring what role might be played by its Supply Division. In 2014, UNICEF supplied 16.3 million children with learning materials, mainly through its country offices; however, UNICEF does not currently have any centralized expertise for reading book provision.³²² UNICEF's status as an implementer would also need to be carefully evaluated to determine if a potential conflict of interest might exist.

A potential disadvantage of operating within an existing organization is that it would be a less dramatic way to attract attention to the book problem. Based on our interviews, however, it seems unlikely that in the current environment a free-standing GBF would attract the kind of large-scale funding that Gavi and GFATM have attracted, and which would justify the high costs of establishing an entirely new entity.

³¹⁹ Naidoo, Jordan. (2016).

³²⁰ Albright, Alice and Mundy, Karen. (2016). Global Partnership for Education. Interview conducted by R4D. 12 January 2016.

³²¹ Dar, Amit. (2016). World Bank | Education Global Practice. Interview conducted by R4D. 8 January 2016.

³²² Bourne, Josephine. (2016). UNICEF. Interview conducted by R4D. 8 January 2016.

Hosting could take many forms, ranging from, at one extreme, opening a new “window” for funding related to schoolbooks within an existing education financing mechanism, much as Gavi regularly opens windows for new vaccines, to establishing a quite autonomous entity with its own governance structures, secretariat, and operating procedures within a host organization. More complicated arrangements are also possible, under which different existing organizations assume responsibility for different functions of the new entity. The best arrangement will depend on the available hosts, on the extent to which their existing capacities and structures are a good fit for the GBF, and on their willingness to allow autonomy and deviation from their standard model.

In addition, it will be important to build in regular reviews (perhaps every 2-3 years) of whether the host agency is adequately performing its role and, if not, of the appropriateness of moving to another host agency. Such an incentive will be essential for a host agency to pay appropriate attention to its role as host. Independent evaluations can be used to assess such hosting arrangements. For example, the independent Phase IV Mid-Term Evaluation (2012) of the Consultative Group to Assist the Poor (CGAP), housed within the World Bank, surveyed and commented on hosting and administrative arrangements, asking questions such as “To what extent is the CGAP-World Bank institutional arrangement supporting or hindering CGAP and World Bank’s visions, missions, and objectives relating to financial inclusion?” and “To what extent have CGAP and the World Bank paid sufficient and timely attention to developing a World Bank exit plan and strategy?”³²³ Evaluation indicators measured evidence of positive or negative impacts linked to institutional arrangements and the level of satisfaction expressed by stakeholders.

The scope of the feasibility study only allowed for a very preliminary exploration of hosting arrangements, and a more detailed study and analysis of the best arrangement will need to be undertaken if the decision is made to have another agency host the GBF.

4.3.6. Governance

In broad terms, governance models for international organizations tend to be of two kinds: the “stakeholder” and “shareholder” models. In the former, a broad range of stakeholders, including recipient countries, civil society, and relevant multilateral organizations as well as donors, are represented on and have voting rights on the organization’s Board. Gavi, the GFATM, and the GPE all have Boards of this kind. In the shareholder model, the organization’s funders control the Board. This is largely the case for the World Bank and the IMF.

The shareholder governance model has been the norm for many new international development partnerships created in recent decades, and it can promote inclusion and confer greater legitimacy. However, it can also be cumbersome and inefficient. Further, a number of assessments have attributed weaknesses in the governance of some international partnerships, in part, to the stakeholder governance model.³²⁴

If the GBF is hosted by another institution, as we recommend, its governance arrangements would be subject to and circumscribed by the governance structures of the host organization. These arrangements could take a number of forms, however. Within the World Bank, for example, there are entities, including the GPE itself, with their own Boards and, at the other extreme, simple trust funds in

³²³ Universalialia. (2012). *CGAP Phase IV Mid-term Evaluation – Revised Report*.

³²⁴ Bezanson, K. A., and Isenman, P. (2012).

which donors agree in advance to terms of use but have no ongoing voice. There is also a middle ground, exemplified by the Global Finance Facility and Power of Nutrition, in which donors remain closely involved in the choice of countries and other high-level decisions.

The appropriate governance model depends on whether the GBF is hosted by another organization and, if so, on how that organization is governed. For example, if the GBF were hosted by the GPE, it may make sense for the GBF to adopt a leaner model focused on donor input, as other stakeholders would already be represented on the GPE Board. The exact division of responsibility between the host organization's structures and that of the GBF would have to be negotiated with any potential host.

5. Further areas of exploration and analysis

The subsequent stage of work will refine and test the concept of the GBF. Based on our consultations, the following activities have emerged as potential activities for the subsequent stage of work. Some of the activities below will be undertaken by the R4D-IEP partnership in Phase 2 (February – June 2016). A high-level description of activities and areas is provided at this stage, and the timing and specifics of each will need to be further developed.

