



MANGO TREE LITERACY LAB

Case Study on Open Licensing of Early Grade Textbooks in Uganda



Government Primer: Primary 1 Leblango Literacy
Mango Tree Literacy Lab's open-source reprint of this text

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ACRONYMS

MOES	Ministry of Education and Sports
MTLL	Mango Tree Literacy Lab
NAPE	National Assessment of Progress in Education
NBA	Neil Butcher & Associates
NCDC	National Curriculum Development Centre
NGO	Non-Governmental Organization
OER	Open Educational Resources
RCT	Randomized Control Trial
TMP	Teacher Mentor Program



Vendor selling MTLT storybooks at a parent meeting at Tikaling Primary School, July 2019

INTRODUCTION

The ever-increasing collection of Open Educational Resources (OER) has created fertile ground for improving learning worldwide, especially where funding for learning materials is scarce. In this digital era, openly licensed educational materials can now contribute to making education more accessible across the globe. New and increasingly numerous modalities for using open licenses enable increased production and sharing of copyrighted educational materials, based on the fundamental belief in the freedom to share knowledge and promote equity in learning.¹

This case study will tell the story of one small, Ugandan NGO's experience using openly licensed government primers to support early primary literacy.

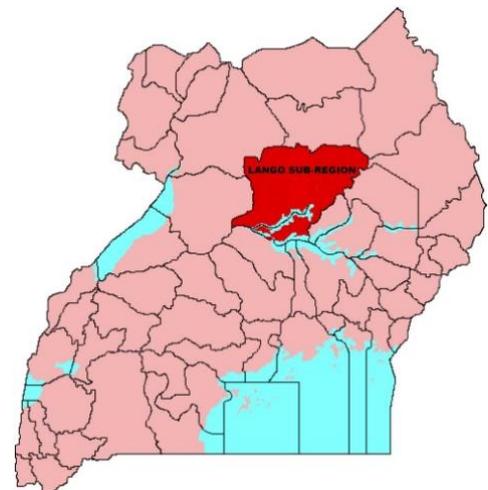
¹ Cozzolino, Sofia and Cable Green. (2019). *Open Licensing of Primary Grade Reading Materials: Considerations and Recommendations*. A Global Reading Network Resource. Prepared by University Research Co., LLC. (URC) under the Reading within Reach (REACH) initiative. Washington, D.C.: USAID. Retrieved from: <https://bit.ly/2VyXe8F>

CONTEXT AND LOCATION

[Mango Tree Literacy Lab](#) (MTLL) is a registered Ugandan Non-Governmental Organization (NGO) that believes that African children have the right to read, write and engage with ideas in a language they know and understand. MTLL's mission is to promote reading, writing, teaching, and publishing in African languages through innovative projects and enterprises. Mango Tree's "laboratory" is the Lango Region of northern Uganda. "Laboratory" is part of MTLL's name for a reason. MTLL aspires to work side by side with government to ensure successful implementation of innovative education policies, making mistakes and learning within the constraints of real-world challenges.

MTLL shares its process and solutions widely through multiple channels: a website and social media platforms, formal and informal partnerships with government and other civil society actors, and on-going projects with international researchers who document and share MTLL's work through papers and conferences.

The Lango Region of northern Uganda provides a challenging but realistic context in which to experiment with education policy innovations. Twenty years of civil war, from the mid-eighties to the mid-aughts, led to infrastructure shortages, extreme poverty and poor access to quality education. Lango lags behind in most development indicators. A 2018 technical report from the World Bank² indicates that poverty in Lango is 32%, compared to the national average of 19%. Education indicators are also lagging. A 2017 report by the Ugandan Bureau of Standards³ identifies Lango as having the largest disparity between boys' and girls' school enrolment in Uganda, with a Gender Parity Index of 0.83. The same report states that Lango had a "Net Primary Completion Rate for Age 13 Population" of only 3.5%, the second lowest in the nation.



Lango's history also impacts community attitudes about educational initiatives that support local language literacy. The British did not prioritize Lango's development. Northern cultures in general fared poorly under colonial rule, but within the north, Lango's neighbour, the Acholi, were favoured with policies that elevated the Acholi language and culture. These issues were compounded during the independence era. Milton Obote was a Lango man who twice led Uganda, but was twice deposed through military coups. Political stereotypes still impact the younger generation, which portray past Lango leaders as evil men. Lango, without positive historical role models, without a properly recognized language and cultural identity, and slowly recovering from the 20-year civil war, inevitably struggles with a cultural identity crisis, to the extent that many people in Lango are quick to dismiss, deny or simply ignore their language and cultural heritage.

² World Bank. 2018. *Poverty Maps of Uganda (English)*. Washington, DC: World Bank. Retrieved from: <https://bit.ly/2YJWxLs>

³ Uganda Bureau of Statistics. 2017. *The National Population and Housing Census 2014 – Education in the Thematic Report Series*. Kampala, Uganda. Retrieved from: <https://bit.ly/38dMscP>

HISTORY OF MANGO TREE LITERACY LAB'S WORK IN LANGO

The genesis of MTLT's support of early literacy in Lango began with sweeping reforms of the early primary curriculum made by the Ministry of Education and Sports (MoES). 2003 was a year of reckoning for Universal Primary Education (UPE) in Uganda. Dropout rates indicated that only 22% of the pupils starting Primary 1 (P1) in 1997, the first UPE cohort, progressed to P7 in 2003.⁴ The 2003 National Assessment of Progress in Education (NAPE) results indicated that only 20% of pupils in P6 attained a basic standard of literacy.⁴ Together, this data suggested that only about 4-5% (20% of 22%) of UPE's first pupil cohort were provided with basic literacy by the education system. Considering the enormous investments made by the Ugandan government and its development partners to implement UPE, these outcomes demanded reform. Throughout 2004, a curriculum review process took a hard look at the Ugandan primary curriculum and came up with a wide range of important policy recommendations.

