



# **2019 Digital Literacy Trust Report**

5<sup>th</sup> December 2019



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## 1. Executive Summary

Digital Literacy Trust (DLT) is a public-private partnership formed in 2016 to harness technology for inclusive and quality education in Kenya. In 2017, DLT engaged with Kenya Ministry of Education under an MOU to collaborate for impact and sustainability of ICT in Kenyan education. This report summarizes the initiatives of DLT from 2017 to 2019.

Major results:

1. Engagement across public and private sector
2. Support for MOE priorities relating to ICT integration in education
3. Engagement with publishers for success of Kenya's Competency Based Curriculum

## 2. 2019 Key Initiatives

In line with its objectives of delivering high quality, accessible local educational content for learners DLT carried out the following projects in 2019:

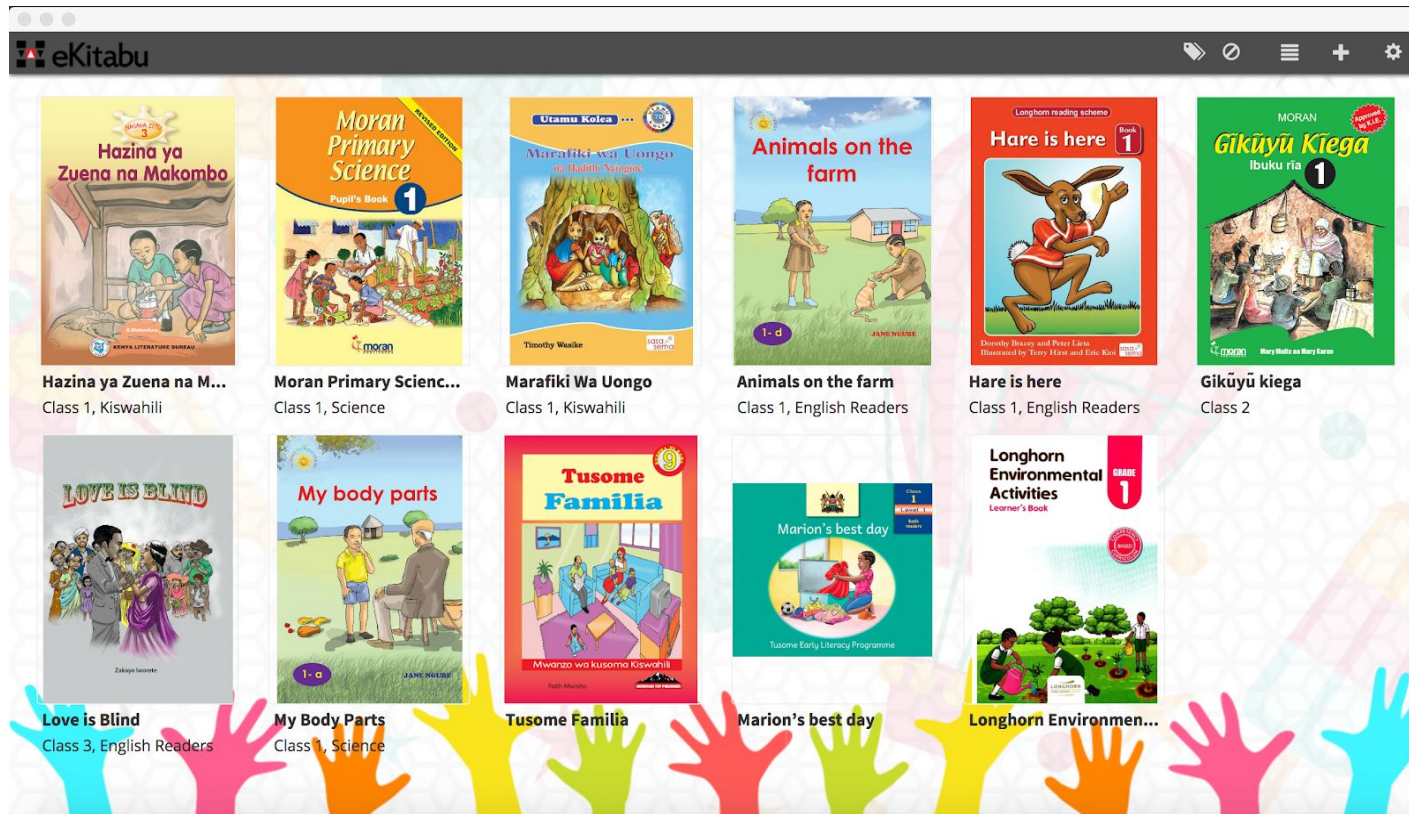
1. Digitization of CBC materials for use by all primary school children
2. UNICEF Accessible Digital Textbook (ADT) with KICD
3. Content Development Challenge (CDC) for Kenyan publishers
4. MOE Directorate of Special Needs Education (DSNE) E-Readiness Survey
5. Kenyan Sign Language Studio - Studio KSL with Deaf Ability Initiative
6. Orbit refreshable braille devices and Kenya CBC content for blind learners

