NATIONAL COUNCIL FOR HIGHER EDUCATION

THEME:

"Adaptation to current and future challenges for Higher Education under the Covid-19 pandemic."

3RD ANNUAL HIGHER EDUCATION CONFERENCE (VIRTUAL) PROCEEDINGS

18th – 20th May, 2021

3rd ANNUAL HIGHER EDUCATION CONFERENCE

ORGANIZED BY

NATIONAL COUNCIL FOR HIGHER EDUCATION

A virtual conference coordinated from Makerere University Business School (MUBS), E-Learning Centre, Kampala, UGANDA.
18th -20th May, 2021

THEME: Adaptation to current and future challenges for Higher Education under the Covid-19 pandemic.

Thematic Areas:

- ODeL Context relevant to teaching and learning interventions.
- Impact on the internationalization of Higher Education, the cross-border movement of students, academics and scholars
- Effective pedagogical practices for online teaching.
- Higher Education Financing Strategies for attraction and retention of students.
- Policy and strategic frameworks for Higher Education recovery and sustainability in the Covid-19 era.
- Crisis-sensitive higher educational planning and management.

Welcome Remarks

The National Council for Higher Education welcomes you to the 3rd Annual Higher education Conference. In a special way gratitude is extended to the Guest of Honour and all of our distinguished Keynote Speakers, Panel Discussants, Session Chairpersons and Presenters. We would also like to acknowledge the important contributions of all of our conference participants and NCHE staff.

Cocvid-19 pandemic affected many things, including our annual Higher Education Conference, unlike the previous conferences, this is a virtual one, the first of its kind to ensure observance of SOPs as guided by the Ministry of Health, the majority of our participants joined on line.

The theme of this year's conference is ***"Adaptation to current and future challenges for Higher Education under the Covid-19 pandemic"***. The conference aims at exploiting the available opportunities for higher education institutions to adapt to the effects of Covid-19 pandemic. In addition, the conference will avail institutions and individuals an opportunity to disseminate their research findings.

The Covid-19 pandemic which was first reported in Uganda in March, 2020, has turned out to be a serious threat to access to education on the African continent where millions of students in higher education institutions had their education disrupted due to closure of these institutions occasioned by lockdown. This caught almost all institutions unprepared to embrace online learning. In Uganda, over 20 institutions of Higher learning and about 300,000 learners were affected after being sent home.

Chief Guest, distinguished participants, we all know that most of our institutions of higher learning were using the face to face system of teaching and the outbreak of the pandemic which resulted into temporally closure of institutions caught our institutions unprepared. This affected the learning and teaching, the financial base and human resource in these institutions. However, for institutions especially those in developed countries that adopted blended learning had lesser challenges since they continued with the teaching and learning despite closure.

The National Council for Higher Education approved the implementation of the Emergency Open, Distance and electronic learning (ODeL) system for a number of institutions. However, many are faced with challenges in implementing this system due to adaptability constraints. Some have failed to switch from the traditional classroom and face to face instruction training to computer based training as a result of high bandwidth and internet costs and computer illiteracy among the teachers and learners.

The failure by institutions to adapt to the modern learning platforms is attributed to a number of factors but the most pressing one is the financial constraints. Covid-19 is still with us, but this should not stop teaching and learning. There is therefore need for institutions to adapt to the new approach and ensure continued access to education by students. But as NCHE, we urge institutions that have embraced ODeL to ensure delivery of quality higher education.

We appreciate the partners who have supported higher education institutions in switching to online teaching. I call upon, Government, Development partners and private sector to come out and support institutions by enabling internet connectivity countrywide, subsiding the cost of equipment such as computers and access to internet.

The NCHE will continue to monitor institutions for compliance and give guidance where it is needed. Its our hope that our engagement at this conference will provide opportunities to reflect on our level of preparedness and willingness by our institutions to adapt to the challenges posed by the Covid-19 pandemic to higher education and propose strategies for addressing the gaps. We look forward to a fruitful engement with you all.

Ladies and gentlemen, it is now my singular pleasure and honor to invite the Chief Guest to make her remarks.

