

Challenges to Opportunities for Universities, NRENs, Ubuntunet during the COVID 19 Pandemic

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COVID-19: NASS may reconvene over budget cuts, fresh palliatives

Akeredolu, Wike make u-turn on Easter services

THE NATION

SUNDAY

APRIL 12, 2020

CORONAVIRUS

Lockdown will last as long as necessary, says Buhari

...More states to be affected as extension looms

- 13 new cases as national tally rises to 318
- Anxiety in Kano as state records index case
- Anambra, Niger announce 14-day shutdown
- 37-year-old mother dies of Covid-19 at LASUTH
- Lagos discharges 11-year-old boy, three others
- FG begins inspection of public, private treatment centers
- Vaccine could be ready by September
- WHO probes reports of virus survivors being re-infected

One feared killed as robbers raid Lagos, Ogun neighbourhoods



What I did

TOTAL IN COVID CASES		COVID-19 CASES IN NIGERIA	
1,727,602		318	
DEATHS		DEATHS: 10	
105,728		RECOVERED: 26	
RECOVERED		ACTIVE: 230	
390,639			

- Immediate Impact on Higher Education Institutions (indeed all learning institutions)
- Institutions ordered closed
- Shift to ONLINE learning as STOP GAP measure and in many instances still continues across the continent



ADMINISTRATORS found themselves

- **Uncharted Territory** - how do you keep the university enterprise going under COVID 19 restrictions
- **Sustainability** - how do you ensure universities survive (financially and otherwise)
- **Meet Student and Faculty Needs** - new systems, new process, capacity building
- **Connectivity** - massive drop in capacity on site, need for connectivity off-site
- **Integrity** - of the learning and evaluation process

A photograph of three people, two men and one woman, sitting around a dark wooden conference table. They are all wearing face masks. The woman on the left is wearing a blue surgical mask and a dark blazer. The man in the middle is wearing a white surgical mask and a brown jacket over a light blue shirt. The man on the right is wearing a blue surgical mask and a blue button-down shirt. They appear to be in a meeting, with papers and a red folder on the table. The background is a plain, light-colored wall.

