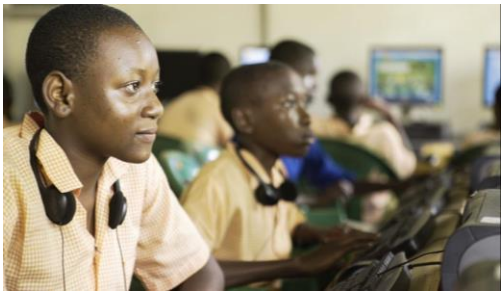
iMlango



Duration:
May 2015 – June 2021

Activity Goals:
iMlango was designed to achieve three overarching outcomes: learning (numeracy and literacy), transition and sustainability. Key project objectives included improved primary school attendance and quality of teaching (using ICT), girls' learning progress, improved life skills and increased use of project data to inform decision-making.

Implementing Partner:
Avanti Communications, Whizz Education, sQuid, and Camara Education.

Key Partners:
Ministry of Education, United Kingdom's Department for International Development (DFID), Kenya Institute for Curriculum Development

Activity Locations:
The project was operational in four Kenyan counties: Kajiado, Kilifi, Makueni and Uasin Gishu

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ACTIVITY OVERVIEW

iMlango (a word derived from the Swahili for doorway or portal) was a private sector-led project funded by UK Aid. It aimed to help 100,000 marginalised girls improve their learning and transition to the next stage of education, through the innovative use of technology. The project was delivered by a consortium of partners, led by global satellite operator Avanti Communications, alongside Whizz Education (maths learning outcomes lead), sQuid (the digital transactions and online portal provider), and Camara Education (hardware infrastructure). The project was conducted as part of a Randomised Control Trial (RCT) (with the endline extract provided for reference below).

The project provided schools with satellite broadband and computer labs which allowed students to use an online portal for personalized adaptive learning in maths and online learning in literacy. The project generated real-time data on student attendance and also on their learning progress, so the teaching content could be tailored to each individual child. It also provided a loan scheme for parents as part of the project's microfinance initiative, working with mothers in the communities.

The project was implemented in 205 primary schools and reached over 100,000 students. The project was operational in four Kenyan counties: Kajiado, Kilifi, Makueni and Uasin Gishu. These regions were selected on the basis that they represent a cross-section of the type of situations driving marginalisation of girls in the more rural regions of Kenya. The majority of the schools were located in rural settings, with some schools situated in peri-urban regions.

School-based challenges in these regions included poor quality teaching and learning environments, whilst communities were also found to face financial barriers such as unemployment and poverty and an inability to afford tuition fees. Other factors identified to be key barriers to girls' education were a lack of perceived value of education and aspirations, entrenched social attitudes surrounding girls' schooling and dropout rates as a result of teenage pregnancies and early marriages. iMlango was designed to achieve three overarching outcomes: learning (numeracy and literacy), transition and sustainability.

ACTIVITY AREAS

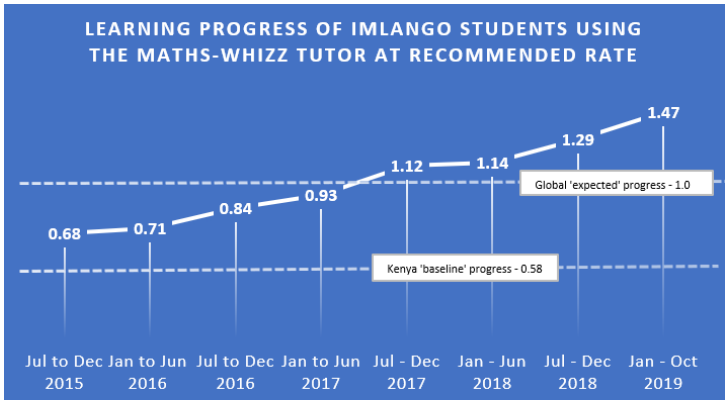
iMlango a comprehensive education programme was delivered by a ground-breaking partnership of public and private sector organisations, with the aim to improve Kenyan pupils' learning outcomes, enrolment and retention through the delivery of:

- High-speed satellite broadband connectivity to schools.
- Individualised adaptive maths tutoring alongside digital learning content for literacy and life skills.
- Continuous training and support to teachers to use best practice to integrate ICT into schools' learning processes.
- In-field teams to provide educational support to teachers and leadership guidance to headteachers.
- Electronic attendance monitoring with digital semi-conditional payments to incentivise families to send their daughters to school – with the money used at local merchants.
- In-field teams to support the schools and ensure timely technical maintenance.
- Real-time project monitoring and measurement.