Fund concept development and refinement

1. Refine operational and governance structures

Based on the institutional structure ultimately decided for the GBF – specifically, whether it is established as a stand-alone body or hosted within an existing organization – the governance structure will need to be carefully developed and assessed through consultations with technical experts. Specifically, some of the questions that will need to be answered are:

- How can the autonomy of the GBF be maintained while simultaneously leveraging the built-in networks and channels of the host?
- How can the composition and responsibility of the Board and/or Secretariat be created to reflect inclusiveness and efficiency of decision making?
- How can mechanisms be created to ensure high-quality participation from all partners?

2. Refine the model for fund disbursement

As explored in Section 4.3.1, it is proposed that the GBF provide cash grants and fund technical assistance to eligible countries in response to country proposals. However, a number of areas still need to be further explored around how this process will work in practice. Some of these issues are laid out in Section 4.3.1, and include how country proposals will be developed and submitted, eligibility criteria, appropriate results-based financing techniques, and coordination of GBF funding with other education support. The World Bank's REACH program could also further test the scope of RBF strategies within the book chain. Additionally, details on frequency of disbursement and policies on renewal proposals will also need to be decided in due course.

Political support and buy-in

3. Consultations to generate political buy-in for a new mechanism: It will be crucial to seek broader feedback and buy-in, both on the concept of the GBF and on its proposed activities. Extensive stakeholder consultations will be needed to obtain input from a representative mix of partners, including country-level policymakers and stakeholders. Strategic political mapping to understand the priorities and interests of key stakeholders and/or potential funders is also recommended. Opportunities to build political support, e.g. through the activities of the new International Commission on Financing Global Education Opportunity or through the G7, need to be explored, as does the fit with other international educational priorities such as helping educate refugees and the promotion of global citizenship.

Deeper analysis in a select number of areas

4. Further analysis on the feasibility and provision of reading materials to targeted populations

Our feasibility study did not focus on the specific needs of children in distinct contexts where the challenges may be severe and unique. For example, disabled children or those in fragile and conflict-affected areas face unique needs and challenges in accessing and using books. More analysis and exploration of particular populations is thus needed to better understand how the GBF could effectively support reading in such circumstances.

Test approaches

- 5. Test and explore specific approaches to demonstrate proof of concept:** Conducting small-scale pilots in a select number of countries would be a valuable means to test and refine specific approaches that could be undertaken by a GBF. Indeed, the RMNCH Trust Fund and the Global Financing Facility started with 8 and 4 frontrunner countries, respectively, highlighting the importance of first piloting with a small number of countries. This could entail testing both the proposed joint learning and knowledge dissemination functions as well as country-level activities. We recommend that careful attention be paid to the selection of representative countries to ensure diversity in country contexts and challenges. It will be important to achieve quick wins and successes to demonstrate the concept and need for a GBF; at the same time, testing specific components around funding and procurement in more challenging contexts (e.g., South Sudan, Haiti) will be important to refine the model. We also recommend collecting evidence of the impact of GBF activities and reading books provision during this phase to demonstrate its impact and value to policymakers and other stakeholders. The planning and design of pilots could be undertaken as part of Phase 2, with actual testing conducted as part of a GBF startup phase.

