

Education Technology: ICT4E

Infusing technology in education to improve learning and life skills

Education technologies provide unique opportunities to address many education challenges in the developing world, fragile states, areas affected by infectious diseases and conflict environments, leading to improvements in student learning and life skills.

Education technologies can overcome barriers to accessing quality education, and strengthen learning outcomes for children because they:

- Improve access to teaching and learning materials.
- Deliver compelling, rich media that brings subjects to life.
- Enable one-to-one, self-paced learning.
- Contain vast amounts of educational content in many subjects.
- Promote 21st century pedagogy including project-based learning and sharing lesson plans.
- Enable skills like digital literacy, creative thinking, innovation and collaboration.

All World Vision education technology (ICT4E) programmes utilise some common programmatic elements in order to succeed, sustain and scale, including:

- Clear student learning objectives and indicators.
- Advocating for a supportive environment for education technology.
- Engaging with national and local education authorities.
- Teacher and administrator training programmes with ongoing coaching.
- Local teacher ICT4E support groups to capture and share best practices.
- The design and execution of a sustainability plan owned by the community.
- The administration of a simple and effective monitoring and evaluation plan.

Then, of course, is the selection and implementation of technology, which is often the least costly aspect of a successful education technology programme. Selection of the right pedagogical model, right technology and right digital content involves many factors including the targeted outcomes, age groups, local infrastructure, security and more.



Keeping Children Safe Online

In the ever-expanding world of the Internet, social media and “smart” technology, the need for knowledge and mechanisms to protect children and youth are crucial. World Vision’s office in the Middle East and Eastern European region identified increased Internet use as a growing threat to children, putting them at risk of: identity theft, cyber bullying, pornography exposure and being trafficked.

As a result, the Keeping Children Safe Online (KCSO) project was launched in 2009 to provide youth and their parents the knowledge and tools they need in order to stay safe online. The programme has since expanded, and is being incorporated into World Vision’s Child Protection and Participation work in Latin America and Africa. The KCSO toolkit has been translated into three additional languages: French, Spanish and Portuguese. To date, the project has reached more than 5,800 children, 4,800 parents and 3,000 teachers through training and peer-to-peer projects that help keep children and youth safe online.

For more information, visit: www.wvi.org/keeping-children-safe-online

WorldVision is piloting and scaling many technology architectures to address these contexts:

Basic feature phones

Basic feature phones are emerging as solid tools for delivering educational content – especially when users already own them. Java-enabled feature phones can serve as e-readers through World Reader’s free mobile app, providing access to over 4,000,000 books in many local languages. There are also a variety of SMS text messaging solutions available to support literacy and numeracy. Feature phones can even deliver rich educational content, including pictures, audio, narrative stories, videos, quizzes and educational games, using a free, open-source, web-based application developed by Ustad, then burning the content onto a standard SIM card that plugs into the phone.



Smartphones

Smartphones can provide an optimal mix of low-cost and high-functionality, using Wi-Fi to search the Internet and download content. They are increasingly owned by community members. Android is most popular with many applications, including Education Development Centre’s Stepping Stone and Education Technology for Development’s MoToLi. MoToLi creates Android mobile learning applications for any language based on a pre-programmed meta-framework and templates for rapid localisation. Windows Mobile Phones are also promising and can serve as a workstation in a Windows computer lab. The new Chekhov system from Microsoft allows for local language text creation including pictures, audio matching the text and even phonics. This enables local language learning even in the absence of teachers. Smartphones can be connected to an LED projector, providing a low-cost “one-to-many” teaching method that is intuitive for teachers, with access to large amounts of free digital training content and professional development tools designed for the Android and Windows Mobile Phone.

Tablet Computers

WorldVision and Open Learning Exchange are pioneering the use of low-cost Android tablet computers to improve basic literacy in primary schools. Tablets are linked to a Raspberry Pi server that generates a local Wi-Fi signal that looks like the Internet for distributing digital content to computers, tablets and smartphones, all operating with little power and no Internet. World Vision is also exploring the use of iSchool Android tablet computers to deliver 5,000 highly scripted lesson plans and self-paced digital content to primary school youth – now available in English and eight local Zambian languages.

For more information about World Vision’s ICT4E programmes, please email Education and Life Skills at World Vision International: EdLS@wvi.org

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