For Mango Tree, the most significant reform of 2004 was the emphasis on local languages as both the medium of instruction in early primary and the first language for literacy acquisition. Unfortunately, by 2007 it was clear that the MoES and National Curriculum Development Centre (NCDC) were struggling to articulate a cost-effective and scalable model for teaching literacy in Grades 1-3 that could be translated into Uganda's many local languages. MTLT believed that solving the language of instruction challenge was at the heart of education reform in Uganda, so it sought funding for a pilot project that would demonstrate to government that a scalable literacy model was possible. In 2010, MTLT began a 3-year pilot to develop a P1-P3 literacy model for Leblango and English in the Lango Sub-region.

One of MTLT's first steps was to create a Theory of Change through extensive interviews with education stakeholders in the region.⁵ MTLT posed the question, "What will it take to have a literate society in Lango?" On the surface, the answer was straightforward: "Producers and consumers of literature." Below the "producer-consumer" axis, three systems of regulation were identified: 1. Regulators of Instruction; 2. Regulators of Usage; and 3. Regulators of Distribution. Still something was missing. Eventually, this was defined as a "Culture of Literacy" which resides above the "producer/consumer" axis on the Theory of Change. It addresses the community's ambivalent attitude about their language and acts as a "north star" for guiding project activities. (See the illustration on the next page.) MTLT further defined a culture of literacy as, "an enthusiasm for and a commitment to reading and writing in everyday life."

At the end of MTLT's initial pilot project in 2013, results of an external evaluation pointed to large gains in pupil performance.⁶ Based on this initial data, funding was acquired from the *Raising Learning Outcomes Program* under ESRC/DFID and Oxford University to study a scaled-up model with a longitudinal randomized control trial (RCT) from 2014-2017. This study found that literacy levels raised equivalent to 6.3 grades for pupils by the end of P4 in mother tongue for the full-cost program and 3.6 grades for the reduced-cost program⁷ – among the largest improvements ever achieved for a randomized education intervention.⁸

⁴ Read, Tony and Enyutu, Samuel. (2004). *The Uganda Primary Curriculum Review Road Map for the Implementation of the Curriculum Reforms Recommended by the Primary Curriculum Review Report and Approved by the Ministry of Education and Sports*, unpublished manuscript, Ministry of Education and Sports Uganda.

⁵ Esbeck, Craig and Brown, Victoria. (2017). *Supporting Mother Tongue Literacy in Uganda: Mango Tree's Journey*. Retrieved from <https://bit.ly/31tuyS8>

⁶ Peters, Chelsea. (2014). *Primary Literacy Project: Results Summary*. Retrieved from <https://bit.ly/3g8Bqsc>

⁷ Buhl-Wiggers, Julie. (2017). *The Impact of Teacher Effectiveness on Student Learning in Africa*. Retrieved from: <https://bit.ly/2uQ9tmY>

⁸ McEwan, Patrick. (2015). *Improving Learning in Primary Schools of Developing Countries: A Meta-Analysis of Randomized Experiments*. Retrieved from <https://bit.ly/2HMGQdd>.