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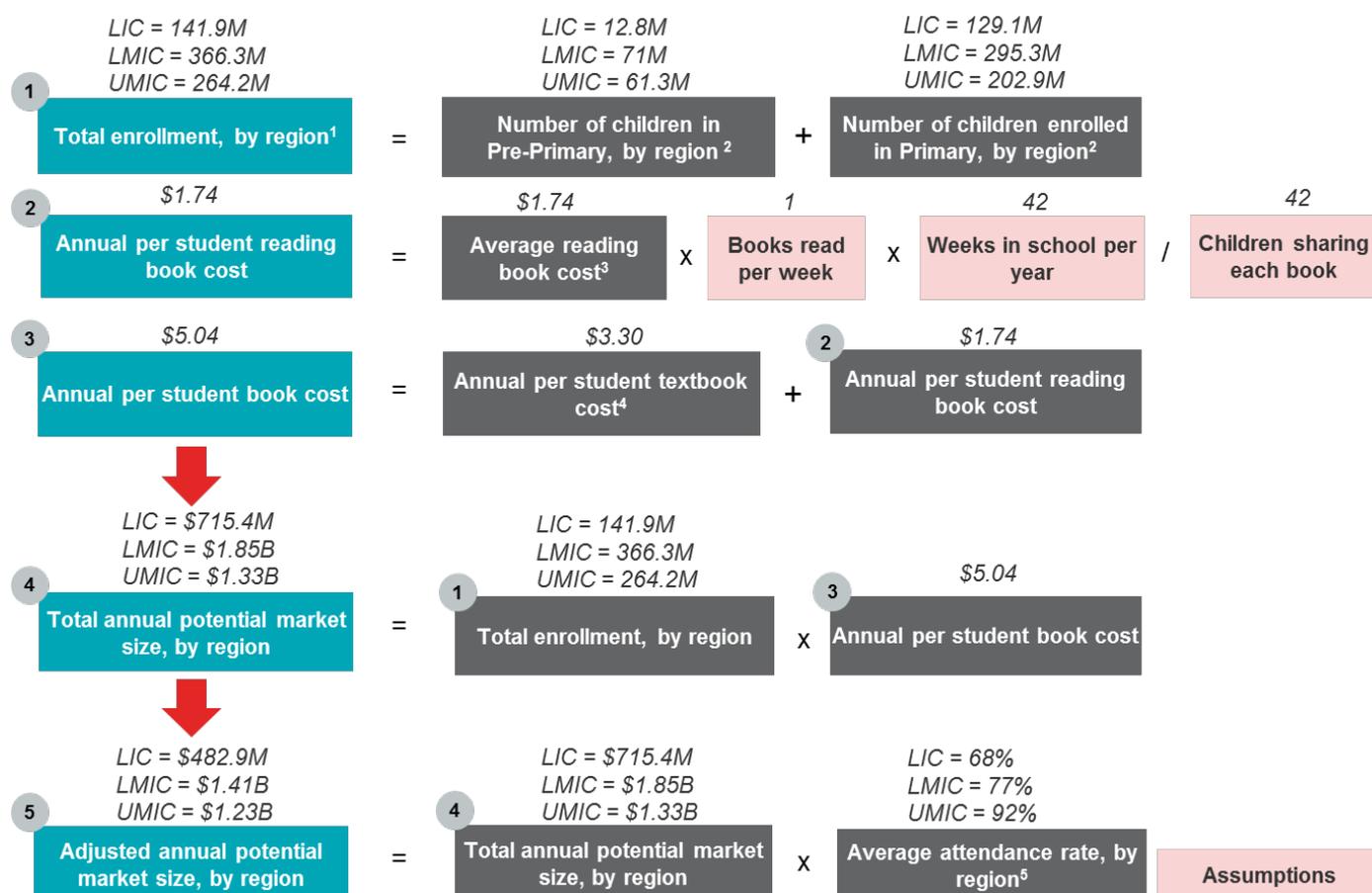
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7. Appendices

Appendix 1. Market sizing methodology.



1) Regions defined using the UIS classifications of low income, lower middle income, and upper middle income countries

2) UNESCO. (2016b). UIS Database.

3) Estimated as US\$1.74, based on average reading book price reported in the Data for Education Research and Programming Survey, 2014.

4) Estimated as US\$3.30, based on Fredriksen, B., Brar, S., and Trucano, M. (2015).

5) UNESCO. (2016b). UIS Database.

Key assumption inputs to the model

Number of books read per child per week

- Children are assumed to be reading one new book each week for the duration of the school year. This is based on conversations with education experts regarding an “aspirational” target that ranged from 1 book per month to one book per day.

Number of children sharing each book

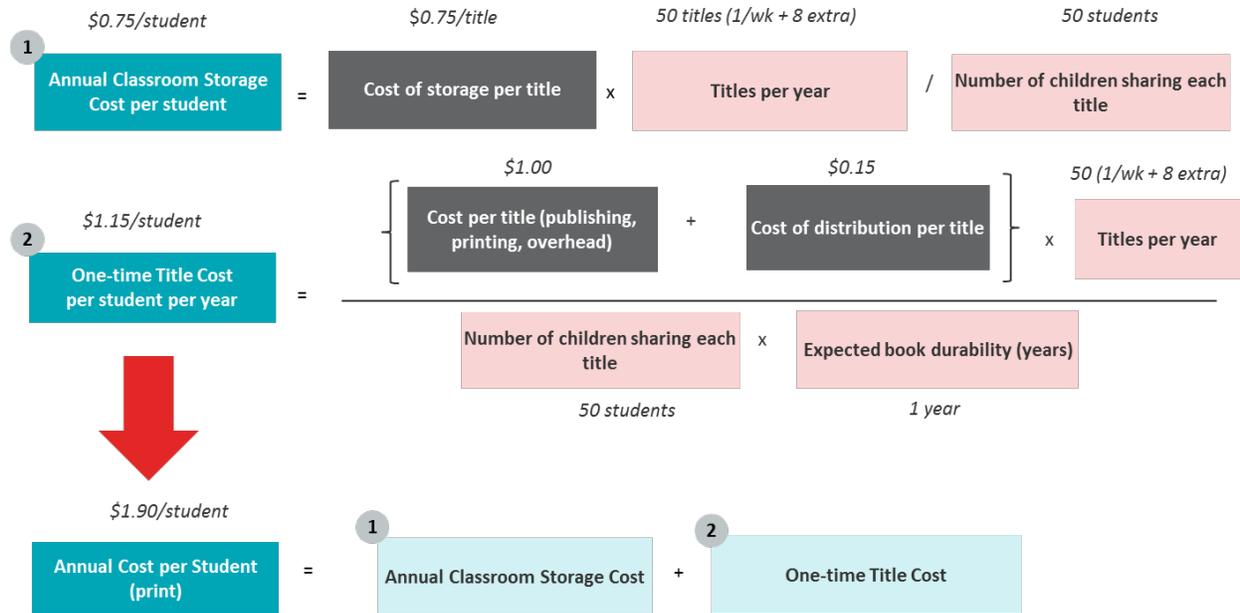
- It is assumed that there are 42 children per classroom and that each classroom of children would be sharing books. This was based on estimates from UNESCO that over half of first grade classrooms in Sub-Saharan Africa have over 50 students and that this number decreases in older grades.

