Responsible Digital Development: Rwanda

November 18, 2024

Presentation on **“The Use of Technology in Education- Gender Gap”**

Outline

Technology Can Unlock Solutions to Rwanda's Education Challenges

Research Question:

- How can technology-driven solutions address gender gaps to ensure equitable and high-quality education for primary learners in Rwanda?

Problem Statement:

- Gender Equity in digital literacy and educational outcomes

Rwanda's Long-Term Education Goals:

- Providing equitable access to high-quality education in Rwanda
- Future-proofing the education system
- Improving human capital through education
- Developing in-demand skills driving the economy

Theory of Change: If we leverage technology effectively (scalability, accessibility & inclusion), then we can:

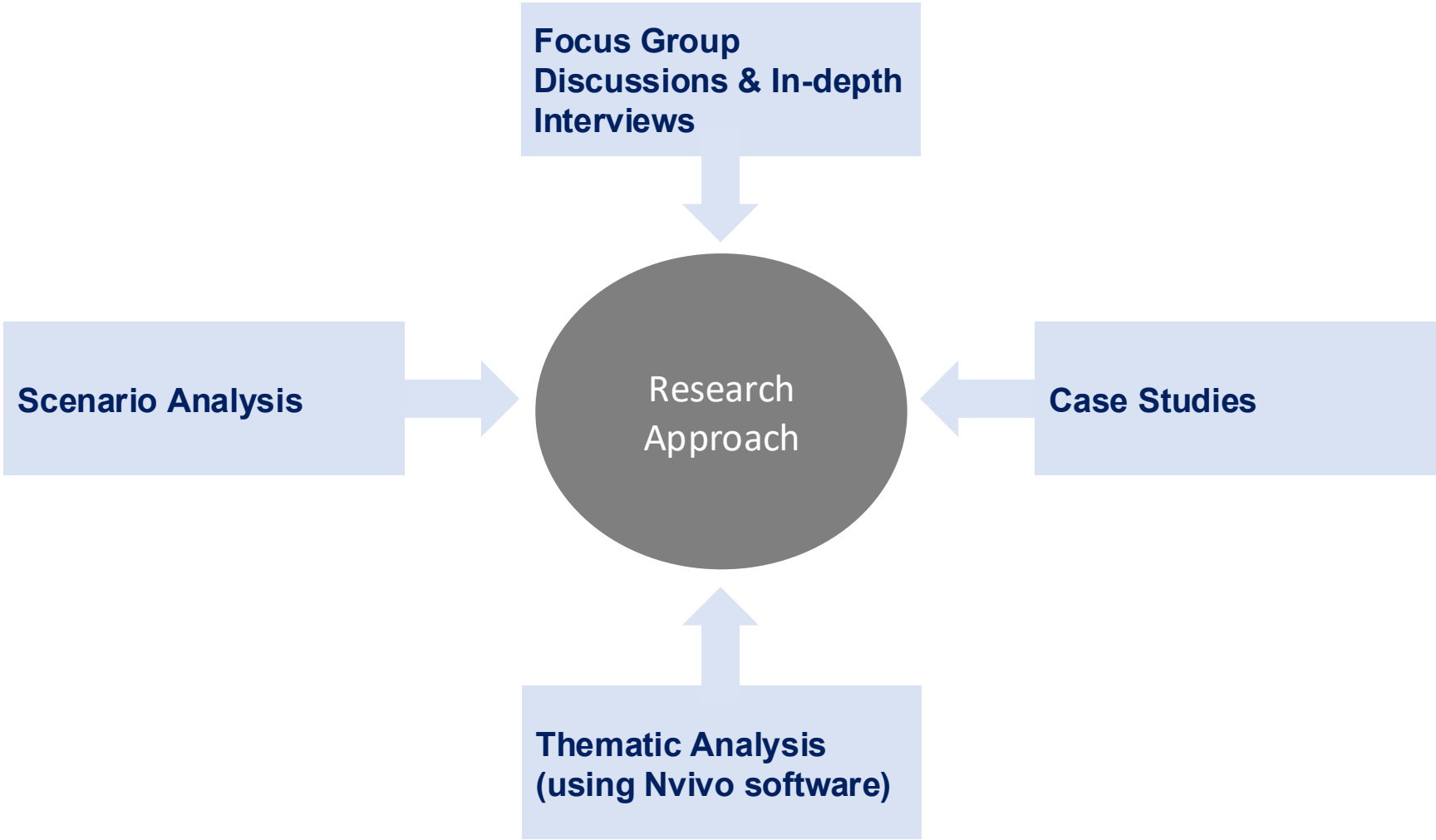
- Provide equitable access to quality education
- Address systemic barriers that hinder learning outcomes
- Build a tech-driven foundation for Rwanda's knowledge economy
- Improve learning outcomes as an intermediate step toward a knowledge-based economy and society

Advancing digital education aligns directly with Rwanda's Vision 2050 plan of creating a knowledge-based economy, where equitable access to education drives inclusive growth.