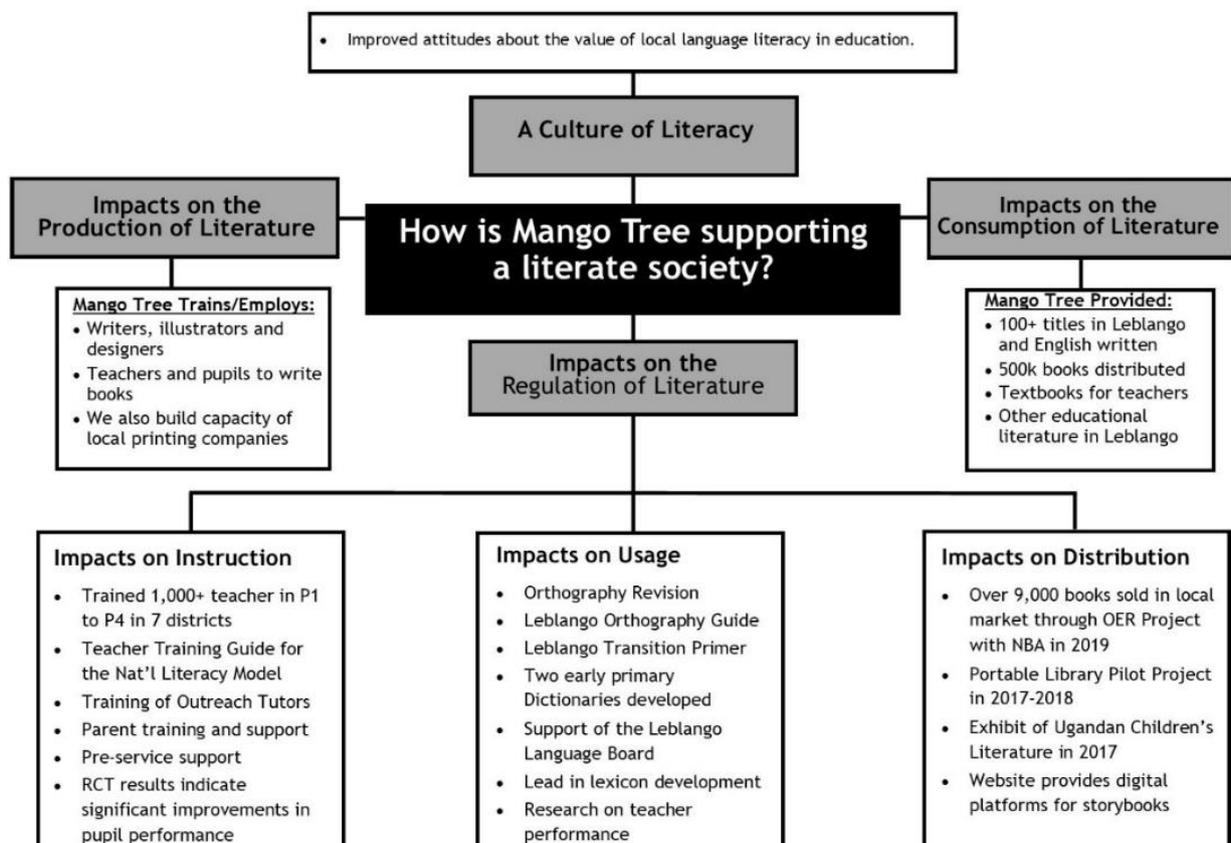
Concurrent with the RCT, MTL was asked to consult on a major early literacy initiative funded by USAID and implemented by the MoES, NCDC and [RTI International](#), a non-profit organization headquartered in the United States that provides research and technical services. This multi-million-dollar project developed a national model for teaching literacy in P1-P4 with accompanying instructional materials for twelve local languages and English. In 2017, with its RCT completed, MTL put aside its literacy model to support successful uptake of the new national model, which was now operational in almost all primary schools in the Lango Sub-region.



National literacy materials for Leblango and English in Primary 1

Since 2017, MTL’s primary activity has been a *Teacher Mentor Program* (TMP), an initiative to develop a cadre of early primary teachers in each district in Lango, who are experts in the new national literacy model and who provide mentorship to teachers throughout their district. The TMP primarily addresses the Regulators of Instruction component of MTL’s Theory of Change. The program ended in December 2019 and 204 Teacher Mentor Graduates were handed over to government officials in seven Lango districts in early 2020. The TMP is discussed in detail below.

In summary, how has MTL contributed to a literate society during its first ten years of work in the Lango Sub-region? The illustration below provides an overview:



A NEW DIRECTION FOR MANGO TREE LITERACY LAB

As mentioned above, MTLL's RCT of its literacy model ended in 2017. By that time, the national literacy model had been distributed to a significant number of schools in the Lango Sub-region. The purpose of MTLL's original pilot and subsequent scale-up had been fulfilled. The MoES and NCDC, with support from development partners, now had a workable literacy model in place for twelve local languages and English that would support successful implementation of the policy reforms of 2004. As consultants on the SHRP project from its conception, MTLL had made an important contribution to this work and wanted to see it succeed in the long-run. Therefore, the next phase of its work in Lango, which coincided with a new funding cycle from its primary donor, [Wellspring Philanthropic Fund](#), was to develop a [Teacher Mentor Program](#) to establish a network of national literacy model teacher-experts in each district who could provide peer mentoring services to teachers and schools throughout their district.

The TMP brought MTLL staff into classrooms where the national literacy model was being taught. An immediate concern was the condition of the pupil textbooks. The national literacy model was designed so that each child had their own primer in front of them for the literacy hour lesson to be taught correctly. A one book to two children ratio could possibly work, but minor adaptations to the lesson design would be required.



Sample Pupil Books

What MTLL staff discovered is that in many schools the number of textbooks per classroom was insufficient for proper lesson implementation. And the condition of the books that were still available was troubling. For the TMP curriculum to meet its learning objectives, the teachers needed to demonstrate that they could teach each literacy lesson successfully, but without adequate books, this would be challenging. Of course, the textbook problem also called into question the sustainability of the national literacy model more generally.

MTLL's first response was to gather more data on the condition of the books in general and to put in place school-based systems and classroom procedures that would mitigate further destruction of the textbooks. This was done by training all the head teachers in the TMP schools to do an official handover of textbooks at the beginning of the 2019 academic year. The following document was distributed to head teachers at the beginning of the year. MTLL staff collected a carbon copy of the completed document from head teachers during their regular support supervision visits.