## 2.1 Digitization of CBC materials for use by all primary school children

Through the partnership with publishers, DLT collected and digitized over 300 books approved for the new Competency Based Curriculum. Through the resources of DLT, the content has been digitized to quality accessible formats using global standards including EPUB 3 and WCAG 2.0. The digitized content has undergone rigorous quality assurance, and is ready for distribution to primary schools. The accessible materials have also been sent back to their respective publishers.

### Results of CBC digitization:

- Received over 300 approved Competency Based Curriculum books
- Digitized over 100 to accessible formats
- Trained teachers on how to utilize the content in classroom
- Delivered content to schools and teachers in DFID's Girls Education Challenge with EDT



*Digitized CBC Content for Access to Quality Education*

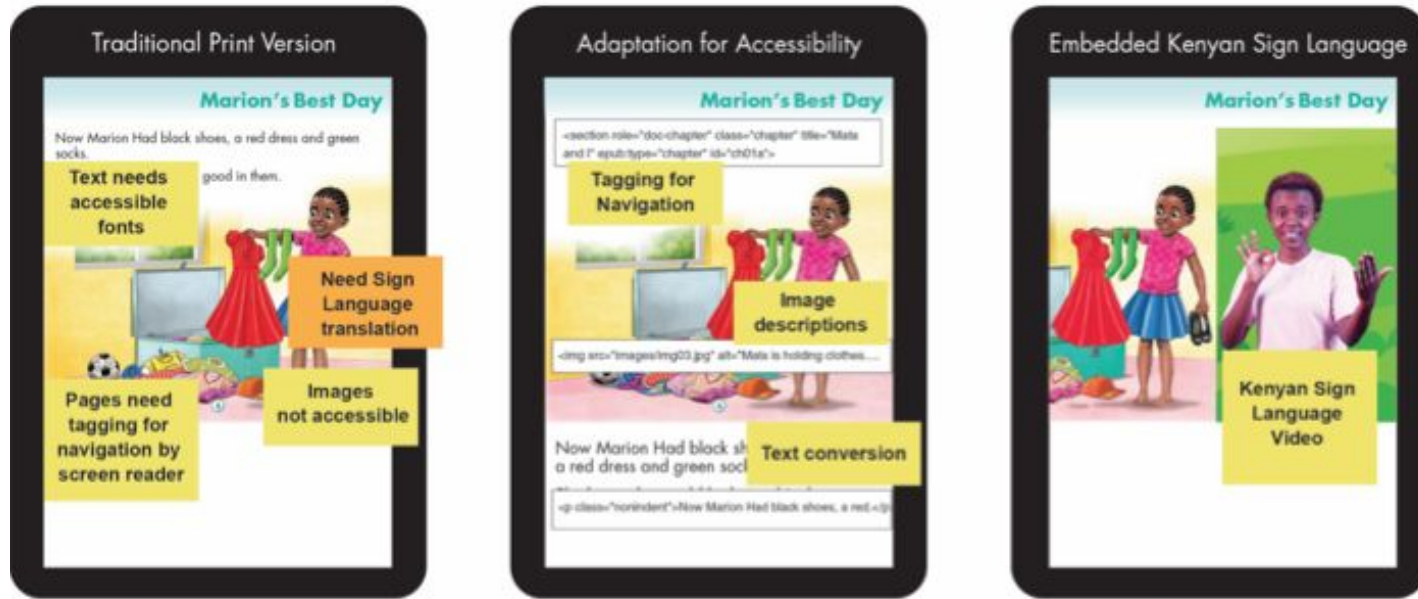
## 2.2 UNICEF Accessible Digital Textbook (ADT) Prototype with KICD

