

Poor internet connectivity stifles digital learning

By Nelson Kiva

When the COVID-19 pandemic shut down physical classrooms across Uganda, education institutions were forced into an unprecedented experiment with online learning.

Five years later, researchers at Makerere University say blended learning, which combines face-to-face teaching with digital instruction, has transformed higher education and opened new opportunities for flexible learning.

But they warn that poor internet connectivity, unreliable electricity and unequal access to digital tools continue to threaten progress.

The concerns are entrenched in the findings of a five-year research project conducted by the College of Education and External Studies' Institute of Open, Distance and e-Learning at Makerere University.

The study, titled *Comprehensive Evaluation of Faculty Blended Learning*

Uptake at Makerere, was funded by the Government of Uganda through Makerere Research and Innovation Fund (Mak-RIF). It explored how students, lecturers and university managers have adapted to blended learning since the COVID-19 period.

RESEARCHERS

The research team, which comprised Dr Arthur Mugisha as the principal investigator, plus Dr Harriet Najjemba, Dr Paul Muyinda, Dr Jessica Aguti, Dr Joshua Bateeze and Rose Akanya as researchers, conducted the study in three phases since 2021 examining the experiences of undergraduate students, postgraduate students and academic staff.

In the final phase alone, the researchers engaged 310 academic staff drawn from Makerere's colleges using a representative sampling model that also considered gender and disability inclusion.

Speaking during the dissemination of the study

WAY FORWARD

The study recommended introducing 'a basic certified blended learning course for students and lecturers, especially targeting newly recruited academic staff.

The findings also showed that many students and lecturers now appreciate the flexibility offered by blended learning.

Prof. Julius Kikooma, the director of Graduate Training at Makerere University, who represented the deputy vice-chancellor for academic affairs, Prof. Sarah Ssali, said faculty members generally recognise the benefits of blended learning in improving flexibility, engagement, accessibility and learning outcomes. Nonetheless, Prof. Kikooma warned that many lecturers continue operating under difficult conditions.

"Some lack office space suitable for

online teaching, while others rely on personal laptops and self-funded internet connections. These are not individual failings of lecturers. They are institutional and systemic gaps that require institutional responses," Kikooma said. Prof. Anthony Mugagga, the principal of the College of Education and External Studies, argued that the country's electricity challenges continue to limit the success of digital learning initiatives.

"The Government has introduced a competence-based curriculum where the major component is IT application. But how do schools and universities fully embrace technology when many communities still lack stable electricity and access to digital devices," Mugagga said.

findings at Makerere University Main Hall on May 29, Mugisha said tertiary institutions are increasingly relying on digital platforms because of their flexibility, ability to reach larger student populations and capacity to support lifelong learning. But researchers

warned that successful implementation depends on "coherent national policies and robust institutional support systems.

CHALLENGES

Among the challenges identified by the researchers

were unreliable internet connectivity, frequent electricity outages, inadequate digital infrastructure, limited technical support and weak institutional co-ordination.

Although Makerere University has had distance learning programmes since

1991, the scholars argued that the abrupt shift to total blended teaching exposed major gaps in preparedness among both staff and students.

The researchers found that many lecturers initially interrupted blended learning because they lacked technical know-how of initiatives such as Zoom. According to the research, others struggled with instructional design, online assessment methods and digital content preparation. Still, the study recorded significant progress over the last five years.

Mugisha said one surprising finding was that senior lecturers who had spent more than 20 years at Makerere adapted more quickly to blended learning after receiving institutional training during the pandemic.

Ironically, the researchers found that younger staff who joined the university more recently were in some cases lagging behind because they had not received similar orientation or structured training.