NATIONAL LITERACY TEXTBOOKS - ACCOUNTABILITY DOCUMENT
ACADEMIC YEAR: 2019

NAME OF SCHOOL: Lango Primary School Term 1 Handover Term 3 Handback

NAME OF TEACHERS: 1. Akello Betty 2. Otim Tom

CIRCLE ONE **P1**-ENROLED: 233 P2-ENROLED: _____ P3-ENROLED: _____ P4-ENROLED: _____

LEBLANGO PUPIL BOOKS			
CONDITION	NUMBER	CONDITION	NUMBER
GOOD The book is complete with all the pages and the cover in good condition.	72	POOR The cover is missing or damaged beyond repair. As many as 20% of the book's pages are missing.	65
FAIR Some damage to the cover, or a few pages missing or torn, but it is still a useable textbook.	101	UNUSABLE More than 20% of the book's pages are missing.	12
TOTAL USABLE BOOKS	173	TOTAL OTHER BOOKS	77

ENGLISH PUPIL BOOKS			
CONDITION	NUMBER	CONDITION	NUMBER
GOOD The book is complete with all the pages and the cover in good condition.	94	POOR The cover is missing or damaged beyond repair. As many as 20% of the book's pages are missing.	68
FAIR Some damage to the cover, or a few pages missing or torn, but it is still a useable textbook.	88	UNUSABLE More than 20% of the book's pages are missing.	0
TOTAL USABLE BOOKS	182	TOTAL OTHER BOOKS	68

TEACHER'S GUIDES – TOTAL		
TEACHER'S GUIDE	NUMBER	COMMENTS ON CONDITION OF TEACHER'S GUIDES
LEBLANGO	1	<i>The TG is in fair condition. We need 2 TGs because we have 2 streams of P1.</i>
ENGLISH	2	<i>Both are in good condition.</i>

SIGNATURE / DATE:

Akello Betty 6/2/2019 Acen Susan 6/2/2019
 Class Teachers date Head Teacher date

Sample Textbook Accountability Document

The condition of the books varied by district because, while the first tranche of pupil books was delivered to select schools and districts in 2014, distribution continued over the next several years with the final district in Lango receiving its textbooks in 2019 because it had been a control district for SHRP research.

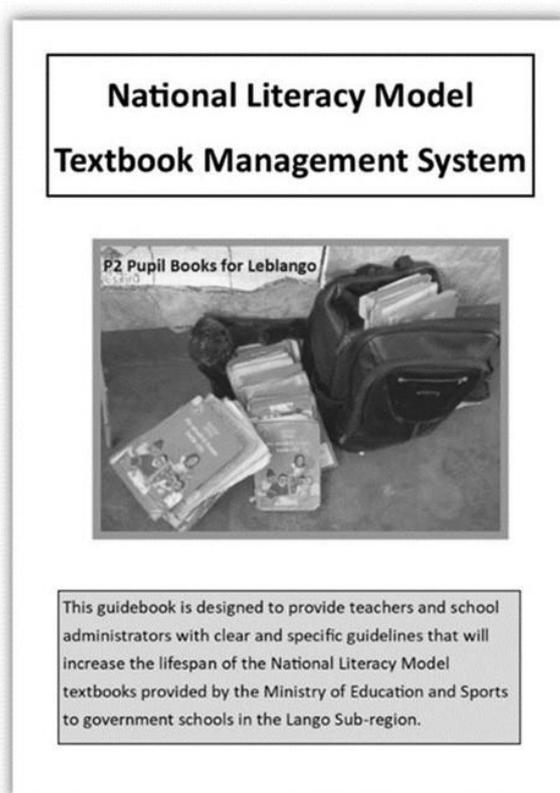
MTLL collected textbook data for the sole purpose of understanding the impact a lack of textbooks would have on teachers in its Teacher Mentor Program. Therefore, the data below should not be considered a representative sample of textbook availability in the Lango Sub-region in general. Nevertheless, it provides some insight into the challenges schools were facing.

Condition of Pupil Books by Percent: Two Districts in the Lango Sub-region					
District	Good	Fair	Poor	Unusable	Lost
Lira District P1 – given in 2014	3%	39%	21%	3%	34%
Lira District P2 – given in 2015	6%	40%	26%	0%	28%
Alebtong District P1 – given in 2017	54%	32%	1%	0%	13%
Alebtong District P2 – given in 2017	66%	13%	0%	0%	21%

The MTL Lab staff also developed a special supplement to the TMP curriculum that provided guidance on how to effectively manage textbooks in schools. This 12-page guide was distributed to all the teachers and head teachers in the program during a regularly scheduled Saturday workshop. The guide identified five components of textbook management that should be handled at the classroom and school level:

1. Accounting for textbooks
2. Storing textbooks properly
3. Managing textbooks in the classroom
4. Training pupils in proper book handling
5. Educating parents

MTLL staff and Loro Primary Teachers' College in-service tutors followed up with teachers during support supervision visits to each school to see how they were managing these five issues. At the end of the 2019 academic year, teachers were expected to complete the accountability document again when they handed the textbooks back to the head teacher. Unfortunately, only a few schools returned this data to Mango Tree Literacy Lab.



MTLL's guide for managing textbooks

At the beginning of 2020, MTL Lab distributed its text handover tool and management guide to head teachers at their first district planning meeting prior to the start of the academic year. Several teacher mentor graduates also volunteered to help MTL Lab revise and improve the textbook management guide, but the national lock down slowed progress on follow up with these initiatives. Further work needs to be done to support the Government of Uganda in developing appropriate systems for the management of textbooks in government schools.

A BRIEF SUMMARY OF THE CHALLENGES OF TEXTBOOK MANAGEMENT IN RURAL UGANDAN PRIMARY SCHOOLS

The book, *Where Have All the Textbooks Gone? Toward Sustainable Provision of Teaching and Learning Materials in Sub-Saharan Africa*,⁹ provides a comprehensive account of the issues related to textbook management in Africa. Much of the book deals with high-level issues like financing, procurement and supply chains, but Chapter 11, which is entitled “Managing and Using Teaching Materials in Schools,” describes two major challenges the education system has once textbooks actually make it to the classroom.