Administrator's Perspective



Faculty's Perspective

FACULTY found themselves

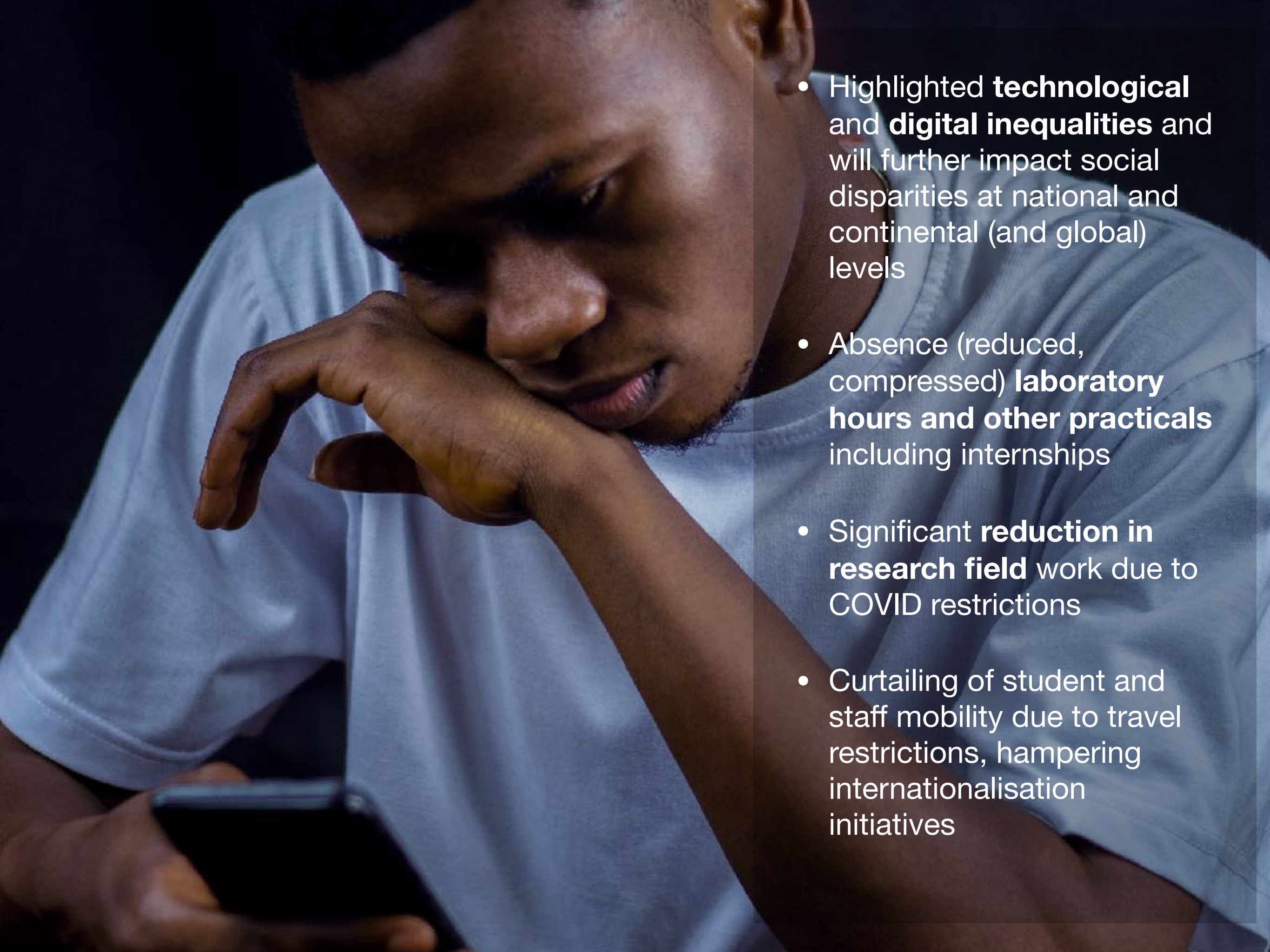
- **At home** - not the best teaching environment
- **New Tools - New Pedagogy** - Most have never taught online before, completely unfamiliar territory
- **Internet Bundles** new cost
- **Low Speeds**
- **Hesitancy** - many were (are) not knowledgeable or comfortable in online settings



STUDENTS found themselves

- **At home** - not the best learning environment
- **Alone** - away from fellow classmates
- **“Mobile Learning”** - far from ideal, most students do not possess a laptop or tablet
- **Internet**
 - **Bundles** new cost
 - **Low Speeds**
 - **Availability**

Students' Perspective



- Highlighted **technological** and **digital inequalities** and will further impact social disparities at national and continental (and global) levels
- Absence (reduced, compressed) **laboratory hours and other practicals** including internships
- Significant **reduction in research field** work due to COVID restrictions
- Curtailing of student and staff mobility due to travel restrictions, hampering internationalisation initiatives



Rising to the Occassion

Institutions quickly **developed and deployed** (even though they were not sufficiently ready)

- **Capacity-building (e-)programmes** for students, faculty and staff on the use of the institutions e-tools (for teaching, learning and administration)
- **Student orientation programmes** on managing the new modes of learning under the pandemic regulations



- **Digitalisation of operational processes and service delivery** (eg AIE at UON), and (for the better) are here to stay
- In spite of high constrained resources (exacerbated by drop in tuition fees), **strengthening ICT infrastructure** to enable use of new tools



In support of students learning under lockdown institutions (in many cases working with their NREN)

