Digital libraries, game-changer in rural schools

Monday May 6 2019

Students try out the newly installed tablets at the digital library at Mpummudde Seed Secondary School in Jinja recently. The tablets are fitted with software that incorporates curriculum for both O and A-Level. Photo by Paul Murungi

In Summary

- The National Curriculum Development Centre has embarked on a pilot project in schools where they are establishing digital libraries to tackle the problem of lack of libraries.

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By Paul Murungi

In October last year, Nyombi Thembo, the director Rural Communications Development Fund at the Uganda Communications Commission, announced government would introduce video conferencing lessons aimed at connecting rural schools to their urban counterparts. According to Thembo, the move is aimed at providing rural and urban students the same learning

opportunities.

"We want a situation where a good Mathematics teacher in St Mary's College, Kisubi is giving a lesson, and some 100 rural schools in Karamoja following this lesson," he said.

In the wake of this attempt at digitising teaching and learning, the National Curriculum Development Centre (NCDC) has embarked on a pilot project in four schools within Kampala where they are establishing digital libraries. To support the move, National Social Security Fund (NSSF) has injected more than Shs450m to provide tablets to mainly underpriviledged secondary schools so as to compete favourably with priviledged schools.

While rolling out the first tablets at Mpummudde Seed Secondary School in Jinja District recently, Richard Byarugaba, the NSSF managing director, said digital libraries will ease teaching and learning especially in schools that face challenges of inadequate reading materials and facilities.

"The traditional education system is undergoing transformation, owing to the ever advancing technology. Unfortunately, the use of technology in Uganda's education system is almost non-existent especially in government-aided schools which are often underfunded," he said.

So far, the Fund has donated at least 440 digital learning tablets to 11 schools with each school receiving 40 tablets.
The project is expected to benefit more than 3,500 students in Senior Four and Senior Six in the next one year and more than 5,200 students in the next two years.

Aggrey Kibenge, the Under Secretary in the Ministry of Education and Sports, says the initiative will help students in underpriviledged schools to rise up to the occasion and compete favourably with their counterparts in priviledged schools. "Students in schools that do not have access to modern learning facilities will get exposure to and access modern learning resources and tools. I look forward to a time when all secondary schools will benefit from this type of digital technology to transform teaching and learning," he said.

Infrastructure issues
Sanon Mwesigwa, the head teacher of Mpummudde Seed Secondary School, said he is

supportive of the project and hopes it will help in reducing the workload for teachers and expose students to a wide range of learning materials as well as the digital world.

However, he expressed worry that due to limited space in some government-aided schools for instance, as a result of the surging numbers in student population, buildings to house digital libraries must be put up.

"We want to appreciate e-learning, but we do not have space for this digital library. My teachers do not have where to sit because the staffroom is now occupied with the tablets," he lamented. James Asili, the head of department for secondary schools and coordinator of the Digital Library project at NCDC, is optimistic that the tablet will prepare students for a digital curriculum with multiple content. The tablet costs Shs600,000 but Asili is hopeful that the cost will reduce with time.

How the tablet works
Ivan Mukasa, the software engineer in charge of the digital library project, says the digital tablets have been tailored to the school curriculum inclusive of all subjects for both O and A levels. "The tablet has been fitted with virtual learn software that incorporates the curriculum for both O and A levels. Each subject follows topics as designed in the curriculum. We shall keep modifying it to suit the students' needs," he reveals.

He further explains, "At the end of each topic, a student can do a self-assessment basing on the three levels of assessment. If the student fails the assessment, they are advised to retake and complete it. All the students' work and assessments are stored on the cloud for review by teachers as well as NCDC officials for analysis on how students are progressing in different subjects, for instance by analysing the difficult and easy topics."

"It is also designed with an e-book readers' icon which enables students to buy online text books and read on their own. The virtual learn also permits performance tracking by schools and parents that can be accessed on Android mobile phones," Mukasa adds.

The tablet can be used both online and offline. Even better, a solar backpack has been provided in cases of power blackout or shortages.

"At first the goal was to develop a virtual lab for sciences but then later we agreed to incorporate both arts and sciences. Students can even tap into the syllabus and read ahead of the teacher and do assessments."

Students react
Hendrick Oboth, a Senior Six student, says he is enthusiastic about the digital library and hopes it will improve his learning. "I have realised there are things teachers fail to explain well in class but which you can read and understand on the tablets on your own."

Similarly, Doreen Mugala, a Senior Four student, says it will ease her studies and help her get more details through research. "I will also be able to acquire skills in ICT which I may require in future," she hopefully says.

Knowing how many rural school grapple with poorly stocked libraries or nonexistent libraries at all, digital libraries could be the timely intervention to bridge the gap between rural underprivildged schools and priviledged ones.

Other edu-tabs
Kaino Africa, a smart school management tech company last year launched their flagship product, the Kaino Tablet crafted for the Ugandan primary pupil. This Education Technology (EdTech) tablet comes with curriculum aligned teacher guides that show the teacher lesson plans; how they are supposed to proceed with the class, what examples to give as well as time the lesson is supposed to start and end. It comes with well-prepared notes from Ugandan content providers, not to mention, it has offline and online past papers, exams and instant assessments at the end of the tests. All this comes in addition to digitalised text books that are cheap (between USD1 to USD10) (about Shs38,000).

Beneficiaries
The beneficiary schools include: Mpummudde Secondary School in Jinja, Nabumali High School Mbale, Atutur Seed Secondary School in Soroti, Sir Tito Winyi Secondary School in Hoima, Kagamba Secondary School in Mbarara, Kyenjojo Secondary School in Fort Portal and St. Charles Lwanga SS, Kasasa in Masaka.