The first challenge addressed in Chapter 11 is substandard storage. Many classrooms in the Lango Sub-region are not secured, so it is risky to leave materials in classrooms overnight. Classrooms are also exposed to the elements; learning materials are thus vulnerable to rain and moisture-related problems. Insects and vermin can also destroy books and other materials very quickly if left unchecked. The SHRP project provided one metallic storage container per grade level for storing the textbooks. The containers were to be located in the classrooms. If used properly, the containers provide adequate protection, but many schools opted to keep all or part of their textbooks in school stores or other alternatives like in classroom cupboards or on bookshelves. MTLL staff also observed classrooms where the books were thrown into the metal containers with no attempt to organize them properly.



Metallic storage container for the national literacy textbooks

Textbook management is the second major challenge identified in Chapter 11. Most schools in Lango lack proper stock registers and staff with the capacity to manage a school library effectively. There is no official handover of textbooks within the school and no system of accountability in place at any level within the district. Inspections by district officials are infrequent and because stock registers are not available or incomplete, there is no way to track inventories and identify if books are missing.

Before developing the *Textbook Management System* outlined above, MTLL staff was unable to ascertain whether a system or standards for managing this multi-million dollar investment of textbooks had been established prior to distribution country-wide.

⁹ Read, Tony. (2015). *Where Have All the Textbooks Gone? Toward Sustainable Provision of Teaching and Learning Materials in Sub-Saharan Africa*. Directions in Development. Washington, DC: World Bank. Retrieved from <https://bit.ly/2C3P9C3>

Although not mentioned as a challenge in Read’s book, the classroom culture and environment are also important contributing factors to the deterioration of textbooks. Many classrooms in Lango are overcrowded, especially in early primary. Even though the policy of the Ugandan government is to prioritize early primary with the best classrooms and teachers, this is rarely followed. Teachers have neither been trained in efficient methods of distribution, collection and classroom storage of books, nor do they know how to teach children how to handle books properly. The parents’ role in supporting children’s ability to respect and care for books has also been overlooked.



Overcrowded P1 Classroom

Paradoxically, a related problem is that because of all the issues mentioned above, as well as many other factors outlined in *Where Have All the Textbooks Gone?*, teachers and administrators are often reluctant to distribute textbooks in the classroom. A 2013 World Bank Uganda study reported that “no textbooks were used by students in 86% of the classes in public schools.”¹⁰ Clearly, the issue of textbooks in African classrooms is complex and multifaceted, which is why a wide range of strategies to address the challenge is needed. Open licensing of government textbooks is potentially one important tool in a much larger toolkit.

The [Global Reading Network](#) Resource quoted in the introduction to this case study identifies four key contributions open licensing can have on primary education internationally:

- Increasing access to reading materials in low- and middle-income countries.
- Shifting or reducing of book-related expenses by governments.
- Empowering teachers to improve instruction through increased access to quality instructional materials.
- Continuous adaption of learning materials to new contexts and educational needs.

Mango Tree’s experience with open resource textbooks illustrates how these contributions can happen in a real-life context.

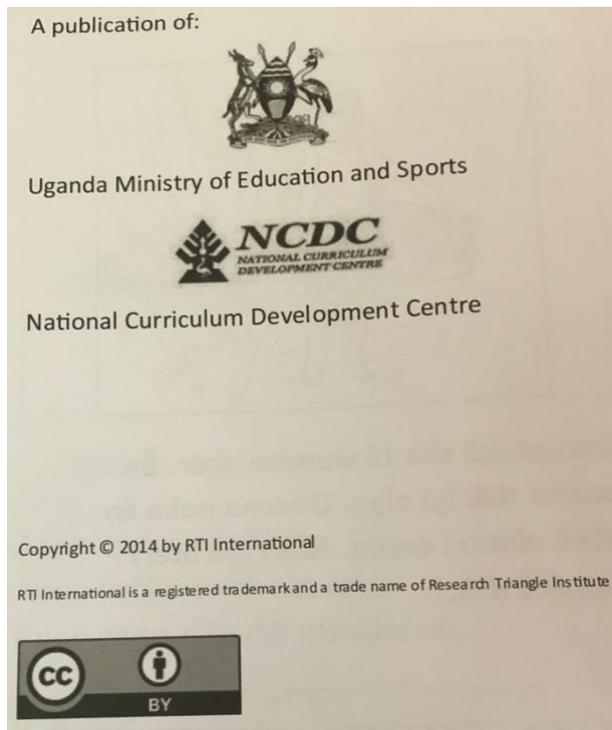
HOW MANGO TREE LITERACY LAB’S STORYBOOK DISTRIBUTION PROJECT ALSO BECAME A STORY ABOUT THE OPEN LICENSING OF GOVERNMENT PRIMERS

In February 2019, MTL received a one-year grant from [Neil Butcher & Associates](#) (NBA) to experiment with developing off- and online distribution channels for local language children’s storybooks. Over the course of its ten years of work in Lango, MTL has developed over one hundred books for children in Leblango, both primers and ability-levelled storybooks. Over a half-million of these books have been distributed to children in Lango through project funds. Despite this accomplishment, MTL knew that for sustainable development, it needed to do more to address the Regulators of Distribution component of their Theory of Change. If children become literate in their language, but lack access to engaging books to read, the literacy environment is not tenable in the long run. In addition, a vibrant market for books and other written and audio materials in the local language is both a key “culture of literacy” indicator and a new sector for economic development in the region. This project provided Mango Tree with a rare opportunity to develop a more entrepreneurial skill set within their organization. A complete case study of the NBA Project is available on the Mango Tree Literacy Lab [website](#).