THANK YOU FOR YOUR ATTENTION

Professor Mary J. N. Okwakol PhD

Executive Director, NCHE

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KEYNOTE SPEAKERS

Professor Guido Van Huylenbroeck, Ghent University, Beligium. Professor in agricultural and rural environmental economics at Ghent *University, Department of Agricultural Economics Presently Dean of the faculty of Bioscience engineering. Prof. Guido Van Huylenbroeck also has ample experience in management as Faculty Chair for internationalisation (2002-2008), Dean of the Faculty of Bioscience Engineering (2008-2015) and since October, 1st 2015 as Academic Director for Internationalisation for the whole Ghent university*

Dr. Jessica Aguti- School of education, Makerere University. *Jessica has been a lecturer at Makerere University since joining the University in 1990 and has risen to the level of Associate Professor. She has played a part in leadership in the University at various levels including heading a section in the Department, being Deputy Principal College of Education and External Studies, Deputy Director of the Institute of Adult and Continuing Education and a Director of the same Institute. She participates in supervision of research of both undergraduate and postgraduate students*

Dr. Fredrick Kitoogo, Principal- *Uganda Institute of Information and Communication Technology,* ***Nakawa.*** *Kitoogo is the Director Planning, Research and Development at National IT Authority Uganda (NITA-U). He holds a PhD in Computer Science from Makerere University, a Master of Science in Computer Science and Bachelor of Statistics. . He has over 20 years of experience in the field of IT, Research & Innovations, ICT Policy & Strategy Development; ICT Governance, Risk and Compliance; Software Engineering; Networking; Information Security; Business Continuity & Disaster Recovery; Business Intelligence & Data Warehousing; e-Government; Content Development; artificial intelligence and Natural Language Processing.*

SESSION CHAIRPERSONS

	Dr. Halima Akbar Wakabi *–* ***Academic Registrar****, Islamic University in Uganda. The key aspects of her duties include overseeing, supervising and coordinating the admission process for the new entrants to the University, monitoring enrollment, organization of examination, coordinating the teaching process, custodian of students' academic records and transcripts, developing and implementing academic regulations and policies and procedures, prescoring students for the conferment of degree and giving advice, guidance and counseling of students*
	Dr. Olive Sabiiti – Deputy Vice Chancellor*, Cavendish University. Dr. Sabiiti is a Senior Lecturer, a scholar of law and an advocate of the High Court of Uganda. As a Commonwealth Scholar, she earned her PhD degree in law from the University of Manchester, UK. As a British Chevening Scholar, she earned her LLM (Master of Laws in International Business Law) degree with merit from the University of Manchester, UK. She holds a post-graduate diploma in Legal Practice from Law Development Centre, Uganda, and a Bachelor of Laws degree (LLB) with Honours from Makerere University*
	Prof. Christine Dranzoa – Vice Chancellor*, Muni University. Vice Chancellor, Muni University; the sixth public university in Uganda located in the West Nile sub-region (www.muni.ac.ug). She is a wildlife scientist, conservationist, administrator, ardent educationist and social entrepreneur by practice. She received her Higher Degrees: – PhD (Zoology) 1997; MSc (1991) and BSc 1988 (Hons) Upper Second from Makerere University. She has a diploma on Modern Management and Administration of Cambridge College; several certificates in professional areas including biodiversity conservation and others from various universities. She founded the Wildlife department and served as Deputy Director, School of Graduate Studies, Makerere University.*
	Prof. Openjuru George – Vice Chancellor*, Gulu University. Prof George Ladaah Openjuru is the Vice Chancellor, Gulu University (GU). George does research in Higher Education, Educational theory and Adult Education. His current project is 'KNOWLEDGE FOR CHANGE, LIFELONG LEARNING, YOUTH AND WORK' TRANSFORMING EDUCATION FOR SOCIAL CHANGE IN EAST AFRICA.*

	Mr. Benjamin Turyahikayo- *Director at National Teachers College, Kabale.* *He holds a Master's degree in Science Teacher Education/General Science Teacher Education from King's College, London, UK.*
	Mr. Francis Katerega- *Principal, Uganda Teacher's College, Mubende. And a member of the Council of NCHE .*

Day 1- Private Universities

18th MAY, 2021

1. OPENING SESSION

The conference was opened by Prof Mary N. Okwakol Executive Director National Council for Higher Education (NCHE)

In her opening remarks, the ED/NCHE, Professor Mary J. N. Okwakol, stated that:

i) Unlike the previous conferences that were held in March, this year's annual conference was held in May due to the Covid-19 pandemic.

ii) NCHE approved implementation of emergency ODeL for a number of HEIs.

iii) NCHE would continue to monitor, and provide guidance to HEIs on implementation of emergency ODeL.