Number of weeks in school per year

- Estimated based on a school year with ten weeks of vacation for summer and winter holidays

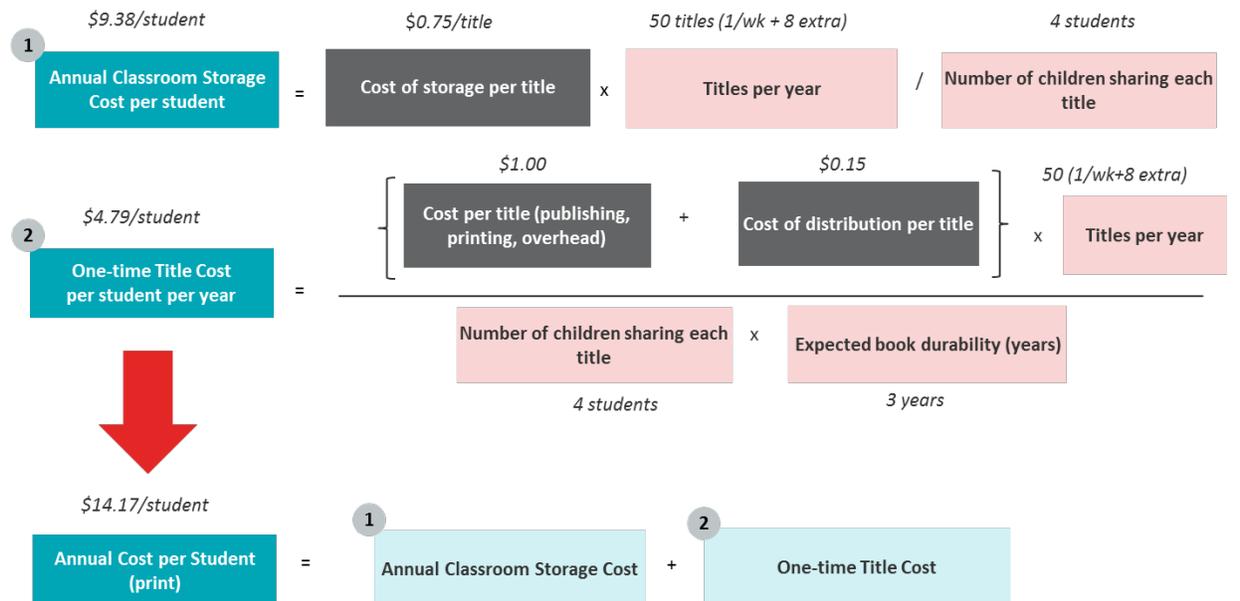
Appendix 2. Digital feasibility analysis- methodology and assumptions used to estimate annual per student cost of print materials