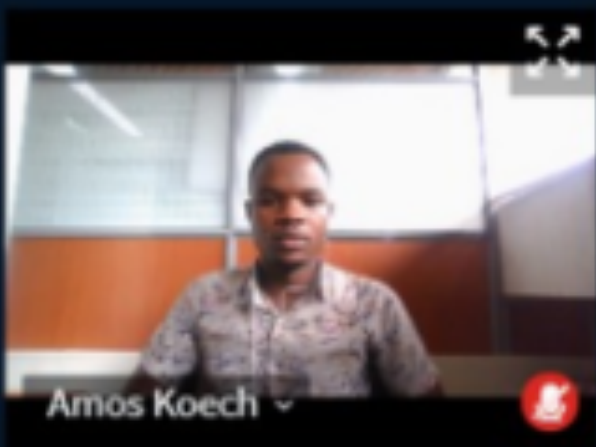
- Negotiated for **acquisition of subsidised data bundles** or **special institution funded pre-paid sim card**, white-listing universities e-programme sites with service providers
- Obtained access for **laptop leasing programmes** for students




- “**Zoom Call**” become part of English vocabulary
- Very expensive for institutions to fully use commercial choices (Zoom, Google Meet/ Classroom, MS Teams)
- Need for real-time ‘video conferencing’ as shift to remote (via the internet) synchronous learning

Start recording

- NRENs rapidly deploy video conferencing services
- Eg. KENET deployed BigBlueButton-based web-Conference platform
- Supports **real-time sharing of video, audio, slides, whiteboard, chat, and screen ... polls and breakout rooms**
- Runs on KENET servers and provided at **no additional cost to members institutions** (strengthening **NREN relevance** as well)



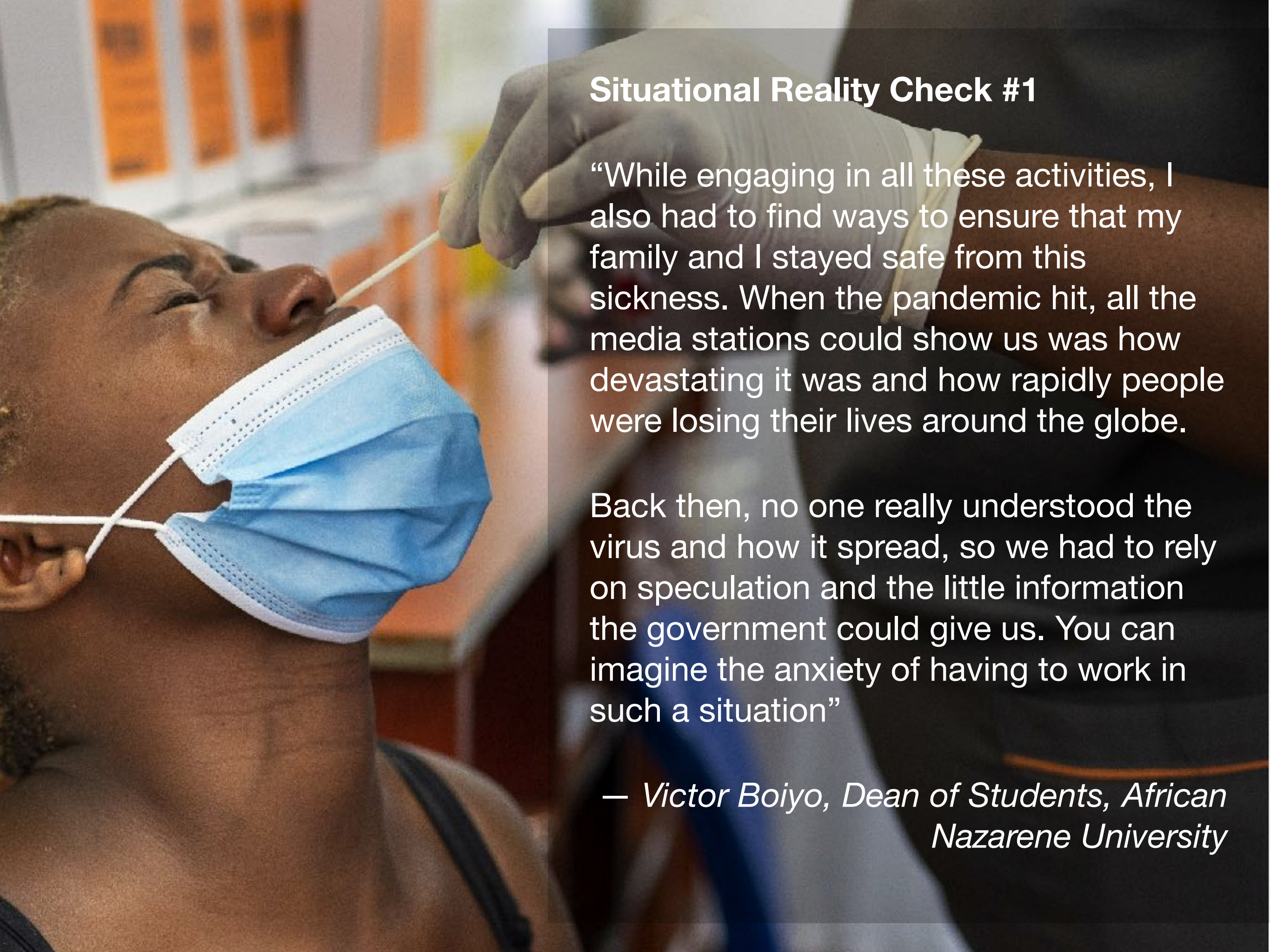
A man with a beard and glasses, wearing a headset, is shown from the chest up. He is wearing a blue patterned button-down shirt and is writing with a pen on a document. The background is slightly blurred, showing some indoor plants.