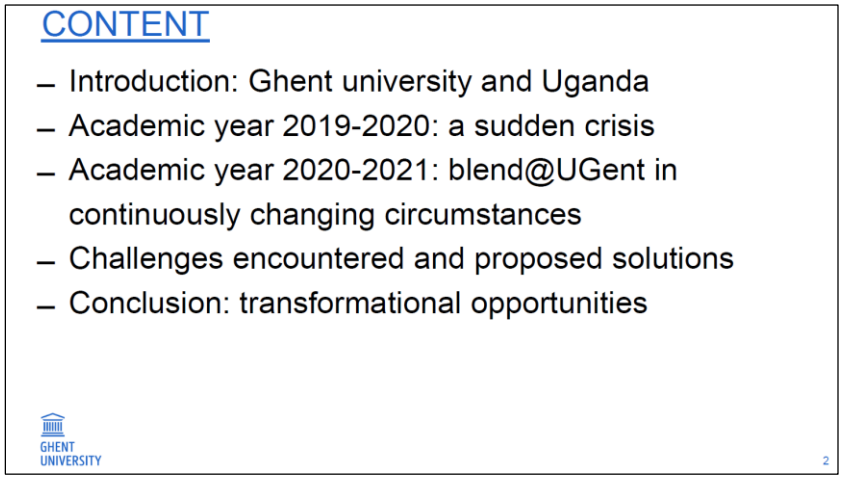
There is need for Government, Development Partners, and other stakeholders to support HEIs in terms of internet connectivity, and affordability to implement online and blended learning

The Master of Ceremonies for the 3 days was Mr. Solomon Serwanja

Keynote Address:

Adaptation to current and future challenges for private universities under the Covid-19 pandemic

Speaker: **Professor Guido Van Huylenbroeck,**
Professor in Agricultural and Rural Environmental Economics, Ghent Univerity, Belgium.



INTRODUCTION

PARTNERSHIPS WITH UGANDA

Cooperation agreements

- Student/Staff Exchange agreement 2020/21

Partner	Faculty
Comprehensive Rehabilitation Services of People with Disability	Medicine and Health Sciences
Special Children's Trust - Dawn	Psychology and Educational Sciences
Makerere University	Arts and Philosophy
Makerere University	Medicine and Health Sciences
Makerere University	Political and Social Sciences

- Other agreements 2020/21

Partner	Type of agreement
Mountains of the Moon University	Memorandum of Understanding
Regional Universities Forum for Capacity Building in Agriculture	Memorandum of Understanding

(source: UGI, 3.05.2021)

Partners in educational projects active in 2020/21

Partner	Project	Key Action	Faculty
Makerere University	Nematology Education in Sub-Sahara Africa	KA2 Capacity Building	Sciences
Muni University	Nematology Education in Sub-Sahara Africa	KA2 Capacity Building	Sciences

(source: project compendium, 3.05.2021)

Partners in International Thematic Networks

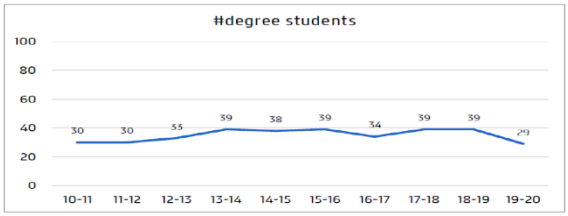
Partner	ITN
Gulu University	MYTOX-SOUTH: Partnership to improve food security & food safety in developing countries, mitigation of mycotoxins GCD - Governance, Conflict and Development
Makerere University	CLIMHEALTH - International Network on Climate-Migration-Health Ghent University
National Agricultural Research Organization	PLANT B&B - Plant Breeding and Biotechnology
Regional Universities Forum for Capacity Building in Agriculture	PLANT B&B - Plant Breeding and Biotechnology