¹⁰ Wane, W. and Martin, G. H. (2013). *Education and Health Services in Uganda: Data for Results and Accountability*. A World Bank Study. Washington, DC: World Bank and African Economic Research Consortium. Retrieved from <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/680381468174903963/education-and-health-services-in-uganda-data-for-results-and-accountability>.

As MTLT was preparing a large print order for twelve of its storybooks for the NBA Project, it occurred to us that we could also adapt the national literacy textbooks to our storybook format by dividing the content into termly texts and printing them as three separate books. The pupil primers could be priced and sold the same as the storybooks.

Inside cover of RTI pupil primer



One of my colleagues with whom I had worked on the SHRP project who had been more involved in the actual printing and distribution of the textbooks, reminded me that the primers have a CC BY license. After a quick google search, we realized our idea might be feasible.

I also began an email correspondence with the NCDC local language literacy specialist, updating her on a range of initiatives MTLT was undertaking related to local language literacy, but I didn't explicitly mention the idea of printing the primers. Instead I arranged a meeting in April 2019 at her office in Kampala.

We went ahead and carefully scanned the pages of the P1 pupil book. Using *Microsoft Publisher*, we laid out one term of content from the national textbook, adjusting the page size to match our storybook standards. We added a cover page and

appropriate attribution. We printed a few sample copies and began showing them to local education stakeholders, including head teachers, district officials and Loro Primary Teachers' College staff. Because there was widespread recognition that pupil books were deteriorating, the consensus from local education stakeholders was that MTLT should actively pursue the idea of printing the books.

When I met the NCDC local language specialist in April, I outlined the objectives and workplan for the Storybook Distribution Project and gave her copies of the twelve storybooks that were being sold. I then gave her a sample of the pupil book for Term 2 and described MTLT's idea to add this book to the titles available for sale.

The specialist explained that NCDC was aware of the need to begin replacing textbooks, but the process was likely to be a lengthy one, since it was necessary to make revisions in some of the pupil books, based on teacher feedback. This would take time and resources that had yet to be procured. She appreciated that MTLT's idea could provide a short-term solution, but since she was not in a position of authority, she encouraged me to talk to senior management. She contacted the office of the deputy director of NCDC and helped me fast-track an appointment for the following day since my time in Kampala was limited.

My meeting with the deputy director was similarly positive but non-committal. In both meetings I talked with NCDC officials about how the Creative Commons BY license gave MTLT the right to reproduce and sell these government materials. At the same time, I emphasized that MTLT wanted to do it with NCDC's support and active engagement in the process so that we could explore whether this was a viable short-term solution for other languages as well.

Both NCDC officials recognized that there had been internal discussions about the Creative Commons licensing of these materials, but suggested that NCDC had yet to determine if it recognized the open licensing agreement. As a parastatal, NCDC has a unique and somewhat tenuous position within the wider network of government institutions working in the education sector. Since it is expected to “pay its own way,” it’s not surprising that NCDC would be concerned about the ownership of this important and valuable piece of intellectual property. The result of my two meetings at NCDC was a request to write a formal letter to the director outlining in detail MTLL’s plan to print and distribute the P1 textbooks. I sent the three-page letter on April 15, 2019, but did not receive a reply despite follow ups by email and phone.

MTLL was hesitant to move forward without any outside support. It was understandable that NCDC was unwilling to issue an official stamp of approval, given its ambivalence about accepting the Creative Commons license as valid. If NCDC allowed one small NGO to print their materials, it could open the floodgates to other potentially major competitors. It was more worrisome to us that while individuals within RTI expressed their support of our initiative, we never received an official response either positive or negative from RTI headquarters. As an organization that prided itself in working side-by-side with local and national stakeholders to support government initiatives, MTLL staff felt that we needed a bigger player to support this initiative if any questions emerged. The MTLL staff read through the small print about the BY license on the Creative Commons website, but the legal language left us unsure that we were protected if we went forward. Fortunately, after consultation with staff from Neil Butcher & Associates, we were assured that they were within our legal rights to print and sell the books.

As Term 1 ended in early May, the pressure from head teachers to make copies of the pupil book available for Term 2 increased. At a staff meeting in May, Jimmy Mwoci, one of the literacy specialists at Mango Tree, talked about a school he had just visited where nearly all the books had been destroyed by termites because they were kept in the school store rather than in the metal container. On that day, a colleague from another local NGO attending the MTLL staff meeting and shared photos of the textbooks being stored poorly at another school. That meeting was the turning point. Everyone agreed that MTLL needed to take action, even if approval from NCDC was not forthcoming. On May 20, 2019, MTLL signed a contract to print 2000 copies of the Primary 1 Term 2 pupil book.



