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EDC EARLY GRADE READING PROGRAM

RWANDA

LITERACY

LANGUAGE AND

LEARNING

Building a Strong Foundation for Literacy in Rwanda:

Results and Lessons Learned from the L3 Initiative

April 2017

The Literacy, Language, and Learning (L3) Initiative was a five-year project funded by United States Agency for International Development (USAID) and implemented in Rwanda between August 2011 and January 2017. L3's strategic objective was to strengthen teaching and learning, so that children leave primary school with solid literacy and numeracy skills. With a focus on improving students' reading and mathematical skills in grades one to four (P1 – P4), as well as students' and teachers' English language proficiency, L3 collaborated with the Ministry of Education, USAID, and technical partners at both the teacher preservice and in-service levels as well as school curriculum and implementation levels. The achievement of project goals and objectives has broken significant ground as the first national-level, early-grade literacy and mathematics initiative in Rwanda. Over the lifetime of the project, L3 reached nearly 24,400 P1 to P4 teachers in 2,714 schools across the country. The Initiative provided more than 8 million units of educational material, including student readers, teachers' guides, read-aloud story collections, and audio lessons played via cell phones, SD cards, and speakers. More than 1,835,500 students from P1 to P4 were exposed to literacy and numeracy teaching and learning materials produced and distributed by the project.

USAID FROM THE AMERICAN PEOPLE

REB Rwanda Education Board

EDC Learning transforms lives.

Theory of Change

L3's Theory of Change had five key elements that were developed in tandem in order to achieve its strategic objective. The theory posited that if quality of teaching were improved, along with the increased availability and use of teaching and learning materials, increased English language support for teachers, strengthened Ministry of Education capacity for leading literacy reform, and improved equity in education, then Rwandan children would leave primary school with solid literacy and numeracy skills.

IR 1: Results by the Numbers

- **8 million units of educational material produced, including student readers, teachers' guides, read-aloud story collections, and audio lessons played via cell phones, SD cards, and speakers**

- **1,835,500 students from P1 to P4 reached by teaching and learning materials developed by the project.**

- **1,000 netbooks and projectors with training videos provided to SBMPs**

- **10,231 student teachers and 334 TTC tutors supported in best literacy and numeracy practices**

- **24,405 mentors and teachers trained in best literacy and numeracy practices**

- **1,141 School General Assembly Committees supported in 12 districts, including 4,834 members, 163 Sector Education Officers, and 12 District Education Officers**

Results

IR 1: Improved Quality of Teaching

L3 worked with the Rwanda Education Board (REB), University of Rwanda College of Education (URCoE), Government of Rwanda (GOR) officials, and development partners to develop a shared vision of effective literacy and numeracy. This was achieved through participation in Education Sector Working Groups (ESWG) and by establishing a strong working relationship with key stakeholders, which resulted in the following:

- Development of contextualized instructional materials

- Establishment of national standards for students and teachers

- Support for the curriculum reform process

- Development of the Oral Reading Fluency Assessment of Rwandan Schools (FARS), the Mathematics Procedural Fluency Assessment of Rwandan Schools (MARS), and the Rwanda English Proficiency Standards (REPS)

L3 produced P1 to P4 Kinyarwanda, English, and mathematics print and audio materials. L3 trained instructional material developers in interactive audio production and re-equipped the REB studio at the Curriculum Pedagogical Materials Development Department (CPMD) with state-of-the-art studio and video recording equipment. Interactive audio instruction (IAI) lessons provided supplementary instruction in literacy, numeracy, and English as a Second Language (ESL) for P1–P3 to ease the transition to English as the language of instruction in P4. Reports from schools suggested that L3 materials transformed teacher practice and that students made significant learning gains.

L3 supported REB's National School-based Mentoring Program (SBMP). L3 developed a profile of an effective school-based mentor and professional development continuum for the SBMP. Through a cascade model, senior mentors were trained in how to use L3 produced video-based modules to train the school-based mentors (SBMs) in pedagogy and use of L3 materials.

L3 targeted current and preservice teachers to ensure the long-term sustainability of the initiative. L3's implementation partner, Voluntary Service Overseas (VSO), provided Literacy and Numeracy Advisors (LNAs) to provide support and services in the Teacher Training Colleges (TTCs) to incorporate evidence-based literacy/numeracy instructional practices and L3 instructional materials.

