

Teaching and Learning in Fragile Contexts (TLFC) Policy Brief



Leveraging Telecommunication Models and Policy Frameworks to Enhance Literacy and Learning Outcomes in Refugee Camps in Rwanda

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Musanze, June 2026



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EXECUTIVE SUMMARY

Rwanda hosts more than 120,000 refugees living in camps and urban settlements. Over the last decade, the Government of Rwanda has adopted progressive policies promoting inclusive education and refugee integration into the national education system. Refugee learners attend public schools, follow the national curriculum, and sit for the same national examinations as Rwandan learners. Despite these achievements, significant disparities remain in learning outcomes, literacy development, access to educational resources, and educational continuity.

The research project entitled *Leveraging Telecommunication Models and Policy Frameworks to Enhance Literacy and Learning Outcomes in Refugee Camps in Rwanda* examined how telecommunication technologies and digital learning approaches can improve literacy and educational outcomes among refugee learners. The study was implemented under the Teaching and Learning in Fragile Contexts (TLFC) programme and focused on five refugee camps: Mahama, Kiziba, Nyabiheke, Mugombwa, and Kigeme/Kitabi.

The study was motivated by persistent challenges affecting refugee education, including overcrowded classrooms, shortages of qualified teachers, limited access to ICT infrastructure, weak English language proficiency, poverty, trauma, early pregnancy, and inadequate learning resources. While Rwanda has invested heavily in digital transformation and educational technology, little evidence existed regarding how telecommunication technologies could be effectively adapted to refugee settings and aligned with national education policies.

Using a mixed-methods approach, the research involved 334 participants, including students, teachers, school leaders, parents, education officials, camp coordinators, and development partners. Surveys, interviews, focus group discussions, observations, and policy reviews were conducted to assess educational barriers, ICT interventions, policy implementation, and literacy outcomes.

The project also designed and implemented an innovative educational intervention in Mahama Refugee Camp. Students from Groupe Scolaire Paysanat L developed and performed a drama lesson addressing early pregnancy prevention, learner protection, responsible decision-making, and school retention. The lesson was subsequently digitized and uploaded to online learning platforms managed by INES-Ruhengeri and the Rwanda Education Board (REB), demonstrating how technology can expand access to educational content beyond traditional classroom settings.

The findings reveal that telecommunication technologies have significant potential to enhance learning in refugee contexts. Existing initiatives such as Smart Classrooms, Profuturo digital learning programmes, online educational resources, and ICT training programmes have improved learner engagement, teacher effectiveness, and digital

literacy. The study found positive associations between ICT access and literacy outcomes, while participants consistently reported increased motivation, participation, and learning confidence when technology-supported approaches were used.

The drama intervention demonstrated particularly strong results. Stakeholders rated its effectiveness at 4.95 out of 5, with over 95% of participants reporting positive changes in educational motivation, awareness of early pregnancy risks, learner protection, and commitment to education. The intervention also strengthened communication between learners, teachers, parents, and community members.

The study concludes that technology can significantly strengthen refugee education when accompanied by strong policy implementation, teacher professional development, sustainable infrastructure investment, and active community engagement. The findings provide evidence-based recommendations for government institutions, humanitarian organizations, schools, and development partners seeking to improve educational quality and equity in fragile contexts.

CONTEXT

Rwanda has emerged as one of Africa's leading countries in refugee inclusion and educational integration. Refugee children are enrolled in national schools and have access to certified education pathways. This approach aligns with Rwanda's Vision 2050, the Education Sector Strategic Plan (ESSP 2023–2028), and international commitments under Sustainable Development Goal 4 (SDG 4) and the Global Compact on Refugees.

Despite this progressive framework, refugee learners continue to face substantial educational barriers. Many schools operate under conditions of overcrowding, with classroom ratios reaching as high as 75 learners per teacher. Limited access to textbooks, computers, internet connectivity, electricity, and qualified teachers further constrains learning opportunities. Language barriers particularly affect learners transitioning from French or Arabic-speaking backgrounds into English-medium instruction.

The increasing availability of telecommunications infrastructure in Rwanda presents an opportunity to address these challenges through digital learning approaches. Mobile devices, educational radio, online learning platforms, satellite connectivity, and digital content can help overcome geographical, resource, and instructional limitations while improving access to quality learning opportunities.

This study therefore sought to understand how telecommunication technologies could be effectively integrated into refugee education systems and aligned with national policies to improve literacy and learning outcomes.

RESEARCH METHODOLOGY

The study adopted a mixed-methods research design to provide comprehensive evidence on educational challenges, technology use, and learning outcomes.

Study Sites

Research was conducted in:

- Mahama Refugee Camp
- Kiziba Refugee Camp
- Nyabiheke Refugee Camp
- Mugombwa Refugee Camp
- Kigeme/Kitabi Refugee Camp

Table 1: Research participants

Participant Category	Number
Students	220
Teachers	58
School Leaders	18
Parents	20
Education Officials	10
NGO and Camp Education Staff	8
Total	334

Data Collection Methods

The study employed multiple complementary methods:

- Questionnaires and surveys
- Literacy and learning assessments
- Key Informant Interviews
- Focus Group Discussions
- Observation
- Policy document analysis
- Educational intervention assessment

Educational Intervention

The project developed a drama-based educational lesson focused on:

- Early pregnancy prevention
- Responsible decision-making
- Learner protection
- School retention
- Educational aspirations

The lesson was performed by students from GS Paysanat L and later digitized for broader dissemination through online learning platforms.