Improper storage of government textbooks

When the pupil books were delivered, they were added to the twelve storybooks already being sold by local vendors. A pupil book cost Mango Tree UGX 1370.5/= to print (US \$ 1.00 = UGX 3650/=). Vendors purchased the books from MTLL at UGX 1500/= and resold them to the general public at UGX 2000/=. Head teachers could also make bulk purchases of books from MTLL at the vendor price. The Term 2 pupil book quickly became MTLL’s best-selling book. Parents wanted to buy copies for their children so they could have their own copy to take home. Head teachers purchased them in bulk to restock their lost inventory.

In total, 1196 Term 2 pupil books were sold over two months. Based on this positive response, MTLL went ahead and printed 2000 copies of Term 1 and Term 3. The Term 3 books didn’t sell as well (only 293 total) because they arrived a bit late and the school calendar did not provide as many parent meetings where vendors could meet with their customers. Sales of the Term 1 books were brisk in January and February 2020 with sales of 797 books recorded, mainly by head teachers.

Unfortunately, the Covid-19 school closure abruptly halted most sales in March, although a few head teachers did order books during lockdown when government funds were made available. These numbers may seem small given the enormity of the problem, but considering this was a first attempt to develop a distribution system for marketing children's books in a rural Ugandan context, MTLL and its education partners in the region are enthusiastic to continue exploring the potential of this initiative going forward. As the Global Reading Network Resource on open licensing indicated, this initiative has increased access to government mandated reading materials and shifted some of the costs of production downstream. The format of the book was also adapted from one large textbook, to three smaller books that receive significantly less wear-and-tear in a given year. With time, as more and more families see the benefits to purchasing the texts for their children, this initiative also has the potential to empower teachers to improve instruction through more active parental engagement.

FUTURE THOUGHTS ABOUT OPEN LICENSING IN THE LANGO SUB-REGION AND BEYOND

The Storybook Distribution Project funded by Neil Butcher & Associates provided MTLL with valuable data and experience related to the development of a market-based distribution model for local-language books. The case study, referred to above, details learnings, but one particular insight has proven especially valuable with the onset of a global pandemic. From the case study:

One of our key insights is that many of our customers do not have a way to gauge the value of a book. They understand the value of 2000/= (the cost of one of our books) in a traditional market, but it takes a great deal of savvy salesmanship to convince the average parent that they will obtain 2000/= worth of value from this collection of paper.

So how can we efficiently and effectively infuse value in our books? We now have a hypothesis to use radio programming to create dynamic cultural content that can be leveraged to increase demand for written texts that replicate or elaborate upon the oral content.

The report went on to list a variety of ideas for radio programs that could draw a large audience and be the springboard for developing text-based content that listeners would want to purchase. Then the global pandemic resulted in all schools in Uganda closing on March 27th. MTLL was suddenly faced with a new reality in which to operate.

In mid-April, the MoES issued its [Framework for Continued Learning during the Covid-19 Lockdown in Uganda](#). Lesson delivery via radio and television played a key role in the provision of distance learning. As implementation of this framework began in Lango, MTLL recognized an opportunity to support this important government initiative. The radio lessons provided by government did little to adjust to the medium of radio. The radio teachers spoke directly to the children as if they were still sitting in a classroom. In addition, almost all programming was focused on upper primary and secondary learners, especially those preparing for their national, end-of-cycle exams. Early primary programming was largely ignored, perhaps because it was difficult to develop content at the national level since the medium of instruction and the literacy content was local-language-based. In late April 2020, MTLL staff reached out to the manager of [Radio Q FM](#), a local station it had worked with for several years. MTLL explained that it had no funding, so could not pay for radio time, but would like to do something to support early primary school pupils and their parents to continue literacy instruction during the lockdown. Without funds, MTLL's aspirations were low; perhaps it could produce several public service announcements about learning the alphabet and telling stories to children. MTLL was both surprised and delighted when the Radio Q FM manager offered a weekly one-hour time slot on Saturdays from 12-1 pm.

Mango Tree’s first show aired on May 9, 2020, and it is continuing to learn and grow its instructional model. MTLL is actively seeking funds to develop and expand its early primary radio programming to include numeracy, English and social emotional learning.

Mango Tree has also proposed a program to provide training and peer support for its listener facilitators. MTLL’s instructional model is designed so that an older family member listens to the radio show with the young children. Referred to by the radio host as his “co-teachers,” he addresses both the pupils and co-teachers, usually talking directly to the pupils, but also telling the co-teacher how to support the lesson from home. As part of this training, MTLL envisions providing the co-teachers with the open-source pupil primers along with other support materials. To that end, MTLL would like to print P2-P4 textbooks, using a CC license, if funds were available.

Even without funding, MTLL has begun to offer both the government primers and a selection of storybooks to radio listeners. Mango Tree also provides the co-teachers with a free pencil-and-paper assessment tool after every four weeks of lessons to help them with continuous assessment. Because the country is still in lockdown, individuals must come to the radio station to pick up the free assessments and purchase the books, so sales are minimal, but plans are being developed for reinstating a revised version of their vendor distribution system once the country opens up again.

Looking beyond this period of lockdown, Mango Tree has begun to envision how radio education can become a major strategy for impacting the “Regulators of Instruction” component of its Theory of Change. It is exploring how radio programming can ensure that children in early primary who have lost classroom hours due to the lockdown can still attain the foundational competences outlined in the national curriculum by Primary 4 when the medium of instruction shifts to English. At the same time, MTLL wants to improve the ability of both teachers and parents to provide effective instruction in their domains of responsibility.