Methodology and assumptions used for [print](#) estimates – Classroom sharing



Assumptions

Methodology and assumptions used for [print](#) estimates – 4 student sharing

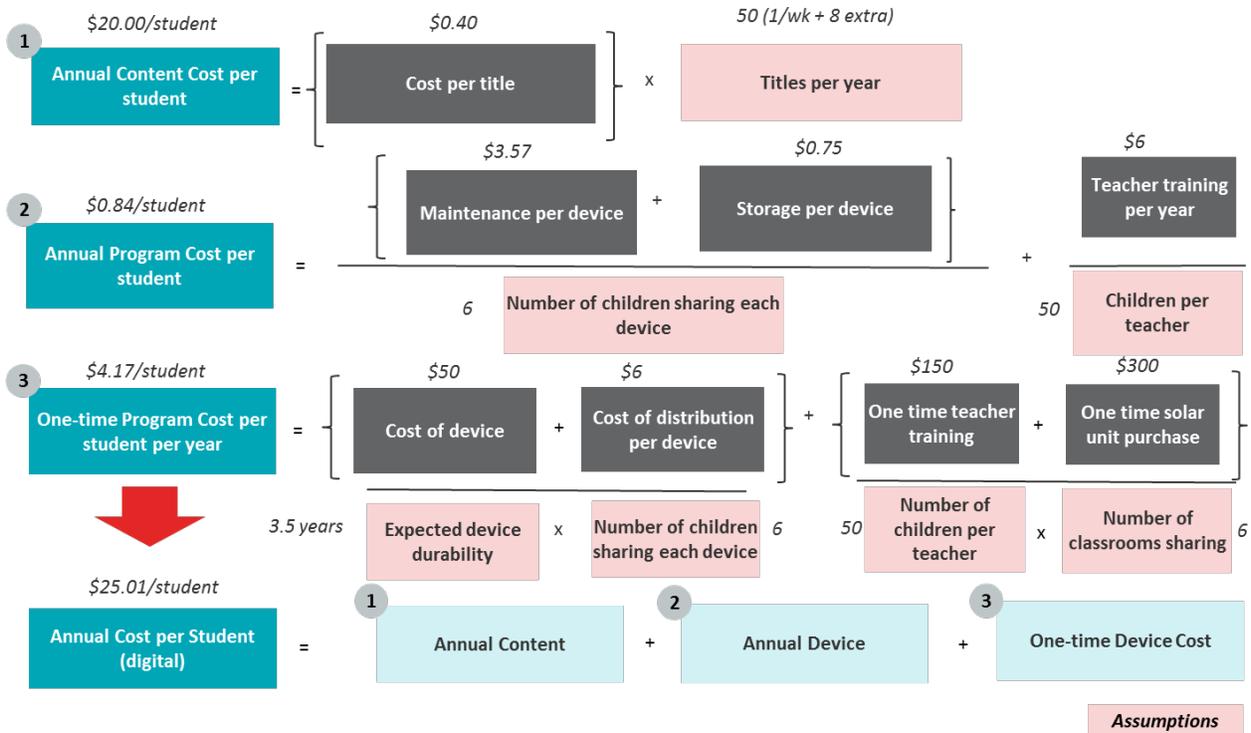


Assumptions

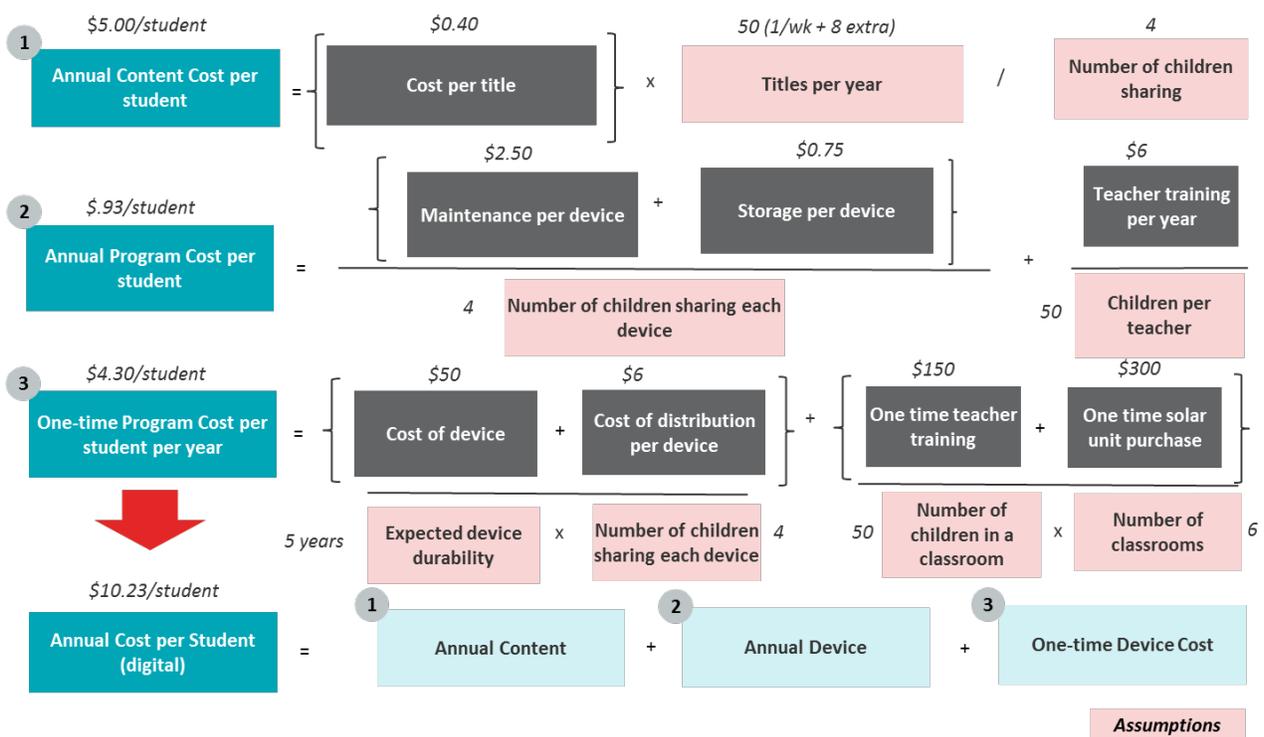
Cost Component	Estimates and Sources	Average used in model
Cost of storage per title	\$0.40 – Worldreader, cost of wooden cabinet, amortized over lifetime of cabinet and number of devices stored (assumed same storage as digital) \$1.08 – Bridge International Academies, cost of locked cabinet, amortized over lifetime of cabinet and number of devices stored	\$0.75
Cost per title	\$0.37 – Pratham Books \$1.74 – DERP study (RTI International. [2015])	\$1.00
Cost of distribution per title	Range from \$0.03 to \$0.22 – BrudaDruck Range from \$0.06 to \$0.30 – Pratham	\$0.15
Expected book durability	6 months – Kenya National Library Service (KNLS), heavy usage 2 years – KNLS, classroom usage 3 years – BrudaDruck 3-4 years – Tony Read (IEP), Birger Fredriksen (World Bank)	1 year for library sharing 3 years for classroom sharing
Number of children sharing each title	50- UNESCO median class size estimate	50 children