Rationale of Focus/ Why This Work Matters: Aligning With Rwanda's Vision 2050 goals: innovation, technology, and sustainable development.

- 74% female vs. 64% male in primary school completion rate
- 63.75% of Rwanda's Chamber of Deputies is female - amongst the highest in the region

Our multidimensional approach is grounded in grassroots voices and robust analytical frameworks to ensure our recommendations are both relevant and scalable for Rwanda



Case Studies

Sierra Leone

- International organizations provided solar-powered radios during Ebola outbreak in 2014 for education
- Government provided solar-powered radios to discuss social issues in 2019

Nigeria

- Utilization of USSD (text message requests for services) as low-tech solution for low-connectivity communities
- Especially useful during COVID

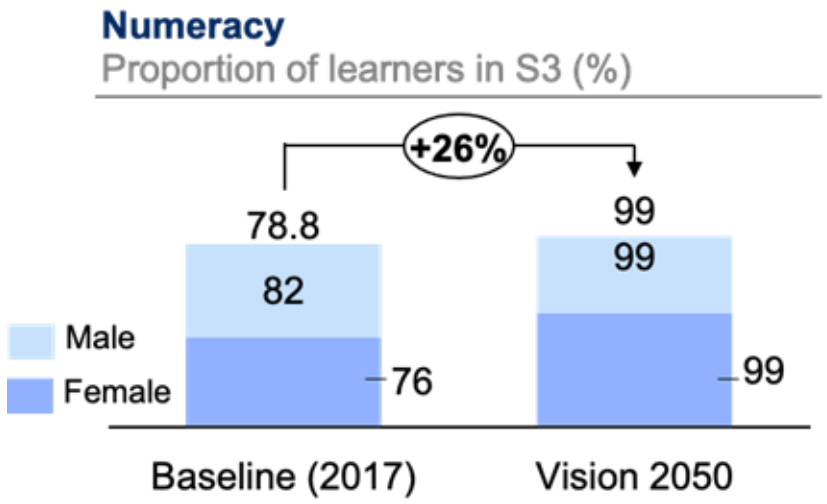
Kenya

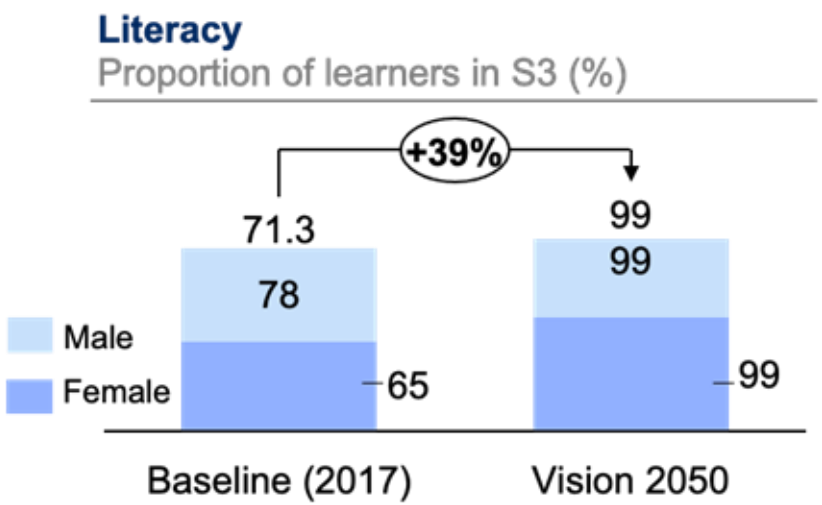
- Kenya's DigiSchool program has increased internet connectivity for schools, woven digital content into the curriculum, provided training for teachers, and provided digital devices and infrastructure