No one knows what impact this “dead year” is going to have on pupil performance. Having radio programming supported by openly licensed instructional materials that can be quickly and inexpensively reproduced by government or NGO partners and distributed to schools and families could help mitigate the instructional time lost during the lockdown. Mango Tree wants to contribute to the development of a remedial instructional approach by developing a comprehensive radio education curriculum for early primary learners that can be replicated in other language communities both in Uganda and beyond.

MTLL also has plans to impact the “Producers of Literature” and “Regulators of Distribution” components of its Theory of Change through its on-going development of the local language publishing market. Mango Tree has partnered with another local organization, the [Lango Heritage Centre](#) (LHC), to seek business development funding for a situational analysis and strategic plan to establish profitable and self-sustaining markets for cultural products and services that enrich the people and culture of the Lango Sub-region. From a recent proposal to UNESCO’s [International Fund for Cultural Diversity](#):

Lango lags behind in development indicators. Recent data from the Ministry of Labour indicates that 54% of the population in the Lango Region is under 18 years old. Underutilization of the youth labour force is at 38%, with 50% of female youth unemployed compared to 33% of males. The Government of Uganda (GoU) is undertaking measures to develop the standard economic markets in the region: animal husbandry, commercial fishing and large-scale agricultural crops like sunflowers and cotton supported by value chain industries like ginneries and oil processing factories.

These efforts are commendable, but MTLL and LHC both independently identified another stratum of economic opportunity that focuses on indigenous cultural products and services. MTLL is focused primarily on local language

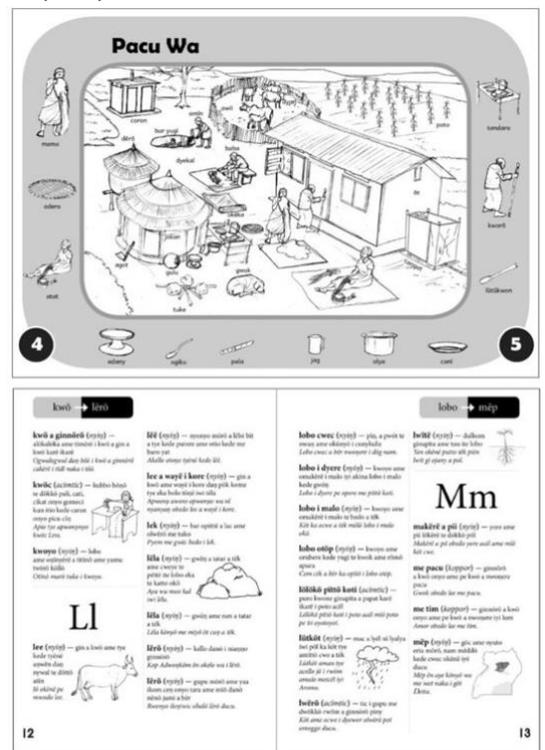
publishing and preserving and promoting oral cultural traditions. LCH is focused on indigenous agricultural products that risk being completely lost due to a generation spent in camps for internally displaced people and the rapid globalization of agricultural markets. These indigenous products contribute to local food security, protect the genetic diversity of the food supply and potentially provide unique markets regionally and nationally. In addition, LHC seeks to preserve and promote other components of Lango's cultural heritage including its music, dance and crafts.

MTLL and LHC understand that these cultural markets may not attract the same level of investment nor have the potential to reap the same financial rewards as the standard markets promoted by the GoU. Nevertheless, MTLL and LHC argue that promoting and investing in these markets has value beyond those measured by standard economic metrics. What benefit does a society derive from individuals with a love and appreciation for their cultural identity? Alternatively, what is the impact on a society, when its citizens feel their cultural and linguistic heritage is inferior to its neighbours?

Finally, Mango Tree is also considering how to fund and produce openly licensed materials that will support the “Regulators of Usage” in its Theory of Change. With the widespread revision of local language orthographies in Uganda through the SHRP project, there is a desperate need for reference books and dictionaries in local languages. MTLL has created two Leblango dictionaries for early primary, one a picture dictionary to support the P1 and P2 curriculum and a children’s dictionary meant to be used in P3. An adult dictionary using the revised and approved orthography has yet to be developed. The [Lango Language Board](#), the organization recognized by government to determine language-related issues, published an orthography guide in 2013. MTLL has also developed two self-guided instructional manuals for teachers that provide them with the basic skills in the orthography and grammar to effectively teach Leblango in primary schools. As part of their fundraising for radio education programs, MTLL is planning to include these resources as part of their overall project design.

In summary, this case study has attempted to explain how Mango Tree Literacy Lab, a small NGO in northern Uganda, has tried to promote “an enthusiasm for and a commitment to reading and writing in everyday life” with a Theory of Change that has supported a wide range of literacy-related activities over the past ten years. During this time, MTLL has recognized that open licensing can make an important contribution to ensuring access to literature and improving both formal and non-formal learning. As an education laboratory and idea incubator, Mango Tree is committed to sharing its results and resources freely. Open licensing is a tool that allows MTLL to do so, while maintaining a connection to its work through appropriate attribution. This case study captures a moment in time, but as its plans suggest, Mango Tree Literacy Lab will continue to learn and explore the opportunities and challenges of open licensing in the decade to come.

For further questions about Mango Tree’s work, contact the director, Craig Esbeck, at cesbeck@mangotreeuganda.org.



Sample pages from MTLL's Leblango dictionaries