

**Electronic paper technology:** At the click of a button, pupils can access a wide range of thousands of reading materials that would otherwise not be available in the remote village that has now access to electricity

# Portable e-reader pushes readers in remote school to epitome of literacy

BY KENAN MIRUKA

Clad in orange and white uniforms, pupils pick encased miniaturised devices from their teacher before settling on their desks.

As the teacher signals the start of a reading session, the Class Four pupils swiftly switch on the devices before each selects their favourite stories from a list appearing on the screen.

Their little faces glow as they read on, pressing buttons to flip through pages.

Their teacher saunters along the rows monitoring to help out those with difficulties.

Ordinarily, this would easily pass for a school with some fancy English name located in the leafy suburbs of Nairobi.

### Up to the task?

Nonetheless, this is routine activity at Intimigom Primary School in Trans Mara West District in Narok County.

The area has been the epitome of poor education standards. Learners use e-readers, and portable electronic devices designed for reading books.

At the click of a button, pupils can access thousands of reading materials that would otherwise not be available in the remote village that now has electricity.

Tucked on the crest of a hill overlooking the expansive Masai Mara Game Reserve, the school is leading the way in the adoption and use of Information and Communication Technology.

### Reduced dropout rates

Built in 2009 by the Kilgoris Project, a US-based non-profit organisation run by professionals from the Maasai community, Intimigom Primary School has 400 learners in pre-school and lower primary classes.

"We are fortunate to be the pioneers in the use of ICT in teaching and learning despite being disadvantaged in terms of geographical location and access to communication facilities," says Shadrack Lemiso, the head teacher.

The pilot classroom e-reader project in Kenya and East Africa was introduced at the institution in June last year, through a partnership between World Reader and the Kilgoris Project.

"We have witnessed impres-

**“I had given up hope of learning how to use a computer but thanks to the e-reader, I can use ICT to deliver in class.”**  
—Solomon Keteere

### About the e-reader

An electronic reader (e-reader) is a hand held, portable electronic device that is tailored primarily for reading digital books, magazines and documents. A typical e-reader is close in appearance to a tablet computer and has wireless connectivity used for downloading content and other web tasks. It has a highly refreshable menu, a keyboard and buttons for turning pages. Its screen has better readability in bright sunlight and has longer battery life because it uses electronic paper technology to display content to readers.

sive results since the introduction. This being a novel technology, both learners and teachers are motivated.

"We no longer push pupils to read and dropout rates have gone down drastically," explains the head teacher.

The school has 65 e-readers used by teachers and learners.

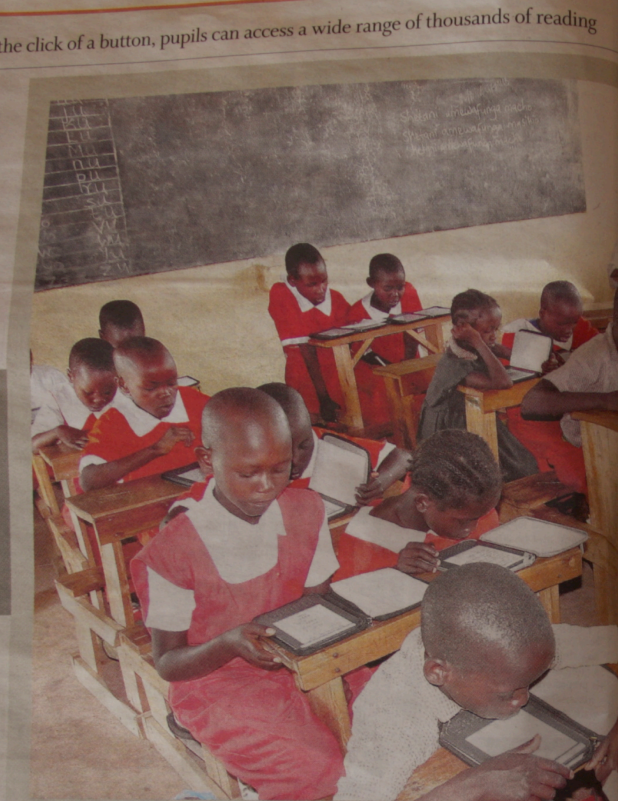
With higher refresh rates, a stand-by battery life of up to two weeks and better readability of their screens in bright sunlight, the e-readers suit the remote village conditions of the school.

Prior to the launch, teachers underwent a two-week training session and they in turn trained pupils on how to use the e-readers.

"I use the e-reader during our library lessons. The pupils are so enthusiastic and their reading skills have improved tremendously.

They can increase the font size on the screen to make reading easier and at the end of the session, they can narrate the stories they read in their own words," says Ms Christine Nasieku, 26, a teacher.

She says learners can switch on



The pupils use e-readers during a library lesson. (PHOTOS: KENAN MIRUKA/STANDARD)

the audio reader to get proper pronunciation of words, further improving their diction.

The four teachers at the Early Childhood Development Centre and those in the primary section use the e-reader as teaching tools with which they can access reference materials.

### Enhanced reading skills

Mr. Solomon Keteere, 48, has worked as a teacher for the last 26 years and is now using an e-reader to make his work easier.

"I had given up hope of learning how to use a computer but thanks to the e-reader, I can use ICT to deliver in class.

"I find it particularly important in enhancing reading skills and improving vocabulary," says Keteere. He is glad he can now read his favourite daily newspaper using the e-reader, something that was nearly impossible in the past.

Leshoo Keshie, nine, a class four pupil at the school, says he likes the e-reader because it makes reading

interesting.

"I like reading stories in English and Kiswahili. The e-reader has a dictionary that helps me get the meaning of new words.

"I would like to have one with coloured pictures in stories," says Keshie.