Appendix 3. Digital feasibility analysis- methodology and assumptions used to estimate annual per student cost of digital materials

Methodology and assumptions used for digital estimates – classroom sharing



Methodology and assumptions used for digital estimates – 4 student sharing



Sources of assumptions for digital estimates³²⁵

Cost Component	Estimates and Sources	Average used in model
Cost per title	\$0.40 - Worldreader	\$0.40
Maintenance per device	Moses (2002) article estimates 30-50% of device cost in maintenance over life of device 1% of device cost annually – Worldreader	25% of device cost over life of device (For library sharing, \$12.50 amortized over 3.5 years, and for classroom sharing, \$12.50 amortized over 5 years)
Storage per device	\$0.40 – Worldreader, cost of wooden cabinet, amortized over lifetime of cabinet and number of devices stored (assumed same storage as digital) \$1.08 – Bridge International Academies, cost of locked cabinet, amortized over lifetime of cabinet and number of devices stored	\$0.75
Follow-up teacher training per year	\$6.00 - Worldreader	\$6.00
Cost of device	\$50 – cost of e-readers used by Worldreader (other devices, like tablets, may cost more)	\$50
Cost of distribution per device	\$6.00 - Worldreader	\$6.00
Cost per title	\$0.40 - Worldreader	\$0.40
Maintenance per device	Moses (2002) article estimates 30-50% of device cost in maintenance over life of device 1% of device cost annually – Worldreader	25% of device cost over life of device (For library sharing, \$12.50 amortized over 3.5 years, and for classroom sharing, \$12.50 amortized over 5 years)
Storage per device	\$0.40 – Worldreader, cost of wooden cabinet, amortized over lifetime of cabinet and number of devices stored (assumed same storage as digital) \$1.08 – Bridge International Academies, cost of locked cabinet, amortized over lifetime of cabinet and number of devices stored	\$0.75
Follow-up teacher training per year	\$6.00 - Worldreader	\$6.00
Cost of device	\$50 – cost of e-readers used by Worldreader (other devices, like tablets, may cost more)	\$50
Cost of distribution per device	\$6.00 - Worldreader	\$6.00

³²⁵ Several organizations implementing e-reading programs were not able to provide estimates of their maintenance costs due to lack of data. As such, these costs should be interpreted as fluid and with caution.