WHIZZ EDUCATION FOCUS

As the learning outcome lead, Whizz Education provided education expertise, teacher training and capacity building and deployed an adaptive learning platform for individualised learning in mathematics, aligned to the Kenyan curriculum, approved by KICD, for 100,000 students. Both Whizz and sQuid provided in-field capacity to support schools and school leaders with implementation.

ACTIVITY IMPACT



- Proof of contextual efficacy: A near tripling of students' rates of maths learning (measurable learning outcomes) when they are given recommended access to individualised learning with the Maths-Whizz Tutor. Further data and insight available upon request.
- Increased teachers' capacity to effectively integrate ICTs in teaching and learning mathematics in an interactive way.
- Improved teachers' pedagogical skills and practice, ultimately supporting their employability.
- School leadership has improved experience/knowledge to integrate technologies effectively into the learning process.
- Increased parental/community engagement within the learning process.

"We thank you iMlango for being in our school.
You have improved our teaching and learning methodology." — Faith Mutual, Teacher, Utithini Primary School

EXTRACT FROM IMLANGO ENDLINE 2022

Here is a summary of the key insights and findings from the iMlango 2022 endline report related to numeracy and mathematics learning outcomes (full report available at https://girlseducationchallenge.org/media/3o0bf4kk/imlango-gect-endline-evaluation.pdf):

Key Insights and Trends:

1. **Impact of Maths-Whizz on Numeracy Skills**:
    - The report highlights those students using the **Maths-Whizz** platform showed notable improvements in their numeracy skills. In particular, students who used Maths-Whizz demonstrated accelerated learning rates in comparison to students without access to the tool.
    - **82% of students** attributed improvements in their mathematics grades to the Maths-Whizz Tutor, reinforcing the positive role that individualised learning can play in advancing students' numeracy.
2. **Progression in Maths Age**:
    - Data revealed that students engaging with Maths-Whizz experienced an **annual progression rate of 1.47 years** in the first year of the project. Without access to Maths-Whizz, the standard rate of progress in Maths Age was significantly lower, at **0.58 years**. For example, students in Grade 4 who used Maths-Whizz were projected to reach a **Maths Age of 12.61** by Year 4, compared to just **9.91** for those without access to the tool.
3. **Self-Reported Learning Gains**:
    - **75% of students** reported that they were performing better in their schoolwork in 2021 than in previous years, despite challenges posed by the COVID-19 pandemic. This improvement in self-reported performance reflects both general and subject-specific learning gains in mathematics.
4. **Subgroup Performance**:
    - Analysis of subgroups, particularly those who used Maths-Whizz effectively (e.g., students engaging for at least 15 minutes per week), demonstrated statistically significant improvements in their numeracy scores.
    - For instance, Group A students with 15 minutes of weekly usage showed an improvement of **0.418 standard deviations**, compared to the broader intervention group.

Challenges Identified:

1. **Inconsistent Usage**: The usage of Maths-Whizz varied significantly across different groups. Low engagement in some groups negatively affected the group's overall improvement in mathematics outcomes.
2. **Attrition and Sampling Issues**: High attrition rates and the small sample size limited the ability to draw broad conclusions across all groups. This issue particularly affected the statistical significance of some findings.

Recommendations:

1. **Streamline Numeracy Content**: The report recommends **focusing on numeracy activities, suggesting that the Maths-Whizz component is technically more advanced and more likely to deliver sustainable improvements in learning outcomes** compared to literacy content. This focus could maximize the program's impact and scalability.
    - **Increase Engagement with Maths-Whizz**: To improve outcomes, it is suggested that students engage more consistently with Maths-Whizz. Encouraging students to meet the **recommended 30 minutes of weekly usage** could further enhance numeracy outcomes.

In conclusion, the report underscores the **significant potential of personalised ICT-based learning platforms, such as Maths-Whizz**, in enhancing numeracy skills. While the programme achieved promising results, particularly for students who met recommended usage levels, challenges like inconsistent engagement and small sample sizes suggest areas for improvement in future iterations.