The head teacher says the e-reader is the best way to implement e-learning.

"Other devices like laptops and desktop computers are cumbersome to carry around and require access to power.

The e-reader is portable and learners can use it in school and even in their homes without worrying about power," notes Lemiso.

Through an arrangement with World Reader, a US and European non-profit social enterprise with the mission of making digital books available to all in the developing world, enabling millions of people to improve their lives, the school can access latest books in the curriculum for classes one to four.

Local publisher Longhorn has

their books available in the kindle.

World Reader provided reading material while the Kilgoris Project bought the gadgets at Sh17,000 each.

Mr David Lemiso, a manager with the Kilgoris Project said their objective is to ensure the community has a bright future through education.

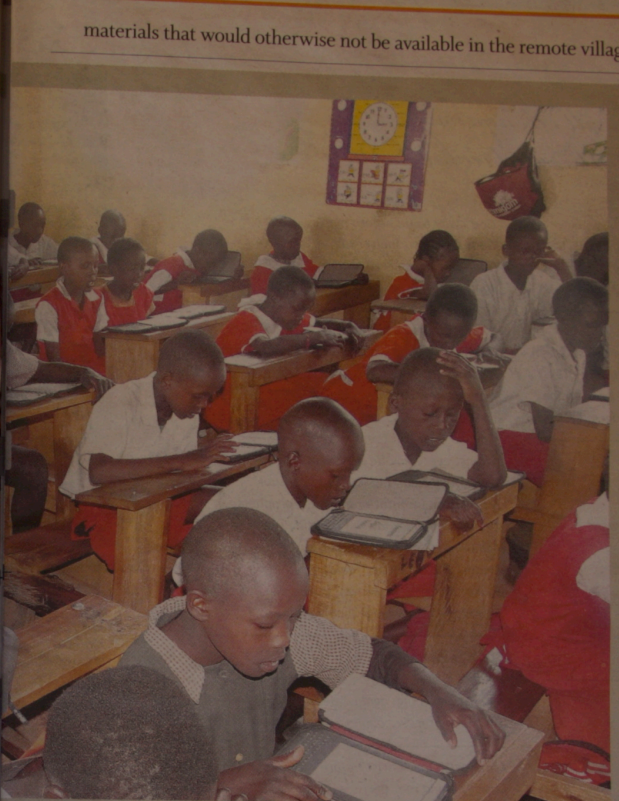
### Implement ICT

"Emphasis is on early childhood education but ultimately, we want the community to have more educated stakeholders.

Books are bulky and costly while some are not easily available. Through this technology, the school has access to books world over," says the manager.

There is a mission to be a model for the whole country by showing that it is possible to implement ICT in remote areas.

"The Maasai community is vulnerable in terms of education. We want to turn this round and prove we can do it," he explains.



ABOVE: Christine Nasieku guides a pupil during a library lesson. BELOW: Shadrack Lemiso explains how an e-reader works.



Uplifting literacy/ KENAN MIRUKA/Nairobi, Kenya

# Digital publishing gives birth to healthy reading culture

For a long time, Trans Mara region has remained vulnerable in terms of education, with high dropout rates and low enrolment of the girl child.

Fewer girls attend school compared to boys, and not all children of school going age are enrolled despite the Free Primary Education (FPE) programme.

At Intimigom Primary School, for instance, there are 77 girls of the 200 pupils enrolled in lower primary school.

Access to learning materials, especially textbooks, remains a challenge to most learning institutions.

The Kilgoris Project in collaboration with the local community built the primary school in 2009 and registered it as a sponsored private school.

The local community provided labour while the Kilgoris Project provided materials used for the construction.

The school accommodates 400 learners in the pre-school and lower primary classes and

has teachers employed by the Government and others by the project.

"We realised children have to be healthy to learn properly and so the project began as a clinic camp that later grew into a nursery school.

A clinical officer hired by the project visits our schools to assess the health of learners," says the head teacher, Shadrack Lemiso.

The project has similar schools at Olowang, Enkijabe, and Otikampu in the same district.

Malaria, typhoid, tuberculosis (TB), common colds, wounds and worms are common among learners.

To end this, the school launched a solar disinfecting system where water from a borehole in the compound is treated using solar rays in special bottles to provide clean drinking water to pupils.

A feeding programme was also introduced to encourage learners to stay in school as they travel over long distances in the morning and evening.

Intimigom e-reader project was launched successfully in June last year and to date, it involves 65 e-readers giving learners access to textbooks and storybooks.

A total of 3,150 books are now available to the institution, 42 titles to 62 e-readers, and 72 titles to 14 teacher e-readers.

"Initially, we faced a serious shortage of books but that is a thing of the past.

The gadget has provided plenty of titles for our pupils.

"We can save part of Free Primary Education funds that would have been used to buy books," explains Mr Lemiso.

He says electronic books are cheaper than the hard copies of textbooks. "A digitised book goes for as low as one dollar while the cheapest book costs Sh250. We can also borrow from other institutions," he adds.

He says the problem of losing books borrowed from the library has been solved through e-readers.

"Dropout rates have fallen drastically and at

the beginning of this term, we were overwhelmed by the number of pupils seeking places at our school. We believe this is due to the novel technology," Lemiso says.

Intimigom programme is the second pilot e-reader project in Africa after a similar one in Ghana.

Through an iRead project, over 60,000 books have been distributed and the results have been impressive.

According to World Reader, children in classes with e-readers read more, their fluency increases quickly, and teachers are enthusiastic about the programme.

Experts argue that e-readers offer many benefits as they contain inbuilt dictionaries and text to speech capabilities that make learning new words easier.

Digital publishing promises to open up new markets in regions facing high transportation costs and low literacy rates.