(source: project compendium, 3.05.2021)

Projects
46
See:
https://www.africaplatform.ugent.be/projects?f%5B%5D=field_countries%3A642

Main financing source: vliruos
IUC
- IUC Mountains of the Moon University:
  Dr. Gellynck- Dr.Kagambe
- Teams Projects :
- Mytoxin project: Gulu and Muni University
  Dr. Haesaert- Dr. Echodu
- Reproductive health: Mbarara University S&T
  Dr. Michielsen- Dr. Nyakato

NUMBER OF STUDENTS FROM UGANDA



(source: UGI, 3.05.2021)

- Academic year 2020/21

Faculty	#Int. students	BA	MA	PhD	Other
Totals	27		9	18	1
Sciences	2		2		
Medicine and Health Sciences	4			4	
Bioscience Engineering	20		7	13	1
Political and Social Sciences	1			1	

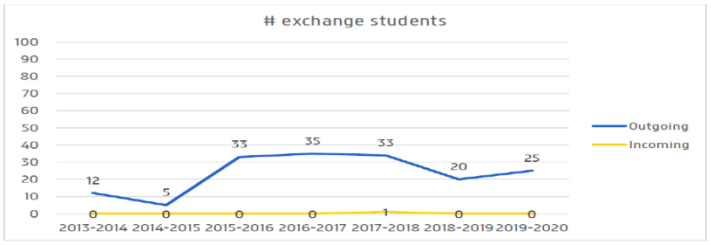
(source: UGI, 3.05.2021)

Total alumni from Uganda:

363

Exchange students

- Overview 2010/11-2019/20



(source: UGI, 3.05.2021)

Postdoctoral researcher

Faculty	#Post docs
Totals	2
Bioscience Engineering	1
Engineering and Architecture	1

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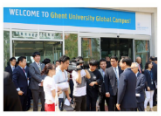
ACADEMIC YEAR 2019-2020: A SUDDEN CRISIS

- Prelude (starting end 2019):
  - Students experiencing problems in China; panicking Chinese students in Ghent
  - Difficulties in South-Korea: impact on Ghent University Global Campus in Incheon
- First cases in Europe popping up in February



→ All managed by already existing crisis team ('Actueel')

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COMPOSITION CRISIS TEAM

- Head of Security
- Director of Student Affairs
- Head of Internal Service for Prevention and Protection at Work
- Staff of HR Office
- Press Office
- Head of Research Coordination Office
- Head & staff of International Relations Office (3)

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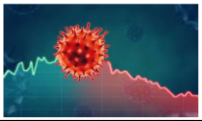
ACADEMIC YEAR 2019-2020: A SUDDEN CRISIS

- March 2020: pandemic hits Belgium (hard)
- Lockdown starting March 13 → no on campus activities allowed
- Need for an immediate response:
  - Already existing crisis team → focus on all non-education related affairs
  - Newly created task force → focus on the support of teaching staff in the sudden shift to online learning (joint endeavour of the central departments for educational policy and ICT)



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IMMEDIATE EFFECTS

- On mobility
  - Of students
  - Of staff
- On the organisation of our education
- On the organisation of the exams

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MOBILITY IN SPRING 2020

- Students who were already abroad
  - First stage: asked them to return to Belgium
  - Eventually (when the situation worsened here): they could choose to stay
- Students who still had to leave: no permission
- Staff: only essential travel was allowed (very limited)

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EDUCATION & EXAMS IN SPRING 2020

- Drastic and sudden shift to online education (without sufficient resources and limited experience – but a lot of motivation to support our students)
- Introduction of on-line teaching tools supported by our ICT department
- Huge impact on the organisation of practicals, placements, master dissertations!
- Mixture of online exams and 'covid-proof' exams (which costed a lot of effort!)