“It has changed the way of teaching. As one of the key users of KENET Web conference platform, I can confirm that there are many features that are amazingly effective for learning in a virtual classroom.

Besides the whiteboard, markers and annotators there are also Breakout Rooms. This is essential for interactive learning. We have not had any challenges, maybe because of the proper training that we received from the KENET team”

— *Dr Muchelule, a Lecturer at Jomo Kenyatta University of Agri & Technology*

NRENS: Beyond Connectivity



Situational Reality Check #1

“While engaging in all these activities, I also had to find ways to ensure that my family and I stayed safe from this sickness. When the pandemic hit, all the media stations could show us was how devastating it was and how rapidly people were losing their lives around the globe.

Back then, no one really understood the virus and how it spread, so we had to rely on speculation and the little information the government could give us. You can imagine the anxiety of having to work in such a situation”

— *Victor Boiyo, Dean of Students, African Nazarene University*

Situational Reality Check #2

“Lectures go faster than before, and there is less opportunity for questions. The lack of direct interaction with lecturers or fellow students about the lesson, and less feedback, makes it harder for learners to follow adequately.

For example: when dealing with some calculations and formulas, it is more difficult to get the lecturer to explain further or give a detailed demonstration.

A slow or completely absent internet connection would often add to my frustration. The same applies to working in isolation at home, where I found it a challenge to concentrate, and also missed having my fellow students around.”

— *Munyampundu Aminadab, Third-year IT student, University of Kigali, Rwanda.*





Moving Forward

A person wearing a dark hoodie is shown from the chest up, looking down with their head tilted. The background is dark and moody, with some light reflecting off the fabric of the hoodie. This image serves as a visual metaphor for the 'dark side' of technology discussed in the text.

The Dark Side

- Significant increase in online plagiarism and other forms of cheating, for example use of online “help” sites in real time during online exams
- **Explosion in number of “Cheat mills” with most of the work being done by our own students - Literarily, Africa (dis)serving the World**
- **Global problem!** without effective technological solutions

Plagiarism and Cheating

A person wearing a dark hoodie is shown from the chest up, sitting at a desk and typing on a laptop. The scene is dimly lit, with the primary light source coming from the laptop screen, which is partially visible on the left. The person's face is mostly in shadow, and their hands are illuminated by the screen's light. The background is dark and out of focus.

The Dark Side

- For example in the UK former Universities Minister Chris Skidmore introduced a bill in the Commons to **outlaw essay writing services in the UK**

“[the services] threaten to damage academic integrity beyond repair”

Plagiarism and Cheating

A person wearing a dark hoodie is shown from the chest up, looking down at a laptop screen. The scene is dimly lit, with the primary light source coming from the laptop, which is partially visible on the left side of the frame. The person's face is mostly in shadow, and their hands are visible near the keyboard area.