L3 recognized that learning went beyond the classroom and involved not only teachers but also families and communities. L3's implementing partner, Concern Worldwide (CW) implemented the school-community component of the initiative, building the capacity of School General Assembly Committees (SGACs), formerly known as Parent Teacher Committees (PTCs). SGACs were trained to launch initiatives in support of improved equity in education, teacher motivation, and community support to literacy. Main activities included:

- Delivery of a package of training to enhance community support for the delivery of quality education, with a particular emphasis on teacher motivation
- Enhancement of the culture of reading and promotion of equity in education within the community
- Scaled-up support from SGACs for teacher motivation and student literacy nationwide.

L3 provided grants to schools with the best initiatives to improve teacher motivation and well-being.

IR 2: Improved Availability and Use of Teaching and Learning Materials

As mentioned earlier, L3 provided teaching and learning materials to 2,741 schools. In addition, the Initiative distributed 1,316 solar panels so that schools without electricity could benefit from the L3 IAI programs and technology.

Working closely with community partners, volunteers, civil society organizations, and faith-based organizations, L3 established 85 Community Mobile Libraries (CMLs), enabling community members across the country to access rich and enjoyable reading materials. The CML initiative has played a key role in creating a literate environment and promoting literacy among community members, not just for children but for all ages and literacy levels.

L3's Writers' Workshops and Mathematics Camps contributed to increasing the availability of reading and numeracy instructional resources for teachers and students.

L3 advocated for support of children's reading practice in homes and communities as well as in schools, for leaders' action to prioritize support for reading, and for the provision of reading materials in schools and homes. Behavior change communication materials promoting literacy and a culture of reading were distributed to participating schools. TTCs regularly organized events and activities in support of literacy, including setting up TTC libraries and sponsoring school publications, debate clubs, and story clubs.

L3 was a member of the Rwanda Reads Task Force and steering committee and supported Andika Rwanda, the national story writing and poetry competition. Through these activities, 5,000 copies of Andika Rwanda books were published annually.

IR 2: Results by the Numbers

- **1,316 solar panels distributed to schools without electricity**
- **95,000 books distributed through CMLs**
- **100,000 books distributed to TTC libraries**
- **854 story titles and problem sets authored through Mathematics Camps and Writers' Workshops**
- **3 Andika Rwanda competitions with more than 3,000 stories submitted annually**
- **1,316 solar panels distributed to schools without electricity**

IR 3: Results by the Numbers

- **394 English IAI lessons**

- **29,466 teachers completed the REPS test in February 2014 and 30,158 completed the second round of tests in October 2014**

- **Beginner Level 1 (CEFR A1), Beginner Level 2 (CEFR lower A2), Beginner Level 3 (CEFR A2), Intermediate Level 1 (CEFR B1) and Intermediate Level 2 (CEFR B2) English Language Syllabi developed**

IR 3: Support for English

L3 developed Interactive Audio Instruction (IAI) to provide supplementary instruction in literacy, numeracy, and English as a Second Language (ESL) for P1 to P3 and to ease the transition to English as the language of instruction in P4. The audio-enhanced English lessons were particularly helpful in providing role models for correct pronunciation, not only for students but also for the teachers themselves.

Rwanda English Proficiency Standards (REPS) diagnostic tests and self-assessment tools were developed for teachers and SBMs to gauge English proficiency levels as well as to set realistic and achievable goals for teachers' personal improvement.

L3's English Language Advisor facilitated a series of workshops, where representatives from REB departments, URCoE, and development partners drafted English language materials for teachers, from beginner to upper-intermediate levels, for the SBMP.

IR 4: Strengthened Ministry Capacity

L3 was a learning activity, during which L3 and MoE designers and implementers gained knowledge and skills even as they promoted learning for teachers and students. Therefore, in all activities, REB counterparts were valuable contributors to L3's goals. Counterparts were drawn from the Curricular and Pedagogical Materials Development (CPMD) Department, Teacher Development and Management Department (TDM), and Education Quality and Standards Department (EQS).

L3 actively participated in key technical committees such as the Rwanda Reads Task Force, Teacher Professional Development Technical Working Group, Curriculum and Assessment Technical Working Group, the SBM Task Force, and

the Continuous Professional Development (CPD) Task Force. L3 also supported the pre-service curriculum reform process and the Rwandan Primary Curriculum review. L3 team members were embedded in REB departments and in district offices.

