Opening a Digital Doorway for Africa's children

BY DI CAELERS AND BOTHO MOLOSANKWE

Give a child a computer and within seven days they'll have figured it out – without any training whatsoever.

This is what a joint initiative between the Department of Science and Technology and the Meraka Institute has proved.

"The results are mindblowing," says Grant Cambridge, engineering technologist for the Meraka Institute. "We go into deep rural environments, bolt down the computers and leave them to it.

"We videotape the activities for later analysis of user patterns and we've seen that within an average seven days the children have got it taped."

Called the Digital Doorway, the project's broad aim is to boost computer literacy and associated skills in Africa.

Underpinning it is the idea of people's inherent cognitive ability to teach themselves computer skills with minimal external intervention.

And that idea has proven a huge hit at Insite (the International Science Innovation and Technology Exhibition) at the Sandton Convention Centre, where the project has been one of the star exhibitions among the 70-odd displays.

Standing 2m high, the vandal-proof Digital Doorway is made up of three stations – each with a monitor, keyboad and mouse.

The computers have educational programs and games, scientific software and applications for both adults and children.

Kim Gush of Meraka says the apparatus was put in rural and poor communities, where those who benefited learnt from being curious and at their own pace "as it is not like a teacher explaining it to you".

At Insite, which started on Sunday and closes today at 6pm, the exhibition made a big impression on Thandeka Mokoena, a Grade 10 pupil at Kwadedangedlele High School in Soweto.

The Digital Doorway exhibit was her favourite, because many people in her area of Zola, Soweto, are not computer-literate. "If they had this machine it would benefit them a lot as they do not have money to visit Internet cafés or they are far from the libraries that have computers," she said.

There are 24 Doorways installed in South Africa, with a further 50 being planned.

They are accessible to the community 24 hours a day.

SWITCHED ON: Students from Kwadedangedlele High School in Soweto explore the "Digital Doorway" at Insite. PICTURE: BOXER NGWENYA

The first was launched at the end of 2002 in Cwili in Kei Mouth in the Eastern Cape, and it was there, Cambridge says, that analysis showed the computers were being used seven days a week, between 4am and midnight. The youngest user was 5, and the oldest in his 80s.

In Slovoville, south of Soweto, they installed one in a community centre with a crèche next door.

"By the time the researcher got there the children had turned a step on its side so they could reach the keyboard, and were painting pictures with Touch Paint. These are children who know nothing about icons or even what a cursor is," he says.

The focus of the project is to bridge the digital divide and to get people comfortable with technology.

Project leader Ronel Smith says it utilises the concept of minimally invasive education as an alternative for promoting wide-scale computer literacy, a concept pioneered by Indian professor Sugata Mitra, who put a computer in a hole in the wall of his building, offering access to the children living in the adjacent slum.

Within seven to 14 days, the children had worked out how to access the Internet, run programs and play games.

"We want to verify, in the South African context, the results of that Indian research which indicates that children possess the cognitive ability to acquire functional computer skills without formal training," Smith says.

What's envisaged is a sustainable network of at least 1 000 Digital Doorways throughout the country, reaching even the most remote areas.

Each one acts not only as a tool for developing computer literacy, but also as a source of information on a range of subjects. The content includes educational games and programmes, an introduction to computer terminology, scientific software, 10 000 books from project Gutenberg, a snapshot of Wikipedia, along with numerous other applications geared for adults and children.

Initial analyses of information gathering by the CCTV camera included:

- The age of users ranges from primary school children, to young and older adults.
- Group sizes vary from four to 12.
- Previously computer-literate users become the "leaders" of the various groupings.
- Typical visits are between 30 minutes to an hour.
- Co-operative learning is common, with peer learning turning competitive among the younger children, but more collaborative for adults.
- Children appeared content to explore until they achieved the desired outcome, rather than ask for help.