

Case Study



Ligbron Academy of Technology

South Africa

e-Learning project expands to include rural schools

The Ligbron Academy of Technology has developed an e-Learning Project which allows it to share its SMART interactive educational technology with five schools in the region so as to improve the quality of teaching and learning.

The academy teaches subjects such as mathematics, science, business studies, information technology and tourism as well as mechanical, electrical and civil technology to 920 pupils.

Based in Ermelo, in South Africa's eastern province of Mpumalanga, the academy sees itself as an education business. Since 2005, it has used SMART Board interactive whiteboards with SMART Notebook and SMART Ideas concept-mapping software and the SMART Sync classroom management system and, in 2007, it started using Bridgit conferencing software to share lessons among the academy's classrooms.

So bowled over was technology teacher Frans Kalp by the positive impact video conferencing had on teaching and learning, he pioneered an initiative to share SMART educational technology's potential at less-advantaged schools near Ermelo.

In 2008, with the blessing of the Mpumalanga Department of Education, Ligbron started sharing mathematics, mathematics literacy and science lessons with three other schools within a 50-km radius. The project has since been extended to include another two schools, with expansion to a further 15 schools planned.

Funding for the expansion is through a public participation process whereby the Mpumalanga Department of Education matches – on a rand for rand basis – contributions from the private sector managed by the Mpumalanga Education Development Trust.

Challenge

To raise the standard of teaching and learning by sharing SMART educational technology's potential with remote rural schools.

SMART solution

Connect schools via a wireless network with Bridgit conferencing software to share lessons.

Result

Improved confidence of maths and science teachers, and new enthusiasm for learning among pupils.

As a community technologically-based education outreach, the Ligbron e-Learning Project's is the first of its kind in South Africa, a country that is grappling with the challenges of finding sufficient resources to boost the quality of education – particularly in science and mathematics – over vast geographic distances.

Two of the pilot-phase schools – Camden Combined School and Umzimvelo School – are rural, while Ermelo Combined School is in the town. The schools are wirelessly connected to Ligbron and use Bridgit conferencing software to share their lessons.

Next to each SMART Board interactive whiteboard is an LCD screen with a digital camera connected to a PC that shows the image of the teachers from linked schools, enabling them to take an active part in the lesson.

As project manager for Ligbron's e-Learning Project, Kalp helped teachers become computer literate and trained them in how to use their SMART Board interactive whiteboards and educational software to maximum effect.

Kalp says the benefits Ligbron experienced from using the SMART Board interactive whiteboards motivated him to drive their use in the less-advantaged schools. Advantages include greater pupil involvement and enthusiasm and ease of access to Internet-based information.

"An added advantage of the Bridgit-based approach for the rural schools is that pupils can ask questions of more than one teacher. This enriches their learning experience.

"It also opens up communication between the pupils at the schools as they work together on tasks. This makes them feel that they are part of a world wider than their village and helps broaden their horizons.

"There is healthy competition among the pupils to come to the front and work on the SMART Board interactive whiteboard at the same time as a pupil in another school, while being able to see each other. This helps create confidence and a willingness to explore their new knowledge with each other."

Kalp says that he has created a distance-learning environment where several classrooms within a 50km radius can virtually work on one desktop. "We also use this technology to train the teachers and uplift the standard of teaching and learning in rural, less-advantaged and under-performing schools."

Mpumalanga Department of Education's co-ordinator for the Ligbron e-Learning Project, Dr Hardus Martiz, says the impact the project has had on the less-advantaged schools has been phenomenal.

"The project has proved most successful in bridging the urban-rural digital divide and a positive attitude has been created, especially in rural schools, towards using wireless technology to spread educational material from SMART Board interactive whiteboards.

"Being able to share quality teaching among the geographically dispersed classrooms has had a marked improvement in the quality of lesson content and teaching methodology. There has been an improvement in discipline and concentration levels of learners. They are positively motivated to learn, and attendance at schools involved in the pilot phase has improved during the past year.

"The project has had a major impact on the confidence on the maths and science teachers in these schools, and has created enthusiasm for learning among the pupils. Children are now motivated to take up these subjects and no longer fear that they are too difficult to understand.

"The impact this technology has had on boosting the standard of education has been an example to other schools in the province. Ligbron's generosity in initiating this shared-learning environment, plus that of the donors and technology participants, has been heart-warming. We plan to replicate this project elsewhere in Mpumalanga."



Ligbron Academy of Technology teacher Frans Kalp captures the attention of learners Marlien Delpport (left) and Chitalu Jamnda.

"The impact this technology has had on boosting the standard of education has been an example to other schools in the province."

Dr Hardus Martiz, Mpumalanga Department of Education

About SMART

SMART Technologies Inc. is both the industry pioneer and global education market segment leader in easy-to-use interactive whiteboards and other group collaboration tools. The award-winning SMART Board interactive whiteboard is the most widely installed interactive whiteboard in the world. Many school jurisdictions have standardized on the product, which is used to provide interactive learning opportunities and enhance student achievement in more than 900,000 classrooms spanning every U.S. state, every Canadian province, every Local Authority in the UK and in more than 100 countries worldwide. SMART products also include interactive pen displays, interactive digital signage, wireless slates and software. Using SMART products, groups can access and share the information they need to meet, teach, train and present. SMART's education customers include New York City Board of Education (U.S.), Oxford University (UK), Kobe City Board of Education (Japan), Barnier Public School (Australia), University of Ottawa (Canada), United World College (Singapore), Stephen-Hawking-Schule Neckargemuend (Germany), Florida School for the Deaf and the Blind (U.S.) and Harvard University (U.S.).

SMART is a private company founded in 1987. Employing more than 1,200 people, SMART is headquartered in Calgary, Alberta, Canada, with assembly facilities in Ottawa, and offices in Bonn, Tokyo, China, New York City and Washington DC. SMART has been issued and maintains a broad portfolio of patents with numerous U.S., Canadian and other patents pending. In 1992 SMART formed a strategic alliance with Intel® Corporation that resulted in joint product development and marketing efforts, and Intel's equity ownership in the company. SMART products are sold through dealers across North America and distributors worldwide. For more information, visit www.smarttech.com.

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