Appendix 4. Current Spending and Spending Need for TLMs

Country	Income level	Actual TLM spending (2010-2014 average)	Actual TLM spending as % of Primary spending	Total cost for text and reading books (minium standards)	Funding Gap	Spending Need as % of Current Primary Spending, Text and reading books*
Benin	LIC	\$ 5,666,736	3%	\$ 10,823,094	(5,156,358)	5.4%
Burkina Faso	LIC	\$ 11,687,712	4%	\$ 13,160,348	(1,472,637)	4.7%
Burundi	LIC	\$ 204,600	0%	\$ 10,384,068	(10,179,468)	15.5%
Central African Republic	LIC	\$ 7,213	0%	\$ 3,360,155	(3,352,942)	26.0%
Ethiopia	LIC	\$ 4,924,934	1%	\$ 79,820,154	(74,895,220)	18.8%
Guinea-Bissau	LIC	\$ 132,684	1%	\$ 1,414,902	(1,282,218)	13.2%
Malawi	LIC	\$ 3,867,763	5%	\$ 20,783,488	(16,915,726)	24.2%
Mali	LIC	\$ 6,159,229	4%	\$ 11,068,070	(4,908,842)	6.7%
Niger	LIC	\$ 9,381,957	5%	\$ 11,552,087	(2,170,129)	6.4%
Togo	LIC	\$ 795,486	1%	\$ 7,169,675	(6,374,189)	7.1%
Uganda	LIC	\$ 6,887,838	3%	\$ 42,917,031	(36,029,193)	15.8%
Armenia	LMIC	\$ 1,223,928	2%	\$ 723,036	500,892	1.1%
Cabo Verde	LMIC	\$ 60,235	0%	\$ 340,030	(279,795)	0.9%
Cameroon	LMIC	\$ 8,906,726	3%	\$ 21,017,679	(12,110,953)	7.7%
Congo, Rep.	LMIC	\$ 1,973,402	1%	\$ 3,726,328	(1,752,926)	1.5%
Cote d'Ivoire	LMIC	\$ 26,066,847	5%	\$ 16,117,341	9,949,507	2.8%
Ghana	LMIC	\$ 12,068,073	1%	\$ 22,030,011	(9,961,939)	2.4%
Guatemala	LMIC	\$ 39,827,710	5%	\$ 12,264,423	27,563,287	1.6%
Honduras	LMIC	\$ 797,767	0%	\$ 5,834,546	(5,036,779)	1.1%
Vietnam	LMIC	\$ 233,129,659	8%	\$ 37,719,462	195,410,197	1.3%
Yemen, Rep.	LMIC	\$ 29,078,324	3%	\$ 19,657,853	9,420,472	2.2%
Colombia	UMIC	\$ 172,842,956	3%	\$ 23,046,347	149,796,609	0.4%
Cuba	UMIC	\$ 17,831,500	1%	\$ 3,872,800	13,958,699	0.2%
Dominican Republic	UMIC	\$ 12,021,952	1%	\$ 6,432,632	5,589,320	0.8%
Ecuador	UMIC	\$ 85,256,159	3%	\$ 10,489,345	74,766,814	0.3%
Kazakhstan	UMIC	\$ 1,319,677	3%	\$ 6,067,844	(4,748,167)	12.4%
Mauritius	UMIC	\$ 946,888	1%	\$ 534,968	411,920	0.5%
Mongolia	UMIC	\$ 3,426,080	2%	\$ 1,213,993	2,212,087	0.9%
Namibia	UMIC	\$ 86,145	0%	\$ 2,157,394	(2,071,250)	0.6%
Paraguay	UMIC	\$ 12,326,558	3%	\$ 4,252,458	8,074,100	1.1%
Peru	UMIC	\$ 53,343,737	2%	\$ 17,734,415	35,609,322	0.8%
South Africa	UMIC	\$ 192,533,303	2%	\$ 36,503,562	156,029,742	0.4%
Grand total		\$ 954,783,776		\$ 464,189,539	490,594,237	
Median			2%			1.9%
Average			2%			5.77%

Appendix 5. Criteria for considering institutional options for the GBF

Two institutional options were considered for a GBF: (1) a freestanding GBF and (2) a GBF hosted by a major education multilateral or global partnership. Each option was analyzed across specific objectives and criteria in order to identify which institutional arrangement best aligns cost-effectiveness with GBF's assumed goals and processes.

Rating System

The table below presents analysis of the major strengths and weaknesses for each option. Each cell displays a rating of 0 to 2 stars. Ratings go from poor alignment, zero stars, to high alignment, two stars. Notes are included below specific options to supplement ratings. The option with the highest ratings total is considered as the institutional arrangement most suitable for a GBF mechanism.

Objective or other criteria	Freestanding GBF Option	Hosted GBF Option
1. Increasing effective use and learning outcomes	A new freestanding GBF could have difficulty integrating with other education initiatives that seek to improve learning. An independent GBF is not going to have the clout of a GFATM or Gavi.	** This option could lead to better outcomes by assuring GBF activities are integrated within the host organization and other education multilaterals' broader education initiatives such as curriculum development and teacher training.
2. Reducing costs of books (assumes subsidization by GBF according to country need)	**	**
3. Increasing physical distribution of books	**	** GBF can use existing accountability systems from the host to try to reduce losses in physical distribution.
4. Innovation	** A freestanding GBF can be nimble and flexible to support innovative schemes, perhaps through a challenge fund, at country level (although at the expense of integration and sustainability).	* A GBF with its own specialized secretariat could still provide a "window" to a challenge fund within a host organization.
5. Intensity of focus on SRM/ books	** An independent GBF with its own vision and goals can prioritize entirely on books.	* A GBF would have its own dedicated focus on books, but it would need to be integrated as part of the host organization's broader objectives.