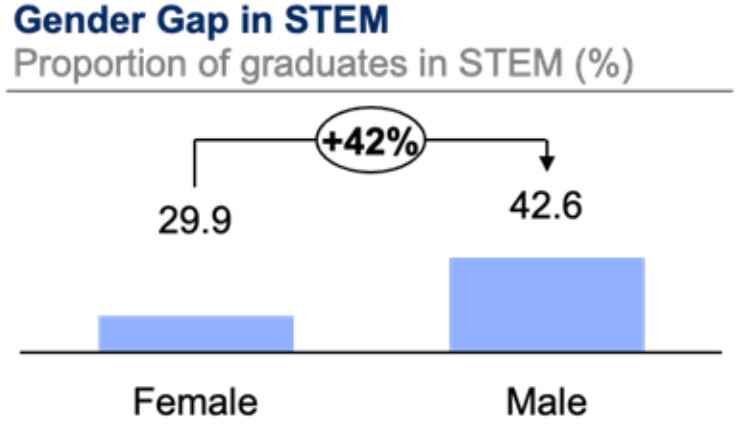
Gender results show Rwanda has achieved gender parity in school enrollment, a strong foundation for addressing learning outcomes

Emerging Themes	Direct Quotations from interviews
Gender Parity in School Access is a Rwandan Success Story	• Females have the same level of opportunities as male counterparts in access to schools • *"The Rwandan government, schools, and individual teachers are very conscious about gender equality … girls are offered an equal opportunity to use the tools that are available"*
International org. play a key role in female centric programs on STEM	• *"... amazing project where [Mentor] she goes to schools and universities and talk to girls and women about STEM programs"* • *"One of our primary goals that we're crafting for the year ahead is honing in on digital literacy and STEM programs"* • *"they [female students] come back with partnerships and many of them become business owners so they grow …"*
Widespread Social Media adoption (Facebook, Whatsapp)	• Facebook serves as a space for informational campaigns, educational updates, and professional networking for teachers and students alike

Despite equal access, females lag in numeracy, literacy, and STEM, highlighting a critical area for intervention