The Dark Side

- Universities, private sector on the continent should actively develop technological solutions
- **not just wait for others to develop them for our use**
- In partnership, Ubuntunet, NRENs can provide test-beds for new technologies for running pilots before making the **tools available to the world**

Plagiarism and Cheating

- Need to develop effective system for **teaching and learning** anchored on
 - Face-to-face, Online, Blended (combination of previous)
- Modular design providing student flexibility
- Supported by **technologies for new forms of learning:**
 - Augmented reality, simulation platforms, platforms that support offline access (**like Netflix**)



Delivery of Teaching and Learning

- Creation of **open educational resources** that may be reused and shared and storing them on **appropriate repositories**
- For example, MIT OpenCourseWare with materials for over 2,500 courses saw a 75% spike in use during 2020 quarantine periods, with over 1.2 million visits from Africa



Open Educational Resources

- The pandemic-driven scramble for online learning was significantly supported across the globe by decades of investment in MIT's Open CourseWare
- Opportunities exist for **co-development** (universities) and **co-deployment** (supported by Ubuntunet and NRENs) of similar African-based **locally relevant Open CourseWare** in support of teaching and learning



Open Educational Resources

- Build capacity of faculty and students to user the developed and globally available open courseware
- Significant benefits include being **inclusive, resilient, interactive** and **scalable**
- Develop models that provide **incentives for high quality courseware development** and **platforms sustainability**



Open Educational Resources

- (Co-)Development and (co-)deployment of **specialised repositories** dedicated to African and global needs, developing valuable collections and making easing the acquisition of information
- Supplement the traditional institutional libraries
- Big opportunity for private and public sector, universities, NRENs, Ubutunet to find collaborative ways to expand into this space.

Open Specialised e-Repositories

Example:

- Africa Research Universities Alliance (ARUA) Centre of Excellence on Non-Communicable Diseases (NCD) provides a platform for the creation of a long-term strategic network of researchers in African universities to strengthen intra-African collaboration, and collaboration between the network and the rest of the world. The ACE-NCD builds on the strengths of its core university members, [University of Nairobi](#) and the [University of Ibadan](#) (Nigeria), [Makerere University](#) (Uganda) and [University of Cape Town](#) (South Africa). ACE-NCD is continuing to engage researchers and stakeholders involved in prevention, control and management of NCDs in Africa including medical research institutions, professionals, policy-makers, and society to ensure co-design and co-production of high impact research output that shall support policy-making, development of evidence-based interventions, and the development of commercialisable intellectual property.
- Mental and regional teams are supported to develop strong grant proposals around the ACE-NCD thematic areas to ensure sustainability and growth of the ACE-NCD.
- Focusses on NCD Research (Reports, government documents, theses, etc) from Ghana, Kenya, Nigeria, South Africa and Uganda
- Currently **288 documents, 790 downloads**



ACE-NCD Early Career Workshop during ARUA Biennial Conference 2021

November 2, 2021



Dr. [Name] as New Centre Director

NCD e-Repository

The NCD e-Repository provides a collection of research related documents from Ghana, Kenya, Nigeria, South Africa and Uganda.

Search NCD e-Repository



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Open Specialised e-Repositories

Example:

Committee on the Implementation of the Bridges to a United Kenya Task Force Report – BBI

- Academia Kenya e-Library
- Repository of Kenya Government documents (County and National)
- Est. 2019
- Currently **1,211 documents, 15,510 downloads**

