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EMBRACE INTERNATIONAL FOUNDATION

# Inclusive e-Learning for Ugandan Youth

## Context

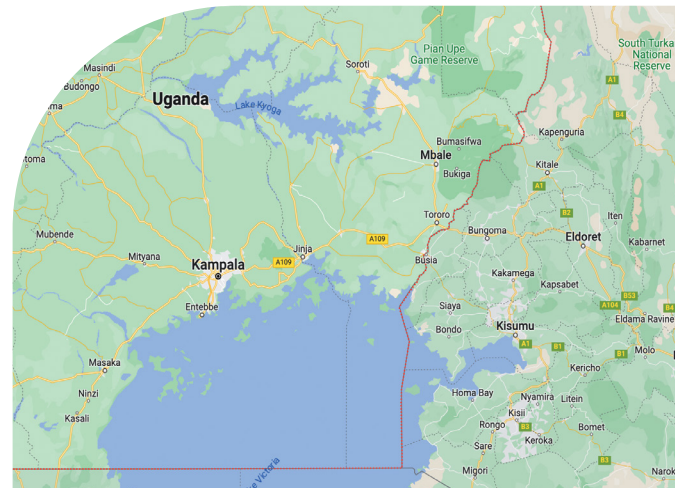
In rural Uganda, the intersection of gender and disability creates a significant obstacle for children in school. Overcrowded classrooms, inadequate resources and poorly trained teachers result in poor learning outcomes for this marginalized group of students. Although girls represent 50% of enrollment, their dropout rates are higher than those of boys. Additionally, enrollment of children with disabilities (CwD) in primary school is only 9% nationally, but in the remote rural Rwenzori Region of Western Uganda, enrolment is less than 4%.

## The Innovative Solution

Supported by FIT, Embrace International Foundation and their local partners Kyaninga Child Development Centre (KCDC) tested a solution to improve learning outcomes for rural Ugandan children via self-directed e-Learning. E-Learning Labs were established using the RACHEL (Remote Area Community Hotspot for Education and Learning) digital server with a digital library which connected wirelessly to a set of tablets in a classroom space without Internet connection. The innovation also aimed to increase equitable access and enrollment rates to quality education for CwDs. For example, by the end of the project, the enrollment rate of CWD was increased. In addition, the dropout rate for the same children in intervention schools (both for math and literacy) greatly reduced.

## Advancing Gender Equality

The gender equality (GE) strategy supported increased access to quality education and retention of girls and CwDs in schools by: 1) Setting specific gender equality outcomes for girls, including those living with disabilities; 2) Mainstreaming GE and girls' rights considerations across all interventions; 3) Having input from a GE advisor to ensure integration of GE throughout the project; 4) Developing gender and inclusion evidence using gender sensitive project data in monitoring, analysis and dissemination; 5) Providing GE and inclusion capacity training to partner members, research staff and Educational Assistants; and 6) Ensuring that e-learning labs are a safe space for girls, including CwDs, to take advantage of self-directed e-learning opportunities.



**COUNTRY**  
Uganda

**AMOUNT**  
\$213,814

**TESTING PERIOD**  
12 months  
Ended August 2022



**GENDER RESPONSIVE (GE2)**

**THEME: EDUCATION**

# Testing Framework

The innovation was tested via cognitive and non-cognitive skills testing in 10 schools – 7 intervention schools and 3 control. Students wrote math and literacy tests and completed Chedoke McMaster Attitude towards Children with Handicaps (CATCH) questionnaires about their attitudes towards disability. Interviews were conducted with each student, including general questions about their attitude towards school, gender and their daily life, and specific questions were asked pertaining to intrinsic motivation, self-confidence, and level of aspiration.

## Results and Impact

- The endline testing was conducted with 1,211 grade 6 to 7 students in the Rwenzori Region of Western Uganda. This included math and literacy tests and student interviews that explored future aspirations, attitudes to school and learning, and gender equality. Overall, data indicated that students in intervention schools had greater improvement in both math and literacy scores compared to control schools.
- Girl students in intervention schools improved their average math scores by 30% compared to those in control schools, who improved by 17%. Similarly, boys showed a higher rate of improvement in intervention schools (25%) compared to 17% in control schools for average math scores. The average literacy score for intervention students was 83% compared to 86% for control students, however, the increase in scores was higher in intervention schools (23%) compared to 17% in control schools.
- There was a significant improvement in the performance of students with hearing impairments in intervention schools compared to baseline, which is attributed to the extra content added on the RACHEL server to cater for the needs of these students. Students in intervention schools also demonstrated a greater commitment to gender equality than in control schools.
- Intervention students were able to master the use of their tablets and the RACHELS, which helped them to explore self-directed e-Learning. For example, the percentage of intervention students who liked to “do extra work because they really like to learn new things” was significantly higher than for control students - 35% compared to 94.3% of intervention CwDs.
- About 80% of eligible students attended at least 2 hrs of weekly e-Learning labs. The results indicated a lower failure rate for CwDs. It was noted that 6% of CwD scored in the top tier in 2021, however this increased to 76% in 2022. The students with hearing issues in the intervention schools also enjoyed a significant improvement with 6% scoring in the top tier in 2021 and 60% in 2022. Overall, there was 10% reduction in dropout rates in intervention schools compared to control schools. Enrolment rates for CwDs increased from 4% to 11%.

## Key Lessons

1. The noteworthy success of students with hearing issues implies that to improve education outcomes amongst children with disabilities, special attention must be put in place to ensure specific educational content is designed and tailored to specific disabilities.
2. Education Assistants were pivotal in creating a culture of non-violence in e-Learning labs where students were encouraged to ask questions without being ashamed of not understanding material.
3. It is likely that students’ experiences in after school e-Learning labs may have contributed to positive attitudes towards gender equality, as boys and girls learned new and exciting computer and research skills side by side in their classrooms.

### PARTNER ORGANIZATION

Kyaninga Child Development Centre (KCDC)

### TARGET PARTICIPANTS

1,211 Children (678 Girls, 533 Boys). These included 163 Children with Disabilities (CwDs), 1048 Children without Disabilities (CwoDs).

### FOR MORE INFORMATION

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### ABOUT FIT

The Fund for Innovation and Transformation supports Canadian small and medium-sized organizations (SMOs) testing innovative solutions that advance gender equality in the Global South.



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Participants talked about the need to stop bullying in schools and recognized the right of CwDs to study.

Some of the parents of CwDs were quoted saying: “Children with disabilities should study alongside their peers but teachers should be strict on bullying”.