<p>6. Aid effectiveness and consistency with Paris/Accra/Busan principles</p>	<p>A new freestanding institution with its own funding channel could complicate donor coordination at country level. The Accra Agenda states: <i>“As new global challenges emerge, donors will ensure that existing channels for aid delivery are used and, if necessary, strengthened before creating separate new channels that risk further fragmentation and complicate coordination at country level.”</i></p>	<p>*</p> <p>Aid effectiveness principles can be adhered to if the strength of the case for a GBF is cost-effective in increasing learning, as compared to current practices by donors and countries.</p>
<p>7. Raising additional funding for education</p>	<p>Very unlikely. Donors will still analyze their overall spending/contribution to education. A freestanding GBF will unlikely have the same political impetus for additional financing as in cases of CSOs, GFATM, or Gavi.</p>	<p>Even more unlikely, although a GBF hosted by a multilateral might be able to access non-education bilateral funds, which could bring in additional resources to education.</p>
<p>8. Raising additional funding for SRM / books (external and domestic)</p>	<p>**</p> <p>A freestanding GBF could attract additional funding from funders focused on the physical supply of books. However, an independent GBF would have less ‘voice’ to get credible commitments for government financing.</p>	<p>**</p> <p>This GBF option would be ideal for funders focusing on addressing issues of use, accountability, and increasing government financing.</p>
<p>9. Sustainability</p>	<p>*</p> <p>Freestanding institutions hardly ever abolish but may lack integration with other actors, which increases the odds of getting sidelined and can run the risk of reduced funding over time.</p> <p>This option would force a GBF to spend more time on mobilizing funds rather than focus on programming.</p>	<p>**</p> <p>A GBF can be better integrated as part of an existing institution with ongoing programs, processes, and support structures.</p>
<p>10. Flexibility in use of multiple intermediaries</p>	<p>*</p> <p>In principle, this option tends to give no preference to intermediaries. However, there is an increased likelihood of mission creep to occur in this option.</p>	<p>*</p> <p>It is feasible that a hosted GBF could still choose the most qualified intermediaries. However, there is tendency to use host institutions as default</p>

		intermediaries (e.g., the early case of GPE selecting the World Bank as supervising entity).
11. Review of country proposals	Combining necessary country and specialized expertise will be difficult and costly for a freestanding GBF. Organizations such as GPE & GFATM show the need for external review.	** Review of country proposals could be integrated within the host's proposal review process and supplemented by an expert GBF secretariat in books/reading.
12. M&E and accountability	* In this option, a GBF would need to initiate and structure an entirely new M&E / accountability unit.	** This option has the advantage of using an M&E and accountability structure that is already in place, even if it hampers flexibility.
13. Repository of books	** A freestanding GBF could pay more attention to repository functions. However, this function would be covered better and more sustainably by libraries.	*
14. Effective buy-in coordination of relevant stakeholders.	* There is more flexibility in this freestanding option but has far less convening power and influence.	** This option can provide a GBF more voice through existing (financial) coordination structures, such as the LEG in GPE for example.
15. Coverage of middle income countries.	** This option allows a GBF to independently decide its coverage.	* This option would require GBF to gain agreement with the host's governance structure to go beyond its usual country coverage.
16. Cost and capacity	It is more expensive to run an independent organization and to reproduce the needed complementary non-book capacity.	** There is less marginal cost as a GBF could use existing capacity. However, the tradeoff between lower marginal cost in dealing with procurement within existing institution and increased flexibility in being an independent fund must be appropriately analyzed.
17. Transaction costs (how easy would it be for countries to access	Countries would have to follow separate GBF proposal review and	* Countries have the benefit of institutional knowledge of host

funds)	disbursement procedures.	organization's disbursement procedures.
18. Use of innovative financing techniques (if we decide a fund should allow for this)	** A freestanding GBF can be nimble and flexible to support innovative schemes, perhaps through a challenge fund, at country level (although at the expense of integration and sustainability).	* A GBF with its own specialized secretariat could still provide a "window" to a challenge fund within a host organization.
19. Provisions books in humanitarian situations	** This option allows a GBF to independently decide its mandate.	* This option would require GBF to gain agreement with the host's governance structure to go beyond usual country coverage.
20. Formal arrangements or MOUs with other relevant organizations (e.g., IDA, UNICEF)	* There is more autonomy in this freestanding option, which allows a GBF to pursue formal arrangements with relevant organizations. However, an independent GBF would have far less convening power and influence.	** This option can provide a GBF more clout to form arrangements with other organizations. However, bureaucratic hurdles might delay agreements.
Total rating	23	29