TAGS

Agriculture

Alcohol Industry

BBI

Budget and Finance

CIDP

Circulars

Climate Change

Commissions

County Affairs

COVID19

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Development

Development Plans

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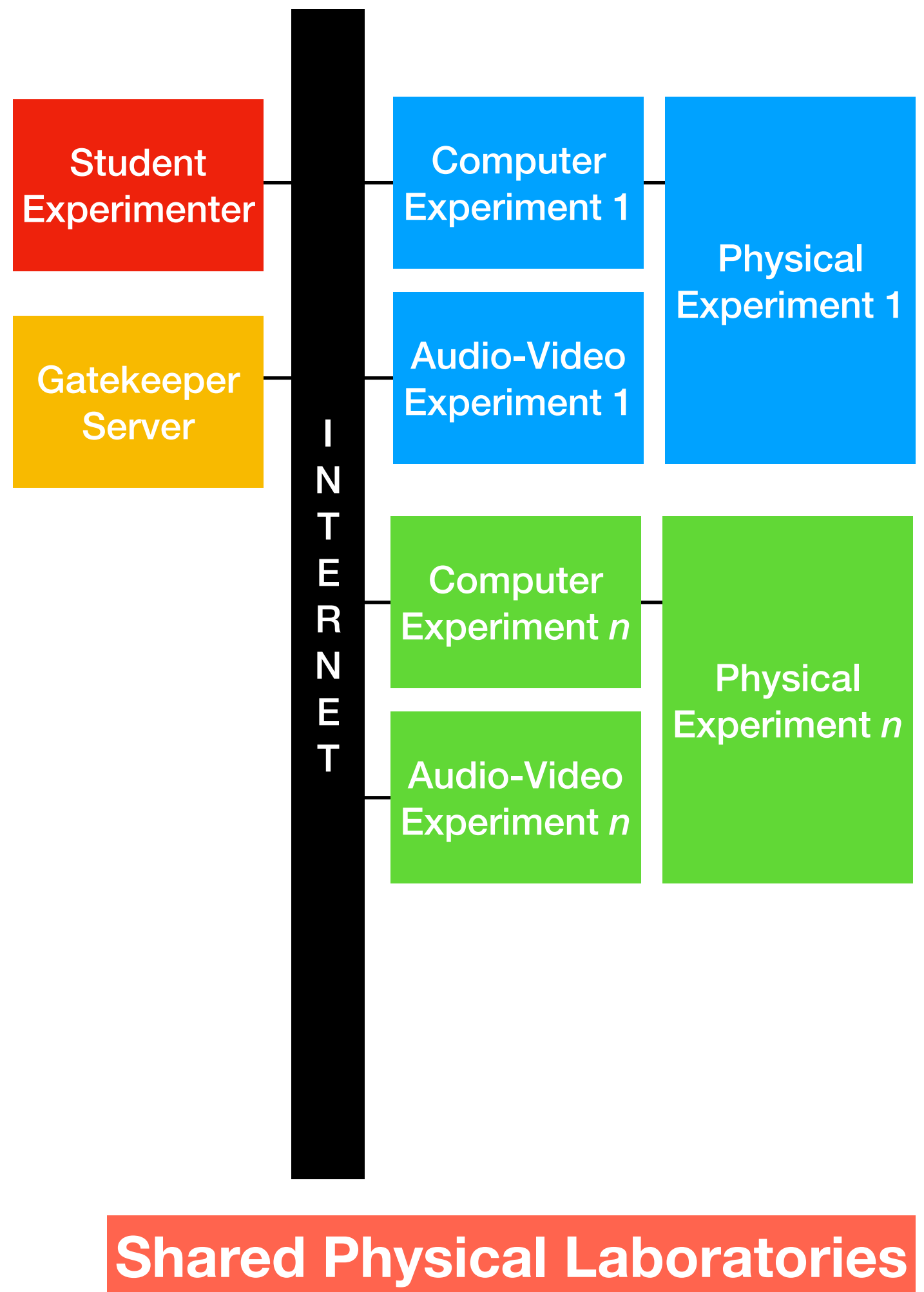
Bungoma County

