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Wireless broadband brings e-learning to Mamelodi schools

The Ulwazi E-Learning partnership has successfully launched an e-learning initiative run on Canopy, Motorola's new broadband wireless-access technology. The pilot aims to create a connected learning community by linking five schools in the Tshwane area to promote shared learning, cultural experiences and knowledge.

"This project was launched in response to the dire need to improve and accelerate education throughout South Africa, particularly among disadvantaged communities where a lack of teachers, resources and funding is hindering their path to progress," explains St. Alban's College director of technology and Ulwazi project leader Ron Beyers. The five schools – St. Alban's College, one of South Africa's choice private schools, and four schools in Mamelodi (Gatang high school, Tshwane Northern college, Mamelodi high school and Modiri technical high) – fall within a 15-kilometre radius and have been connected via a high-speed broadband wireless network. "Lack of affordable broadband connectivity is crippling the cost of education and preventing us from delivering quality education where it is needed most," laments Beyers. "In the past, we had to bus pupils to the college, which wasted time and cost money. "With the high-speed network we have installed, we can reach far more students and create an extended connected learning community," says Beyers.

Several private companies materially support the project, with Motorola supplying the Canopy wireless network and Omega Digital Technologies providing electronic whiteboards. It also has the support of the Knowledge Management and Multimedia units of the Department of Communication, the Department of Education, [The Innovation Hub](#), the University of Pretoria and Schoolnet SA. Recently, the Universal Service Agency has also come on board.

"The network is key to the execution of the project. We are using Motorola's Canopy system, which operates in the 5 GHz band and provides data rates of up to 7 Mbits/s. It is highly flexible, transparent, quick to configure and easy to use; in just two days, we would be able to connect another ten schools, which is how we would like to expand the project in the future. In fact, there is no limit to the number of classrooms we can interconnect, so we hope this pilot will result in a model for nationwide roll-out," Beyers notes.

The project intends to explore empirically the impact of electronic knowledge distribution and e-learning, via broadband and information and communication technology (ICT), on education in South Africa.

The network allows teachers to share skills and resources by using Webcams, audio communication and electronic whiteboards. They also have instant access to material such as multimedia presentations and can interact in real time with other teachers for support.

For pupils, it promotes cultural exchange, assistance through study groups, the development of communication skills and interactive project work.

"The students no longer feel isolated and are benefiting tremendously from their correspondence with other students who are of a similar age. "It is a truly empowering experience that has opened up so many opportunities for them and tapped into new potential," says Gatang high school science teacher Leslie Hlangani.

Ends

“As the current Telecommunications Act prevents the rollout of broadband networks such as this, we could only get a temporary licence for the pilot,” reports Beyers.

“We believe that the pilot will demonstrate the numerous benefits that affordable broadband connectivity brings to education throughout the country and are hopeful that we can get the licence period extended to allow us to explore further the many applications which have come to the fore since the launch of the project,” explains Beyers.