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2020-2021: ON-LINE BECOMING THE NEW NORMAL

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ACADEMIC YEAR 2020-2021: BLEND@UGENT IN CONTINUOUSLY CHANGING CIRCUMSTANCES

- NOT a sudden crisis → need to raise the bar…
- Blend@UGent

- Changing circumstances: "Pandemic Matrix for Higher Education" of Flemish Government

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PANDEMIC MATRIX FOR HIGHER EDUCATION

- Different colour codes depending on the situation of the pandemic
- Green – yellow – orange – red
- Has shifted rapidly (voluntary or top-down)

Activiteit	*Code groen*	*Code geel*	*Code oranje*	*Code rood*
Onderwijs in auditoria	Geen beperkingen	Bezettingsgraad 1 op 2 met mondmaskerplicht *of* Bezettingsgraad 1 op 5 zonder mondmaskerplicht	Bezettingsgraad 1 op 5 met mondmaskerplicht	Niet mogelijk / wordt vervangen door afstandsonderwijs
Onderwijs in kleine groepen	Geen beperkingen	Bezettingsgraad 1 op 2 met mondmaskerplicht *of* Bezettingsgraad 1 op 5 zonder mondmaskerplicht	Bezettingsgraad 1 op 2 met mondmaskerplicht *of* Bezettingsgraad 1 op 5 zonder mondmaskerplicht	Niet mogelijk / wordt vervangen door afstandsonderwijs
Practica en labo-oefeningen	Geen beperkingen	Bezettingsgraad 1 op 1 met mondmaskerplicht	Bezettingsgraad 1 op 1 met mondmaskerplicht	Bezettingsgraad 1 op 1 met mondmaskerplicht
Stages	Geen beperkingen	Veiligheidsvoorschriften van de stageplaats zijn van toepassing	Veiligheidsvoorschriften van de stageplaats zijn van toepassing	Veiligheidsvoorschriften van de stageplaats zijn van toepassing

INTERNATIONALISATION IN AC.YEAR 20-21

- Decrease in number of international degree students (but still OK – degree mobility = considered "essential travel")
- Drastic drop in number of credit mobility students, both incoming and outgoing

	Incoming	Outgoing
1st semester 2020/21	332	224
1st semester 2019/20	1006	1463

- Online alternatives:
  - **online exchange** → in stead of planned and approved physical mobility for selected students
  - **online courses** → allow all students to choose online courses of (selected) partner institutions
  - **joint online courses** → created by staff of Ghent University and partner universities from abroad together and followed by students from all partners involved

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2021-2022: FUTURE PROOFED EDUCATION

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ACADEMIC YEAR 2021-2022: TRANSITION TO FUTURE-PROOF EDUCATION

- Hope that we overcome the pandemic (due to rapid vaccination)
- However: this does not mean to go back to 'before COVID' as we experienced a number of positive elements
- Using the positive elements of blended learning (more autonomy for the learners) while avoiding the negative ones (such as mental problems, lack of on campus contacts between prof and students, …)

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FUTURE-PROOFED EDUCATION

1.T-shaped professional : mixture of (1) disciplinary competences with (2) generic competences
2.Challenge-based and **research-based education**
3. An activating learning environment: student-centered, blended learning, interconnected digital campusses
4.Interaction with stakeholders: social embedded learning and engagement, living labs, real life cases, employability
5.Inter-/multi-disciplinair: learning over the boundaries of the own dsicipline, personalised educational pathways
6.Flexible learning opportunities and learning pathways: International learning, stepping stone, embedded mobility, automatic recognition, micro-credentials, global engagement, ….

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STEPPING STONE PRINCIPLE

- Gradually increasing off-campus experiences while decreasing the on-campus activities
- First year students: fully on campus (traditional teaching), from second year on: gradual increase of off-campus elements (online learning but also living labs/clinics, short term programs abroad, own research in lab or field, …)

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CONCLUSION: TURNING PROBLEMS INTO OPPORTUNITIES

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COVID OFFERS US TRANSFORMATIONAL OPPORTUNITIES FOR INTERNATIONAL EDUCATION

- We discovered on-line learning opportunities that can last ('be there to stay')
- We learned advantages of I@H (e.g. webinars of international staff) → explore possible international cooperation beyond physical stays
- We started to develop Cooperative Online International Learning (COIL): courses in which teachers/students work together, learn from each other in a virtual space
- Blended (international) programs: part on-line, part on campus
- Next level support structure: mixed teams of support staff from both the central and the faculty level (IT, pedagogical advisors, IRO,…) → brought these closer together