DLT in partnership with Kenya Ministry of Education, Kenya Institute of Curriculum Development (KICD) and UNICEF Kenya conducted prototyping of an Accessible Digital Textbook (ADT) incorporating Universal Design for Learning (UDL) principles. The prototype was developed in close collaboration with KICD. DLT provided technical support to KICD who took the lead in the design and development work. The goal of this initiative was to enhance opportunities for children with disabilities to improve their learning outcomes by providing them with accessible curriculum materials approved by KICD.

Accessible digital textbooks allow children with different learning styles to access the same content, participate in the same textbook-based activities inside and outside the classroom, and have equal opportunities to achieve positive learning outcomes. Accessible digital textbooks help overcome important barriers to education.

### Results of ADT:

- Prototype of Accessible Digital Textbook for Kenya CBC
- Capacity built with KICD to produce and evaluate accessible digital content for the curriculum
- Toolkit delivered for KICD and publishers to develop born accessible materials
- Piloting the Accessible Digital Textbook in schools with teachers and learners
- Over 17 trainings with content developers and publishers
- Improved engagements with organizations for persons with disabilities



*Adapting Digital Content for Accessibility*

## 2.3 Content Development Challenge (CDC) for Kenyan Publishers

The Content Development Challenge provides incentives, structure, and training to catalyze a transition to born-accessible publishing practices among Kenyan content developers and publishers. Central to the Content Development Challenge was the use of the practical materials and templates included in eKitabu's Toolkit for accessible publishing.

Prize incentives included 20,000,000 KSH (\$20,000 USD) in cash prizes for winning titles as well as devices for individual contributors within participating publishing firms. Most importantly, the Content Development Challenge is an educational process, with numerous opportunities through the schedule to interact with content development teams, understand their process, and guide them towards born accessible practices. Individual content developers and publishing firms were invited to participate.

### Results of CDC:

- An open source Accessible EPUB Toolkit was developed to support Kenyan content developers and publishers' shift to born accessible publishing
- Content developers from 12 publishing firms received training on born-accessible publishing
- 66 accessible EPUBs were developed
- Winning publishing houses and developers were given awards for their good work at the Kenya Institute of Special Education (KISE)





*Content Development Challenge winners receive their awards at Kenya Institute of Special Education on 30<sup>th</sup> July 2019*

## 2.4 MOE Directorate of Special Needs Education (DSNE) E-Readiness Survey

DLT in collaboration with the Ministry of Education through the Directorate of Special Needs Education is carrying out a Comprehensive ICT e-readiness survey to establish status of ICTs, in selected Special and Integrated Primary and Secondary Schools in Kenya. The Directorate of Special Needs Education identified a gap in this area of ICT in Special and integrated Schools, lack of sufficient evidence and data to support planning and budgeting in the directorate has necessitated the need to carry out the survey. The main objective of the survey is to:

- a) Determine the level of utilization of ICTs in special needs institution management
- b) Establish the extent to which special need schools in Kenya are equipped with ICT infrastructure.
- c) Determine the extent of utilization of ICTs in education of learners with disabilities.
- d) Establish the training needs of teachers in ICT integration in special needs education
- e) Establish the gaps that hinder ICT integration in education of learners with disability

DLT believes this fact finding exercise will be beneficial not only to the ministry but also to various government agencies and other organizations working around technology, inclusive education, children with disabilities and accessibility.