KEY FINDINGS

1. Educational Barriers Remain Significant

The study found that refugee learners continue to face interconnected challenges affecting learning outcomes. The findings demonstrate that educational challenges are multidimensional and require coordinated responses involving education, protection, technology, and community support systems.

Table 2: Major Educational Barriers Identified

Barrier	Findings
Overcrowding	Class sizes up to 75 learners per teacher
Teacher shortages	Limited qualified teaching staff
Language barriers	Weak English proficiency among learners and teachers
ICT limitations	Inadequate devices and connectivity
Poverty	Affects attendance and learning continuity
Early pregnancy	Threatens girls' retention and completion
Trauma and displacement	Affect concentration and wellbeing

"Many learners are motivated, but they lack sufficient learning resources and opportunities to practice English."

2. Telecommunication Technologies Improve Learning Opportunities

"Technology allows students to continue learning even when classroom resources are limited."

Digital technologies are increasingly supporting education within refugee camps. Participants consistently reported that digital tools enhanced learner participation, strengthened motivation, and supported independent learning. Teachers indicated that digital content made lessons more interactive and improved classroom management.

Table 3: Perceived Benefits of ICT Interventions

ICT Intervention	Main Benefits
Smart Classrooms	Improved lesson delivery
Profuturo	Increased learner engagement
Online resources	Expanded learning opportunities
ICT training	Improved digital competencies
Smartphones	Self-directed learning

3. Drama-Based Learning Demonstrated High Effectiveness

The educational drama developed under the project generated strong positive responses among stakeholders. Participants viewed the drama as realistic, engaging, and highly relevant to issues affecting refugee youth.

Table 4: Audience Reception of the Drama

Indicator	Mean Score (/5)
Interest and engagement	4.93
Understanding of messages	4.93
Effectiveness of actors	4.95
Real-life relevance	4.95
Educational value	4.91
Overall Mean	4.93

"The role played by each actor helped deliver the message in a way that everyone could understand."

4. Knowledge and Behaviour Change Outcomes

The intervention strengthened awareness and promoted positive behavioural intentions. Participants reported improved understanding of how personal decisions affect educational opportunities and future wellbeing.

Table 5: Knowledge and Behaviour Outcomes

Outcome	Mean Score (/5)
Understanding causes of early pregnancy	4.89
Understanding consequences	4.93
Understanding prevention strategies	4.93
Better decision-making	4.95
Positive values development	4.95
Reduction of risky behaviours	4.93

5. Positive Educational Outcomes

The intervention was strongly associated with improved educational attitudes and aspirations. Participants emphasized the importance of remaining in school and pursuing long-term educational goals.

Table 6: Reported Educational Changes

Educational Outcome	Percentage Reporting Major Change
Increased motivation	95.30%
Improved literacy development	95.30%
Improved retention	95.20%
Increased love for education	95.30%
Better academic aspirations	95%

“Girls who continue their education can achieve their dreams and build a better future.”

6. Family and Community Support Improved

The intervention contributed to stronger engagement among parents and community members. The findings suggest that educational interventions can influence not only learners but also the wider social environment that supports learning.

Table 7: Family and Community Outcomes

Outcome	Mean Score (/5)
Discussion about early pregnancy	4.98
Parental support for schooling	5
Community responsibility	4.95
Awareness of education importance	5
Supportive learning environment	5

7. Policy Alignment is Strong but Implementation Gaps Persist

Rwanda possesses strong policy frameworks supporting inclusive and technology-enabled education. However, implementation challenges remain in refugee settings due to limited resources, insufficient infrastructure, weak coordination mechanisms, and inadequate monitoring systems. Relevant policies include:

- Vision 2050
- ESSP 2023–2028
- Smart Education Strategy
- ICT in Education Policy
- Refugee Inclusion Frameworks

KEY RECOMMENDATIONS

1. Expand ICT Infrastructure

Government and development partners should extend Smart Classrooms, computer laboratories, internet connectivity, and solar-powered learning facilities to all refugee camps.

2. Strengthen Teacher Capacity

Continuous professional development should focus on:

- ICT integration
- Digital pedagogy
- English language proficiency
- Inclusive education
- Teaching in fragile contexts

3. Develop a Refugee-Specific ICT-in-Education Strategy

National digital education policies should be adapted to reflect refugee realities, including language diversity, mobility, connectivity challenges, and resource constraints.

4. Institutionalize Creative and Digital Learning Approaches

Drama-based learning, digital storytelling, online lessons, and learner-centred methodologies should be integrated into refugee education programmes.

5. Strengthen Multi-Stakeholder Coordination

MINEDUC, REB, NESAC, MINEMA, UNHCR, NGOs, universities, and telecommunications companies should establish stronger coordination mechanisms to support sustainable implementation and scaling.

ACKNOWLEDGEMENTS

This research was funded through the Teaching and Learning in Fragile Contexts (TLFC) initiative implemented by CODE with support from the Government of Canada. The research team expresses sincere gratitude to MINEMA, NCST, REB, INES-Ruhengeri, UNHCR, refugee camp authorities, school leaders, teachers, learners, parents, and all stakeholders who participated in the study. Their contributions were essential to generating the evidence and lessons presented in this policy brief. Special appreciation is extended to the students and staff of Groupe Scolaire Paysanat L for their active participation in the educational drama intervention and knowledge dissemination activities.

The views expressed in this work are those of the creators and do not necessarily represent those of CODE, Global Affairs Canada (GAC) or the Government of Canada. This work was carried out with the aid of a grant from Global Affairs Canada.

Download the full research report at: <https://code.ngo/tlfcresearch/>.

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