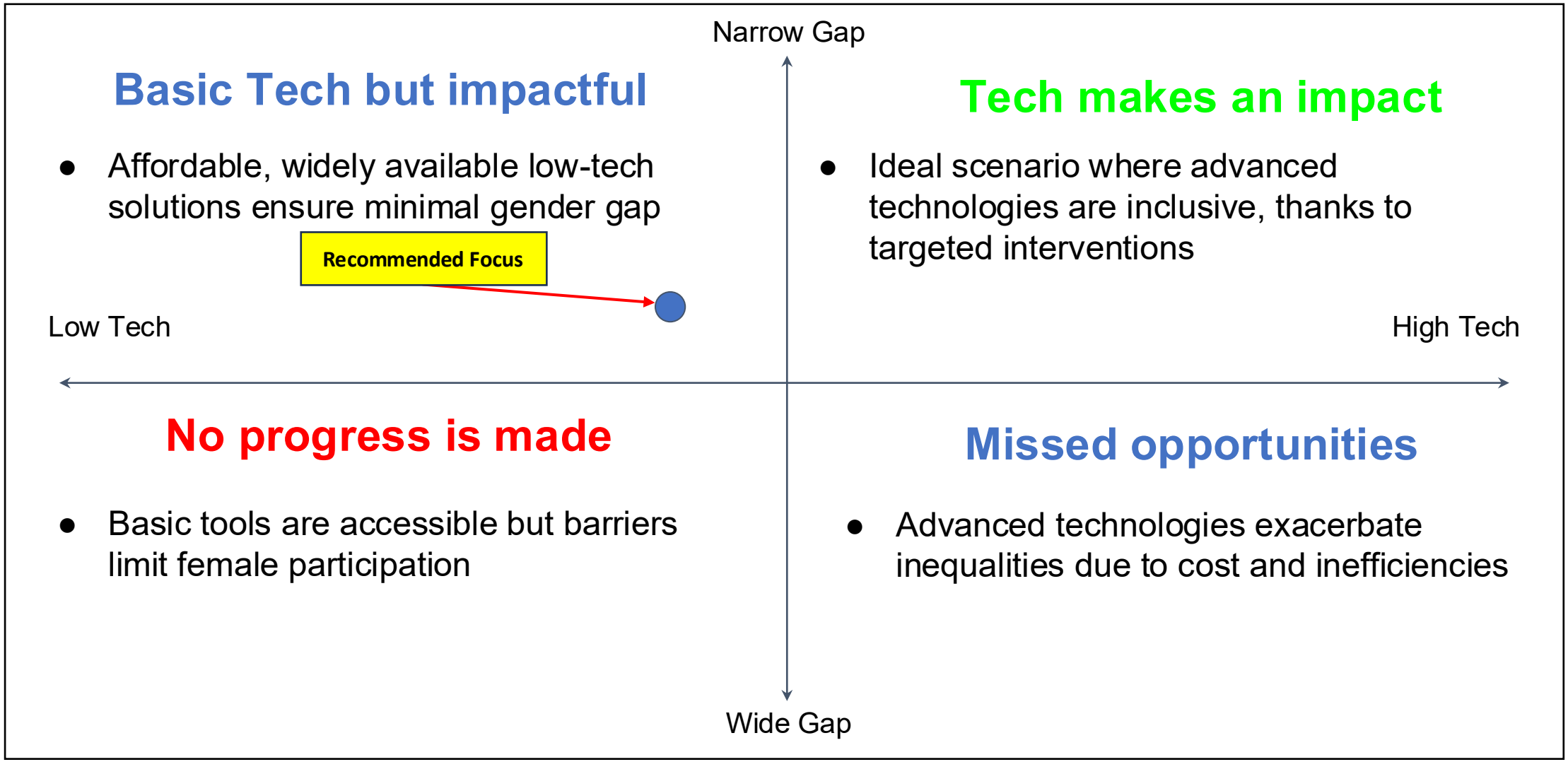






Source: Own computation using data from Rwanda Vision 2050

Low-tech, narrow-gap solutions are achievable and impactful in closing gender gaps in learning outcomes



Practical, low-tech interventions can drive immediate impact in closing gender learning gaps while setting the stage for future tech advancements

Leverage simple, low-tech solutions

- Partner with **2 mobile network operators** by **mid-2025** to create at **least three USSD-based educational platforms** with zero-rated access, targeting **70% coverage**
- Integrate gender-sensitive content on **2 online platforms** to **encourage female** students' participation in STEM subjects by **mid-2025**

Export the Rwanda Model

- **By 2027,** Rwanda will share its education model with a**t least 5 East and Central African countries t**hrough annual regional workshops, training programs, and policy exchanges, aiming to enhance quality education systems and achieve a **20% improvement in gender parity** metrics across participating nations, aligning with UN Sustainable Development Goal 4.

Build a network of community-led initiatives

- Collaborate with at **least 50 existing community-led initiatives** across Rwanda to strengthen peer-learning networks for **10,000 girls, integrate mentorship from 500 female STEM role models**, and implement digital safety workshops within these initiatives to ensure a secure and inclusive learning environment by **Q4 2026**.
- Create **safeguards** to ensure **safety** of all in the digital space

Summary of our findings show that advancing Equity Requires an Integrated Approach Across All Levels

	Recommendations	Value-add to Rwanda and Grassroot Benefits
Gender Gap	• Since High-tech solutions may be too ambitious given Rwanda's current digital infrastructure, Low-tech solutions like SMS-based learning, radio-based education programs, and USSD platforms, align with existing mobile networks and have high penetration • Initiatives in Schools and Communities	• Rwanda can **export** its model to other countries, particularly those in East and Central Africa, positioning itself as an education hub in Africa. By sharing best practices, offering training programs, and facilitating regional cooperation, • Rwanda will not only elevate its regional influence but global on the **UN's Sustainable Development Goal 4** of quality education for all

Timeline/ Checklist -Progress report timeline showing milestones and achievements

August 2024

- Class midterm (foundation set)
- Initial meetings with PI
- Creation of workplan

September 2024

- Develop **research tools/ guide**
- Send out interview requests to stakeholders

October 2024

- Conduct interviews/analysis
- Work on draft presentation
- Work on Literature review

November 2024

- Finalize virtual interviews
- **Give presentation**
- Submit presentation for feedback

Presentation Day (11/18)

December 2024

- Submit draft report to PI
- Continue research and interviews based on feedback

January 2025

- Rwanda Site Visit 01/04-11
- Give final presentation to client
- Submit final paper to Client

Roadblocks/ lessons learned - Roadblocks to Progress Are Challenges We Can Overcome

Roadblocks	Details
Weak connectivity hindered meetings	• Interviewees experienced slow internet and power outages.
Large-scale events limited interviewee availability	• The Marburg outbreak and the World Bank Annual Meeting made scheduling difficult.
Disconnect between large institutions and communities	• Institutions were unaware of on-the-ground realities and had no direct communication lines.

Lessons	Details
Use varied media	• Email, text, and Zoom provided different levels of connectivity and response rates
Be flexible and patient	• It was necessary to reschedule meetings and stay on top of interview requests
Find diverse stakeholders	• Micro-, mezzo-, and macro-level stakeholders offered varying perspectives and experiences

The next steps will involve follow up interviews with our diverse stakeholders and incorporating feedback

Action plan- Immediate actions to translate insights into impact.

Step 1

- Feedback
  - Incorporate feedback from PI

Step 2

- Site visit
  - Present to our clients/ stakeholders in Rwanda

Step 3

- Final submission
  - Submit report to our clients for implementation