In 2014, the L3 steering committee was established to coordinate all L3 activities and to ensure that REB senior management had first-hand information on all activities and could use that evidence to inform future planning in an efficient and cost-effective manner.

L3's monitoring and evaluation team worked with REB officials to develop and periodically assess student achievement in literacy and numeracy. An SMS system was implemented to collect data from mentors regarding training and to facilitate sharing of progress with REB.

IR 5: Improved Equity in Education

Delivering literacy and numeracy instruction through a combination of scripted teacher lessons and IAI programs ensured that all students received equal access to quality instruction on a daily basis and that teachers received ongoing training in inclusive instructional practices. In addition, the L3 instructional materials promoted positive images of girls and other marginalized groups.

The L3 Community Mobile Libraries program reached disadvantaged areas and provided communities with additional reading materials.

L3 Plus, a subgrant for the L3 special needs education (SNE) program, supported the promotion of enhanced literacy programs for learners with special needs. Student teachers received guidance on inclusive education practices, and SGACs underwent training on equity practices. L3 received additional funding from the Disability Fund to support two community resource centers serving children with disabilities (CWD), to conduct a disability community-awareness campaign, and to support camps for parents of CWD to share stories and receive training on supporting their child's education outside the classroom. The L3 Plus project provided skills, resources, and materials for educators, parents/caregivers, Healthcare Providers, Community Health Workers, and representatives of the National Council for People with Disabilities.

Assessing Achievement of Results

To gather information on learner achievement and to support REB in establishing a system of regular national assessments, L3 conducted annual (2014-2016) literacy and mathematics assessments with a random sample of learners drawn from a nationally representative sample of schools. Assessments were conducted in the language of instruction (Kinyarwanda in grades P1 through P3, and English in P4) and were developed by a team of experts from REB and L3. The 2016 L3 endline assessment was conducted in 60 schools with 2,387 learners, 470 teachers and 60 head teachers. The results of this assessment were compared with the baseline assessment conducted in October 2014 at the beginning of the L3 nationwide intervention.

Additional research was conducted on school community partnerships, support to CMLs and TTCs and Special Needs Education Component (L3 Plus). Project results are summarized in the figure on the following page.

IR 4: Results by the Numbers

Regular support to REB departments including:

- **Rwanda Primary Curriculum Review**

- **Pre-service curriculum reform**

- **Support to TDM English Language Advisor**

- **Development of teaching and learning materials**

- **Development and implementation of tools and systems for assessing students' reading and math competencies**

IR 5: Results by the Numbers

- **Positive images of girls and other marginalized groups promoted in L3 teaching and learning materials**

- **283 SGACs action plans developed, including initiatives to help girls stay in school**

- **5 girls' rooms developed in 5 districts**

- **80 parents, 24 healthcare providers, 60 community health workers and 66 NCPD representatives trained at the district level on how to care for children with special needs**

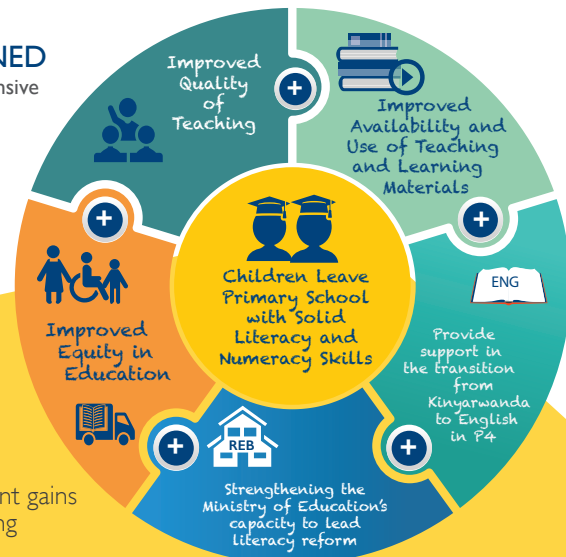# Literacy, Language and Learning Initiative (L3)

Project Impact

8 million TEACHING & LEARNING MATERIALS distributed to all public/ government-aided primary schools, for Kinyarwanda, English, and mathematics.

