

Low-cost computing for education

A new world of possibility for those most in need

Challenge

Deliver affordable access to computing technology to the 500+ students at St. Mary's High School, many of whom are from child-headed families.

Solution

Implement the NComputing X-series solution to create a 49-user computer lab that is accessible to all.

Impact

Access to a computer lab with capabilities that rival those found in any affluent school.

Partner

Global Innovative Systems i-Schools Initiative implemented the solution. The i-Schools Initiative is bridging the digital divide in Swaziland's educational system.

Nestled in the beautiful Ezulwini Valley in Swaziland, St. Mary's High School educates over 500 students. The majority of the pupils are from child-headed families, where one or more children take over as the head of their household and fend for themselves without any adults to look after them.



Pupils at St. Mary's High School now have access to computing resources that rivals that found in any industrialized country.

Educating the children who are bringing up children

The spread of HIV and AIDS has taken its toll on the population of Swaziland, and orphans run as many as one in ten households.¹ In a child-headed household, students often have to drop out of school to work, worrying more about where their next meal is coming from than their academic future. Faced with these challenges, school administrators in Swaziland have made motivating pupils to stay at school a top priority by providing access to new technology and different ways of learning.

"We've always been at the forefront of educating our pupils in all manner of educational and life skills, and opening up the world of technology to them to help them create a better life for themselves and their families is a key part of that mix," stated Mr. Malindzisa, Principal of St. Mary's High School. "Although our pupils face challenges in their home life, they are all keen to further their education and see what the world has to offer, if not physically, then at least through the internet," he added.

¹ "UNICEF NEW ZEALAND", <http://www.unicef.org.nz/page/156/Childheadedhouseholds.html> (July 2009)

“We are well on the way to providing our children with technical skills and know-how.”

MR. MALINDZISA
PRINCIPAL
ST. MARY’S HIGH SCHOOL

The school had a few donated computers available for the students, but the ongoing cost of maintaining them resulted in unsustainable budget cuts elsewhere in the school. “With such a tight budget, we had to look at a long-term, affordable solution that would give us the maximum number of seats to provide the pupils with the tools and education they need to give their families a head start,” added Mr. Malindzisa.

Technology for the 21st century

With budget constraints and ongoing maintenance to take into consideration, Global Innovative Systems recommended that the school run a pilot of the NComputing X-series solution. NComputing virtual desktops enable schools to share the excess power of each PC with up to 11 students, dramatically lowering PC acquisition costs.

The NComputing solution works because today’s PCs are so powerful that the vast majority of applications only use a small fraction of the computer’s capacity. NComputing’s hardware and vSpace™ virtualisation software taps into this unused capacity so that it can be simultaneously shared by multiple pupils. The NComputing virtualisation software works with standard Windows and Linux PCs, and each pupil’s monitor, keyboard, and mouse connect to the shared PC through a small and highly reliable NComputing access device. The device itself has no CPU, memory, or moving parts, so it’s easy to deploy and maintain. By spreading out the cost of the shared computer, schools can provide up to five times the number of seats for the same money.

In the longer term, most PCs are disposed of after three to five years, and when that PC is discarded, about 10 kg of e-waste ends up in a landfill. NComputing access devices weigh just 150 grams and last up to 10 years, so there’s much less waste that finds its way to a landfill site.

The school chose the NComputing X-series, which gets its power through the network cable, reducing the need to install extra electrical sockets and cutting their electricity bills instantly. The school deployed a 49-seat computer lab with just 7 PCs and NComputing.

The possibilities are endless

The NComputing solution gives the pupils and teachers a new computing experience that would compete with schools in any industrialized country.

“The whole school and community are so excited by the implementation of the NComputing solution. The pilot period was so useful to us as we saw how easy the system was to install and maintain. The cost savings we made not only in the initial set up, but also on an ongoing basis, means that we can continue to extend the computer lab. With the help of Global Innovation Systems and NComputing we are well on the way to providing our children with the technical skills and know-how that will rival all of the schools in the wider area,” concluded Mr. Malindzisa.

