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5 mEducation Lessons Learned in BridgeIT Tanzania

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I am [Samuel Suraphel](#) and I've found that the benefits of technology to enhance learning, particularly in underserved communities, have not always been clear – or consistent. However, one such initiative – [BridgeIT](#) in Tanzania – demonstrated that while numerous challenges arose in the course of its implementation, the program demonstrated a number of positive results.

Launched in Tanzania in 2007 by the International Youth Foundation (IYF), BridgeIT was designed to significantly increase educational quality and achievement among primary school students in math, science, and life skills. The strategy: to use an innovative application of cell phones and digital technology in the classroom, with a significant emphasis on teacher training. The mission: to ensure long-term support for the initiative.

Upon the handover of BridgeIT to the Tanzanian Ministry of Education and Vocational Training (MoEVT) in March, 2012, IYF and its project partners were able to celebrate many achievements. Over 100,000 young people in 150 schools were exposed to the program in 7 regions of the country. Teachers in those schools received extensive training and refresher courses on student-centered pedagogy and mobile learning tools.

The program also provided school management committees with new tools for engaging with and enhancing the learning outcomes of the fifth and sixth graders in their school. Other features of the project included working with local consultants and production teams and increasing the capacity of the ministry's media unit to script, shoot and edit mLearning videos.

Here is the [Summative Evaluation](#) from July 2011.

The Value of Partnerships

These achievements were the result of a unique public-private partnership that operated at both a global and local level. For Elimu Kwa Teknolojia (BridgeIT's local name in Tanzania), these partners included USAID, the project funder; Nokia, the Nokia Institute for Technology, and the Vodacom Foundation; the Forum for African Women Educationalists (FAWE), who informed the program's gender responsiveness; the Pearson Foundation; and MoEVT. IYF served as the implementing partner to secure, roll-out, and monitor the necessary technical and human resources that kept the project focused on achieving improved student learning outcomes over its four years of implementation.

Though the most important objectives of the program involved the training of teachers on improved teaching and

learning strategies and gender-responsive pedagogy, IYF was also tasked to coordinate the local and global partners to move away from the more traditional learning strategies by utilizing technology and multi-media offerings in the classroom.

The unique challenges and opportunities posed by deploying these technologies offer a number of learnings and insights for future mLearning initiatives.

1. Content Creation

Early on in the implementation of BridgeIT, the program began producing local videos and animation clips that would assist in teaching Math, Science and Life skills. To produce these videos, local companies were contracted to assist in developing relevant story boards, submitting rough scripts, contracting actors, and shooting and editing the final videos.

Through this process, IYF and MoEVT worked closely with the producers to ensure that the final videos met the learning objective for the lesson, incorporated feedback from teachers and BridgeIT staff, and also met the technical specifications for the video files.

Effective relationships with local producers resulted in the production of over 100 local videos. IYF, as implementer, was able to gain insight into local private sector capacity for educational video production as well as serve as a conduit through which gaps were identified in MoEVT Media Unit's capacity to produce these videos. At the end of the project, IYF was able to facilitate the training of Media Unit staff by the local producers, thus creating essential structures for long term sustainability of content creation.

2. Design

It is important to apply similar design discipline for the technology used in mLearning initiatives as for the pedagogy and/or other programmatic design activities, so that the “m” in mLearning is as appropriate and relevant to local needs as the “Learning”. In the case of BridgeIT, mobile technology was used to deliver content and in an efficient and cost-effective manner. The one-to-many configuration of the system and components, aided in developing a system that is comparably cheaper than other computer integrations and uses components, such as smartphones, whose up-front costs diminish over time.

3. Building Community Ownership of Physical Equipment

A key strategy of the program was to integrate and build community ownership of the BridgeIT equipment among other program components. Local district and school management committees were tasked to ensure power availability for the BridgeIT system requiring electricity (T.V.s, Mobile Phones). In addition, local repairpersons (fundis in Kiswahili) were identified and trained on the program's equipment to provide low-cost assistance for handset related needs. Lastly, a technology help-desk was created in country whereby teachers could text questions or comments to the technology assistant using a free SMS line. The technology assistant, upon receipt of the short message, followed up with responses to the particular issue identified by the teacher or offered additional technical assistance.