Busia County

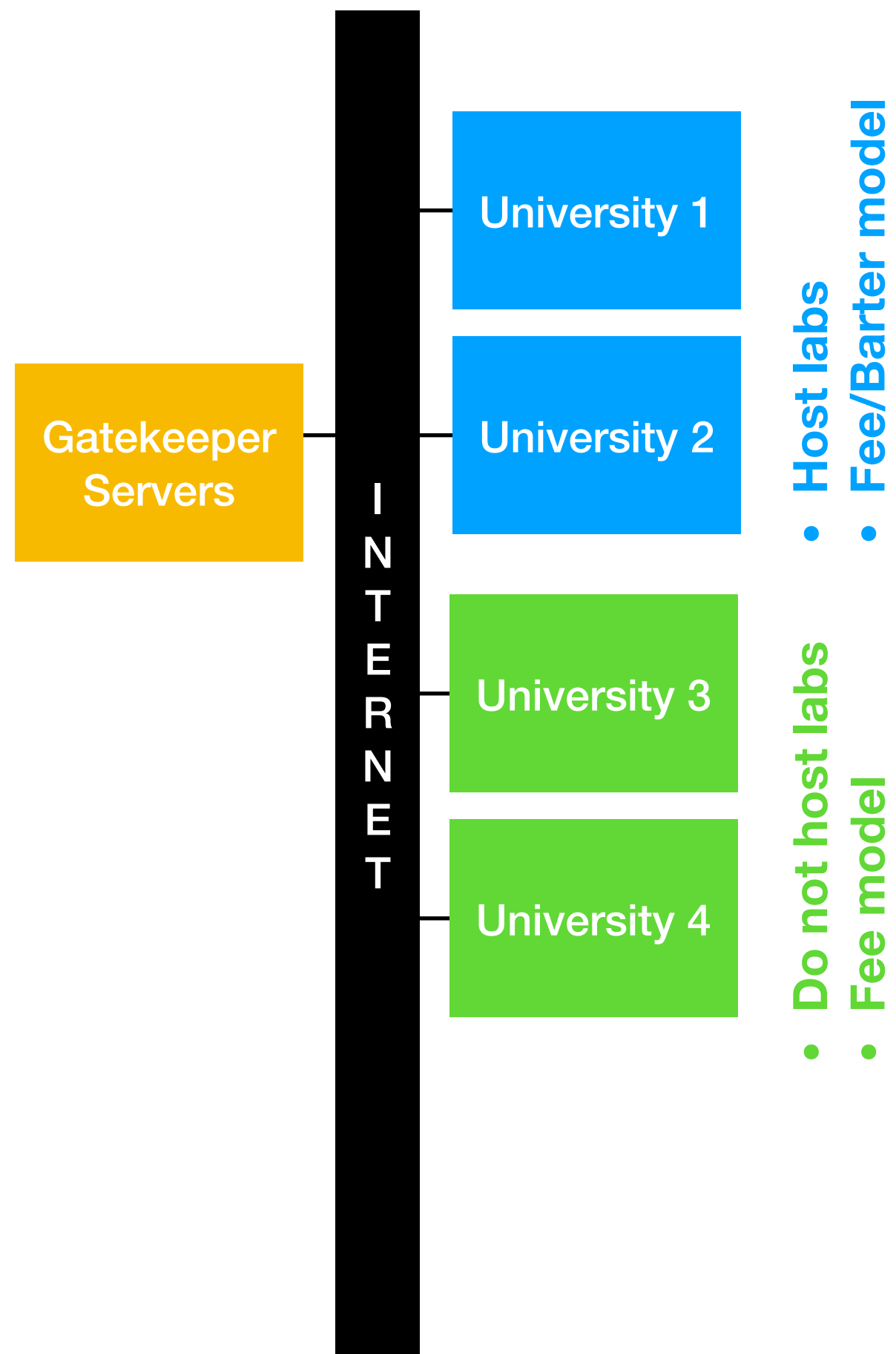
Open Specialised e-Repositories

An idea whose time has come

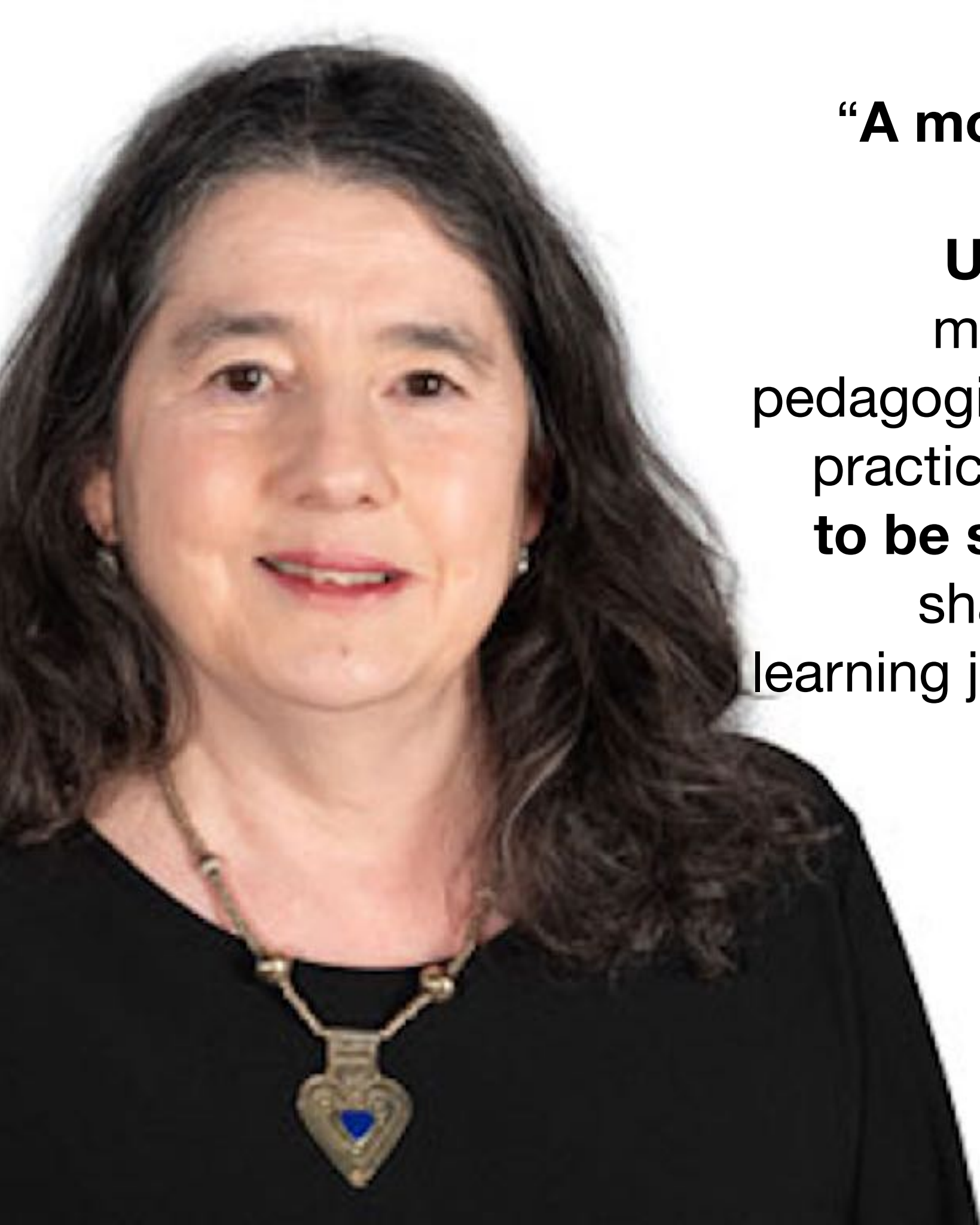
- Remotely controlled physical laboratories
- In 2003 carried out a study at Rutgers University where we showed that there was no difference in learning between students in-person and those remote



**Shared resources,
Quality infrastructure,
and Superior learning**
leveraging on existing
tools



Shared Physical Laboratories



**“A more complex, inclusive,
nuanced view [of the
University] incorporating
multiple factors, including
pedagogies, platforms, contexts,
practices and research, **needs
to be synthesised** if we are to
shape a new teaching and
learning journey in a post-COVID
environment ...**

Prof Ruksana Osman
DVC Academic
University of
Witwatersrand



It calls for us to learn from our history and experience over the past 18 months, to appreciate present contextual realities and environments, to embrace new ways of learning and teaching, and to understand how students learn, and want to learn.”

Prof Ruksana Osman
DVC Academic
University of
Witwatersrand



Thank-You