The survey is to be conducted in early 2020, a workshop was held in November to develop tools to be used in the data collection. Coordination with DSNE is ongoing to ensure the tools are edited and finalized ready for piloting in January. The survey will be conducted in phases, the first phase covers three regions:

1. **Nyanza region:** Migori, Homabay, Kisumu, Siaya, Kisii
2. **Central region:** Kiambu, Murang'a, Embu, Nyandarua, kirinyaga and Nyeri
3. **Coast region:** Mombasa, Taita Taveta, Kilifi , Kwale

**Proposed Activities and Timing**

No	Activity	Dates	Status
1.	Proposal and data collection tools development workshop	November 2019	Done
2.	Proposal and data collection tools editing workshop	January 2020	
3.	Tools piloting and validation in schools	January 2020	
4.	Actual data collection exercise	February 2020	
5.	Report writing workshop	March 2020	
6.	Dissemination of the report to stakeholders	April 2020	

**Results of the E-Readiness Survey:**

- Data collection tools
- Project implementation schedule
- SNE e-readiness survey report
- Dissemination of the report to the stakeholders



*MoE officials together with eKitabu staff in the Tools Development Workshop in Naivasha*

## 2.5 Studio KSL (Kenyan Sign Language)

DLT launched Studio KSL in August 2019 to support Deaf communities and local content creators integrate Kenyan Sign Language videos into early grade readers, producing visual children's storybooks in support of Kenya's new Inclusive Education policy. Investing to set up Studio KSL and packaging accessible books in EPUB has lowered cost of producing quality visual storybooks, supports documentation of regional differences in KSL while giving Deaf communities in Africa a platform to advocate for recognition of their local Sign Languages.

Studio KSL was made possible through the generous support of All Children Reading: A Grand Challenge for Development (ACR GCD) Partners (the United States Agency for International Development (USAID), World Vision, and the Australian Government).

### Studio KSL Results

- Over 60 digital local Sign Language Materials were developed with their glossaries
- We engaged with over 150 Parents and local Deaf communities at Ngala school for the Deaf, Joseph Kangethe, Ebukhuya school for the Deaf
- There as increased participation of Deaf learners in the 2019 Digital Essay Competition KSL category (Signed Videos) and arts
- We adapted Joint Assessment tools in partnership with Royal Dutch Kentalis
- Launched a functional YouTube channel for Studio KSL
- Expansion to other countries- Rwanda, Zambia, Tanzania, Uganda



*Learners of Kambui Primary School for the Deaf and Ngala School for the Deaf during the piloting our Kenyan Sign Language communication assessment tools. Georgine Auma, Director of Studio KSL at eKitabu on the second photo.*

## 2.6 Orbit Refreshable Braille Devices & Kenya CBC Content for Blind Learners

Assistive technology plays an increasingly vital role in how education can be delivered and improved, especially in the area of special needs education, more specifically “blind students.” DLT and Kilimanjaro Blind Trust (KBTA) have partnered to bring Orbit Reader 20 technology loaded with textbooks and storybooks for CBC grades 1-3 content in electronic braille (e-braille).

Assistive Technology for inclusive Education using the Orbit Reader (Orbit Reader 20) is a project that involves the conversion of curriculum text books and story books (which are either in PDF, EPUB or word formats) into e-Braille reader. The Orbit Reader 20 Project consist of adaptation, conversion and installation of e-Braille content to 1500 Orbit Reader 20 devices in three different countries, (i) Kenya (ii) Tanzania and (iii) Malawi. The Orbit Reader 20 devices were provisioned in partnership with KBTA.

