Implementation profile

Western Cape Education Department, South Africa

Khanya Technology in Education Project

The Khanya Project is an award-winning Western Cape Education Department initiative using technology to enhance teaching and learning in one of South Africa's most diverse provinces.

Khanya is derived from the Xhosa word "ukukhanya," meaning enlightenment. Launched in April 2001, Khanya's aims are to have a computer facility in every school in the Western Cape by March 2012 and to empower every teacher to use technology in delivering lessons to every learner in the province.

The Western Cape's demographics vary dramatically, from affluent schools in major urban centers, such as Cape Town, to impoverished schools in isolated rural villages with inadequate infrastructure. Instruction is delivered in the province's three official languages – Afrikaans, English and Xhosa.

Khanya's implementation plan

The project's goal is to use technology to enhance teaching and learning at foundation, primary and secondary school levels. Its first phase involved installing computer laboratories, enabling educators to become comfortable using technology as a teaching and learning tool. However, from the outset, Khanya programme director Kobus van Wyk realised that technology would achieve its full potential only when brought into the classroom.

"This became possible about five years ago, when interactive whiteboard technology became available – and affordable – in South Africa," he says. "Khanya tested several brands of interactive whiteboards, and the SMART Board interactive whiteboard proved to be superior, particularly in terms of lesson content and support."

Pilot project successes

The pilot project, begun in 2006, was conducted in five schools, where interactive whiteboards were used for different grades and subjects. Positive experiences coming out of the pilot included the following:

- In the foundation school level, students aged five to seven benefitted from colorful presentations, which are important in perceptual development
- Science, geography and math educators found the technology effective when used with subject-specific lesson content, such as the CAMI Language and Reading System, Master Maths and lesson activities for SMART Notebook™ collaborative learning software

Quick facts about the project
- Schools with SMART Board™ interactive whiteboards – 534
- Number of SMART Board interactive whiteboards – 1,700
- Students with access to SMART Board interactive whiteboards – 22,000

Quick facts about the Western Cape
- Total schools – 1,570
- Total students – 900,000
- Demographics – Diverse socio-economic population
- Geography - 123,000 km² (49,000 sq. miles)
- Population – 5.5 million

Khanya project building blocks
- Establish a sound technology foundation before introducing interactive whiteboards
- Make thorough initial training of teachers a priority
- Introduce interactive whiteboards on a small scale first to iron out problems
- Partner with a local SMART reseller and other suppliers to assist with large-scale implementations
- Secure funding from public- and private-sector sources
- Commit to post-implementation training and ongoing teacher support

- Teachers could create lessons once, then use them to teach the same topics to different classes
- Using the interactive whiteboards with closed-circuit television cameras and wireless audio, two classes could be taught simultaneously while students could collaborate with others remotely

Khanya subsequently set up similar installations in a variety of subject classes in over a hundred schools across the province. Instruction in geography, science, business, arts and culture, as well as other subjects, is now enhanced by the skillful use of interactive whiteboards.

Funding and public-private partnerships

The Western Cape Education Department allocated a budget to Khanya project to provide technology facilities – mainly computer centers – to all of its schools. Organizers realized from the outset that state funding would never be sufficient to reach all its educational objectives, so Van Wyk initiated a public-private partnership unit within Khanya to procure funding from donors. This funding was often channelled toward the purchase of interactive whiteboards, along with data projectors, computers and, invariably, such infrastructure costs as electrical supply, network cabling and security.

Donations ranged in size and scope – major contributors included South Africa's telecommunications utility Telkom, which provided 450 SMART Board interactive whiteboards in 2009, and SMART, which made a donation of 117 SMART Board interactive whiteboards and other education technology products.

This enabled Khanya to set up seven "SMART centers": three in Western Cape districts – Cape Town, Worcester and George – and four in flagship schools, all catering to a range of primary, secondary and learners with special needs. The centers are each equipped with three SMART Board interactive whiteboards, SMART Notebook collaborative learning software, SMART Bridgit™ conferencing software, a SMART Table™ interactive learning center, a SMART Response™ interactive response system and a SMART Document Camera™. The centers are used for teacher training and for assessing the latest SMART education technology.

Implementation challenges

Great disparity exists between well-funded and impoverished Western Cape schools. In the less affluent ones, the provision of electricity and security proved challenging. Electrical outlets had to be installed in ceilings so that data projectors could be ceiling-mounted. Where classrooms had no electrical outlets at all, they had to be provided. A secure, lockable cage was designed to safeguard data projectors against theft. Laptops were also locked away when not in use.

Despite the challenges to implementation, Khanya found that the success of an interactive whiteboard implementation depends not on a school's affluence, but rather on the willingness of its individual teachers to engage with technology.

"Thanks to the support of SMART Board interactive whiteboards, we are on track in bringing our learners up to speed with their peers. It is helping them shed the disadvantage of poverty by equipping them with the knowledge and confidence to take their rightful place in a future of their own making."

Siddieka Hassen,
Principal, Capricorn Primary School, Khanya Technology in Education Project participant

"Many children do not know much of the world beyond their immediate environment, so being able to access information through the Internet and bring images and sounds from around the world into their learning experience has opened up a world of possibilities for them."

Felicity Sasman,
Principal, Montagu Drive Primary School, Khanya Technology in Education Project participant

Teacher training promoting effective use

Khanya established a policy of installing SMART Board interactive whiteboards only in the classrooms of teachers who demonstrated they could engage with technology and use it as a teaching and learning tool.

SMART Technologies provided trainers to train all Khanya facilitators, who then visited schools to help teachers learn how to use SMART products. Teacher training sessions, seminars and conferences, and ongoing support from both SMART and SMART reseller Edit Microsystems also proved invaluable.

Success measures

By the end of July 2011, 90 percent of the 1,570 government schools in the Western Cape had acquired computer technology, with a total of 46,120 computers in use. Just over 28,000 educators have been trained to use technology for curriculum delivery, and more than 900,000 learners are reaping the benefits.

Khanya realised early on that one or two isolated SMART Board interactive whiteboards in a few schools would not achieve the desired results – the project had to reach a point of critical mass. This has now been attained, with approximately 1,700 SMART Board interactive whiteboards in 534 schools, serving 22,000 learners. With a continuing focus on best practices and professional development, the Khanya Project is on track to achieve its goals by March 2012.