4. Software Sustainability

Software systems for hosting and delivering content to teachers should take into consideration the lifespan of the software and whether operating the software requires yearly registration. The interface should be user-friendly and require minimal training on how to navigate menus and use local language.

Teachers should also be taught how to access content via existing software on their handset. In the case of Bridgeit, teachers were trained to access videos through the existing Gallery application on their N95 phones. For the video content hosted on the central server, the technology team explored direct links to files on the server which could be sent via text message to teachers for download — if the current existing content management system became unsustainable.

Software used, just as hardware, should be built around support systems and maintenance capacity of the local community. Key stakeholders in this area may range from the mobile handset vendors to local IT shops and developers. If the software will only have support from outside of the host country, long-term agreements should be made to secure maintenance support.

5. Mobile Carrier

In the case of many countries on the African continent, mobile carriers have become important intermediaries for providing information, communication, and now, financial services. In the case of BridgeIT, IYF was able to partner with Vodacom Foundation for the provision of educational services. Prior to implementing the program in Tanzania, BridgeIT in the Philippines, used satellites and TV receivers as the mode for transmitting and receiving educational content in the classroom.

The use of existing telecom infrastructure in Tanzania meant that the program, and thus schools, only needed to be within range of 3G enabled towers to receive content. This capacity greatly reduced per site installation costs. It also aids scaling possibilities, were the districts to expand the number of BridgeIT classrooms and/or schools.

The services provided by Vodacom were integral to content hosting and delivery to the 150 Bridgeit schools across the country. Vodacom provided data transfer capabilities for teacher's to download videos, free SMS text messaging between designated program phones, and hosting of the BridgeIT server at the secured Vodacom server room.

For long term sustainability, IYF was also able to identify and explore other strategic areas where the mobile carrier could provide assistance. These included:

1. Integration of Bridgeit technical support with existing Vodacom customer care, to institutionalize technical assistance for Bridgeit teachers.
2. Expansion of SMS services to push out messages containing links to new content that may be placed on the Bridgeit server located at the Vodacom offices.

Through IYF's efforts to build stronger linkages between Vodacom Foundation and the MoEVT, Vodacom Foundation expressed public interest at the national closing ceremony, to continue supporting BridgeIT with existing services and pursue formal MOU talks with the Ministry of Education. The fact that a local private institution with significant presence in the country saw the long-term value of maintaining and building the program presented a clear win for the sustainability of the program.

Conclusion

Through its collaboration with the government and the management of the many private sector partners in implementing BridgeIT, IYF experienced first-hand many of the nuanced challenges of implementing a mLearning program, as well as the positive impact that technology can have in improving learning in the classroom. As the technologies for mLearning rapidly change, one constant for future initiatives will be the effective coordination of

the many pieces and partners that make up the entire system.

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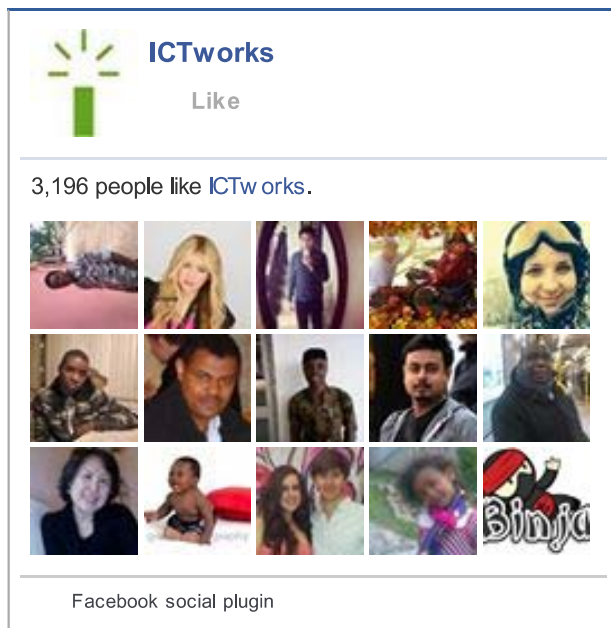
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