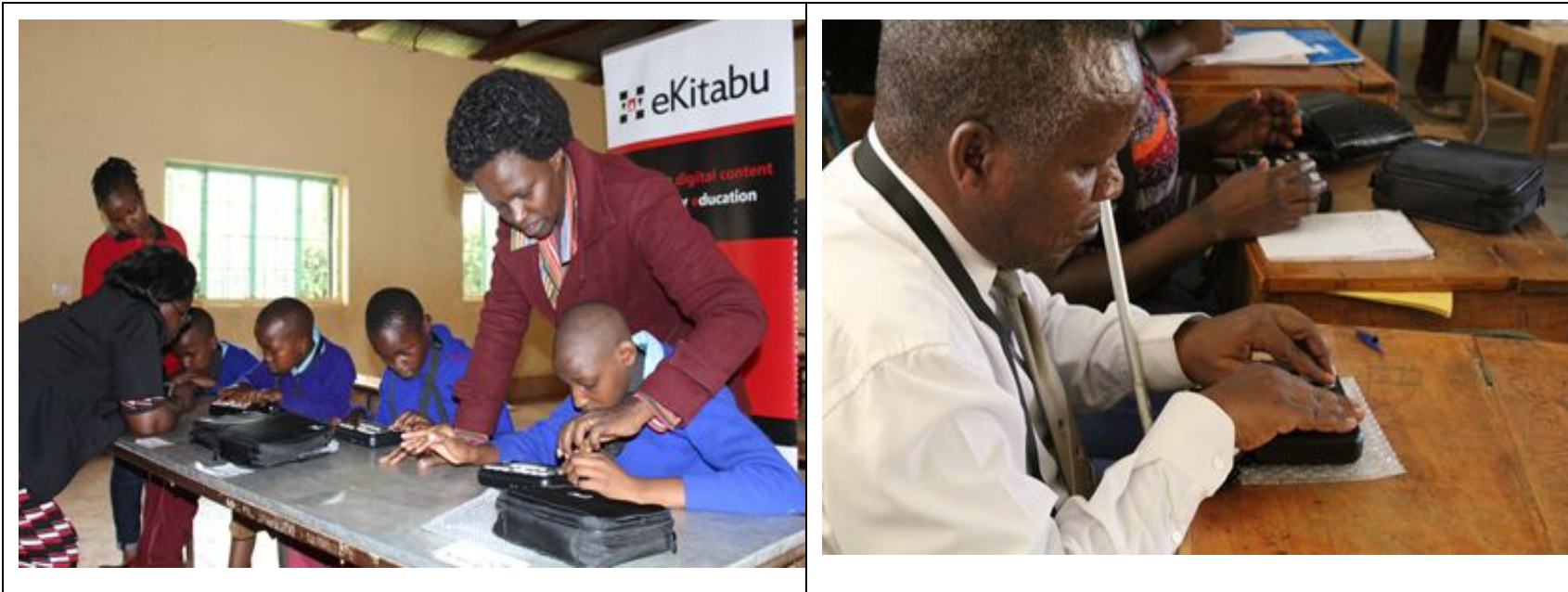
The project period was for 12 months, beginning August 2018 to August 2019 in which measurable results were evaluated.

### **Orbit Reader project results:**

- Curriculum content acquisition, adaptation and conversion
- Acquisition, provision and distribution of the Orbit Reader 20 devices, loaded with content
- Project piloting and rollout in Kenya
- Successfully conducted teacher’s training from the following counties and schools;
  - Migori County
    - Nyasare Primary School
    - Nyabisawa Secondary School
    - Kebaroti Primary School
    - Mosweto Primary School

- Kisumu County
  - Kisumu Day Secondary School
  - St. Vitalis Nanga
  - Nyamasaria Primary School
- Homabay County
  - Obambo Primary School
- Siaya County
  - Nyamira Girls Secondary School
  - Hono Secondary School
- Kitui County
  - Kangundo Primary Special School
  - Muslim Primary
- Project rollout in Malawi and Tanzania
- Identification of beneficiary schools (Teachers and Students)
- Teachers and Students training on the Orbit Reader 20 technology
- Assisted teachers to create an inclusive classroom with the assistance of the Orbit Reader and content for learners with visual impairment
- Provided continuous support to beneficiary schools





*Students Training at Kangundo DEB Special School in Machakos & Teacher training at Muslim Primary School in Kitui*

### 3.0 DLT Members and Collaborators

- Kenya Ministry of Education
- MOE Directorate of Special Education (DSNE)
- Kenya Institute of Curriculum Development (KICD)
- Kenya Institute for Special Education (KISE)
- Kenya Institute for the Blind (KIB)
- Benetech/Bookshare
- DAISY Consortium
- Deaf Ability Initiative
- Digital Divide Data Kenya
- Education Development Trust (EDT)
- Kenya Publishers Association (KPA)
- Bookmark Africa
- Kenya Literature Bureau
- Jomo Kenyatta Foundation
- Longhorn Publishers
- Moran Publishers
- Mountain Top Publishers
- Oxford University Press East Africa
- Queenex Publishers
- All Children Reading (ACR) partners: USAID, World Vision, and the Australian Government
- UNICEF Innovation
- UNICEF Kenya



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