1,835,500 PRIMARY SCHOOL LEARNERS received effective reading interventions.

24,400 TEACHERS TRAINED through pre-service, in-service, and intensive coaching programs.

85 MOBILE COMMUNITY LIBRARIES DEPLOYED enhancing access to reading material for all ages, and promoting the culture of reading throughout Rwanda.

Improved Quality of Teaching

Improved Availability and Use of Teaching and Learning Materials

Children Leave Primary School with Solid Literacy and Numeracy Skills

Improved Equity in Education

Provide support in the transition from Kinyarwanda to English in P4

Strengthening the Ministry of Education's capacity to lead literacy reform

Key Findings

Math
• P1 learners' mathematics performance increased significantly from baseline to endline.
• By the end of L3, less than 7% of all learners achieved a zero score on math problems.

Reading
• P1 - P3 learners showed significant gains in Kinyarwanda and English reading fluency and comprehension
• By the end of L3, the number of P1-P3 learners who could not read a single word fell by 7-10%.
• At endline, girls read better than boys in Kinyawanda (P1-4) and English (P4) whereas performance was about equal with boys in mathematics (P1, P3, & P4).

• Findings at endline found a significant relationship between reading skills in Kinyarwanda and reading skills in English.

Lessons Learned

During the course of the five year L3 Initiative, known strategies were reinforced and new strategies were learned and refined to enhance the quality and sustainability of the Initiative's goals and results. L3's strong partnerships, communication networks, and flexible program design helped L3 to adapt and evolve practices to accommodate many Ministry reforms. Recommendations and lessons include the following:

Partnership

• Achieving the ambitious breadth and scope of the L3 Initiative within a complex educational system requires the collective insights of many partners. Each partner brought a tremendous depth of experience which contributed to achieving project goals and outcomes.

• Integrating L3 technical staff into the Ministry and Rwanda Education Board (REB) was important to ensure collaboration and a deepened understanding of how to operate within the system.

- Forging relationships with district education stakeholders is critical. L3 quickly learned that in order to make change happen at the school level, L3 needed the support of district and sector officials in addition to REB.

- The technical staff from our partner organizations should have been seated within the L3 Initiative office throughout the life of the project. Having all project staff—with the exception of the technical staff embedded within REB— housed within one office would have projected a more unified vision to beneficiaries. Within the context of multiple implementing partners, having a project logo would also have contributed toward projecting a unified vision to schools, community, and the Ministries. However, project logos were not permitted under our Branding and Marking Plan.

- When working within education systems undergoing change, be aware that potential shortfalls in both human and financial resources will likely occur, especially in the face of scaling up. Contingencies for resourcing potential or anticipated shortfalls should be discussed with the Ministry, and plans for mitigating the effects of those shortfalls agreed upon early.

Teaching and Learning Materials

- The original A4 size of the pupil's books meant that books were damaged coming to and from school, because they could not fit easily into children's bags. To address these issues, L3 resized the books to B5 and printed the subsequent P1 and P2 books by terms (Terms 1, 2, and 3). Reducing the book size not only made books more practical for children to carry but also ensured that a single lost book in the series would not affect the entire school year for that child.

- In calculating the number of pupil books for printing and distribution, L3 initially relied on REB statistics but quickly found the data underrepresented actual numbers of students. With an emerging Education Management Information Systems (EMIS) environment, we found triangulating EMIS data on student populations with that we solicited from SEOs and headteachers prior to procurement of materials was essential to obtaining solid estimates of annual book publishing requirements.

- With today's print technology, the difference in cost between printing in full color vs. black and white is insignificant. Full-color books which are being produced in large quantities should be the standard, as it is likely to increase the interest and attention of the learner without incurring significant additional expense.

- The cost-benefit of procuring an extra cache of books to support ancillary initiatives, e.g., the Community Literacy Volunteer Program, should be a consideration for future programs.

- Developing culturally representative and sensitive materials, as well as promoting and building capacity of local authors and illustrators, is key to building ownership and sustainability.

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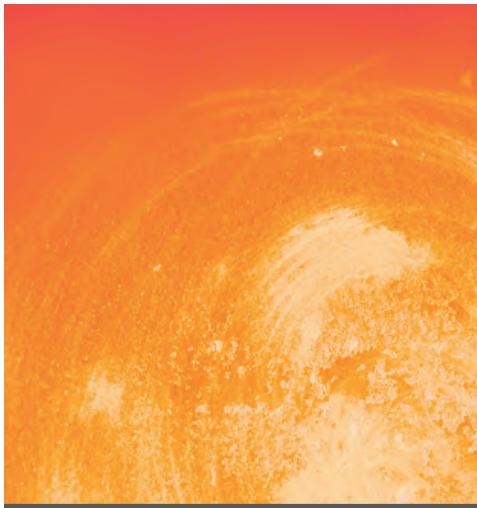
Audio- and video-based resources for teachers modeling best teacher and school leadership practices were an important and cost-effective supplement.

Providing Technology to Enhance Learning for Students and Teachers

- When designing interactive audio lessons, consider how the teacher is likely to use them, in concert with how the designer would prefer them to be used. As necessary, modify the design, so teachers will use them to their best advantage.

- Creating and distributing SD cards fully loaded with the P1 and P2 English, Kinyarwanda, and mathematics resource materials was invaluable to the SBMs, head teachers, and teachers. Rather than purchasing new SD cards when the new P3 content was developed, L3 collected and reloaded the original cards, a process we found both practical and cost-effective.

- While it is hoped that equipment will be well maintained, breakage and loss are inevitable. In addition, the climate of the region must be considered before purchasing equipment. When planning to introduce new technology into the school system on a large scale, discuss with key stakeholders the specifications and implications at the planning stage, so realistic, agreed-upon policies and practices are put in place to ensure proper maintenance and upkeep of the resources and their successful use in the long term.

In-service Teacher Training

- Well-designed audio- and video-based resources for teachers that model best teaching and school leadership practices were an important, cost-effective supplement to other modes of in-service teacher training and an intervention we recommend replicating in the future.

- The L3 Initiative established Teacher Resource Centers (TRCs) in each Teacher Training College, which teachers in schools in their immediate vicinity could access. In the future, it would be worth to consider the use of teacher training colleges as resource hubs that, in turn, serve to support teacher resource centers in all of the schools within their catchment areas. This would increase accessibility and use by teachers and provide greater visibility within the community.

Preservice Teacher Training

- Infusing new curriculum training in preservice institutions not only better prepares student teachers to enter the work environment but also reduces the level of effort required to train in-service teachers on the same curriculum in the future.

- TTCs should be used as a resource for continuing professional development. Their tutors should conduct in-service teacher training, not only as a resource for in-service teachers but also to ensure TTC tutors stay abreast of current best practices and realities on the ground in the schools.

Investing in School Leadership

- We encourage future initiatives to further strengthen the support and training of head teachers to ensure fidelity to implementation and sustainability of best practices.

Community Engagement

• Training only two members of a large SGAC was found not to be sufficient or sustainable to ensure institutionalization of the learning and practices being put in place. We ultimately used and recommend the use of a SGAC training model that includes a core five-member team—the SGAC president (a parent), the vice president (a teacher), the secretary (head teacher), a teacher representative, and school owner or SEO, to better ensure institutionalization of best practices.

• We found that government-provided School-based Mentors did not have the time to deliver effective training to SGACs. Therefore, the use of Community-Based Facilitators (CBFs) was an effective strategy for training, supporting, and motivating SGACs to promote and maintain engagement in education within the communities. We recommend this strategy until such time as government staff are provided.

Mobile Libraries

• The support of Peace Corps Volunteers (PCVs) was instrumental in establishing and resourcing community libraries during the initial stage. However, in the long run, having a local community member serve as the manager proved more sustainable.

• Establishing libraries within established organizations and structures is more practical and sustainable than trying to establish mobile or newly constructed libraries.

• Purchasing books for a community mobile library all at once, at the time it was established, limited the opportunity to buy additional books later on, when new titles—especially Kinyarwanda titles—became available. Reserving some funds to purchase new titles later in the life of the project would have allowed the project to provide a broader range of emerging new titles and better support local writers and businesses.

More About L3

A National Investment in Literacy:

Rebuilding Rwanda's education system focuses on strengthening reading and writing

https://go.edc.org/vklr

L3 included an application of EDC's Read Right Now literacy approach, an adaptable, evidence-based program for resource-lean and low-capacity environments. For more information on Read Right Now, visit rrn.edc.org.