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CONTACT

Prof. Guido Van Huylenbroeck, DINT
'Het Pand', Onderbergen 1, BE-9000 Ghent, Belgium

E-mail: guido.vanhuylenbroeck@UGent.be

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Panel Discussion of emerging issues

The key observations/emerging issues from the keynote address included;

i) Noted that Ghent University was focusing on consolidating the gains from Covid-19, by continuing with online/blended teaching and learning, and that Ugandan HEIs should emulate the same.

ii) Observed the need for every HEI to devise own strategies of teaching and learning during the Covid-19 pandemic.

iii) Practical online courses could be taught online by simulations.

iv) Concurred with Professor Guido Van Huylenbroeck, that it was necessary for first year students to be on campus to acquire experience, and competencies, and study online in the second and other years.

v) The participants were surprised to note that some of the challenges faced by Ugandan HEIs with regard to online teaching and learning, such as Internet and ICTs were also being experienced by Universities in developed countries.

vi) Noted that staff and student support was crucial for the success of online teaching and learning.

DAY 1 - SESSION 2

Thematic Area:

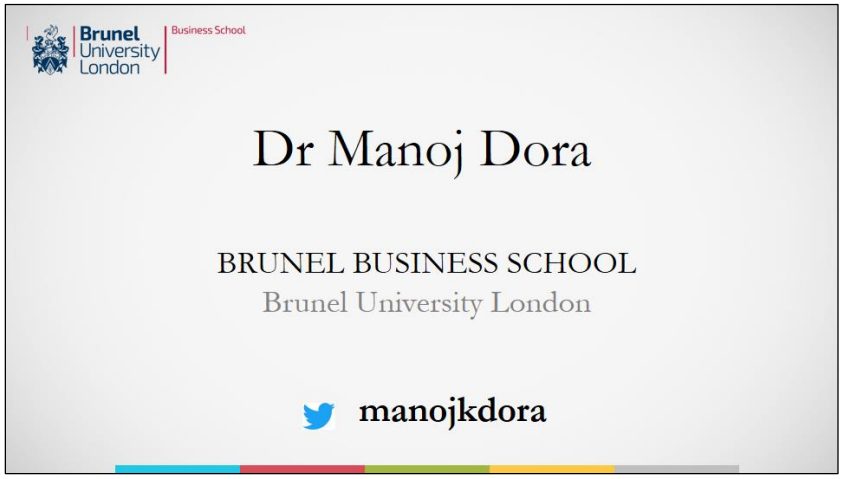
Strategic Policy and Planning Frameworks for Recovery and Sustainability in the Covid-19 Era

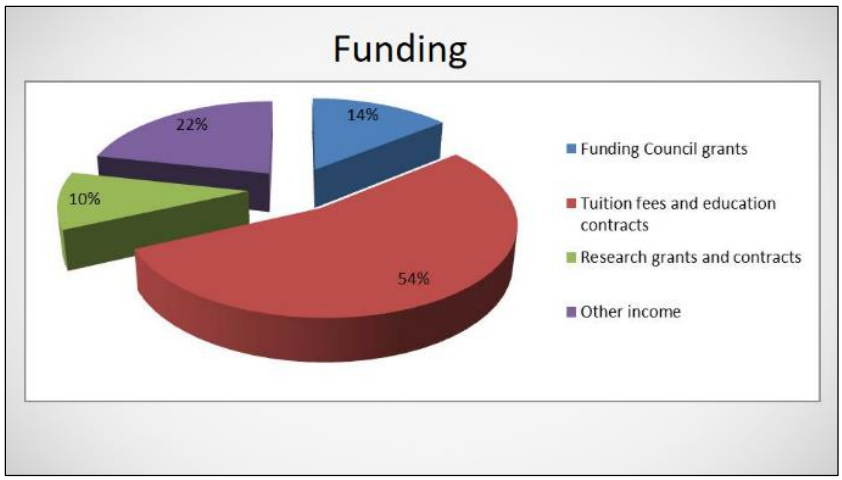
Chairperson:

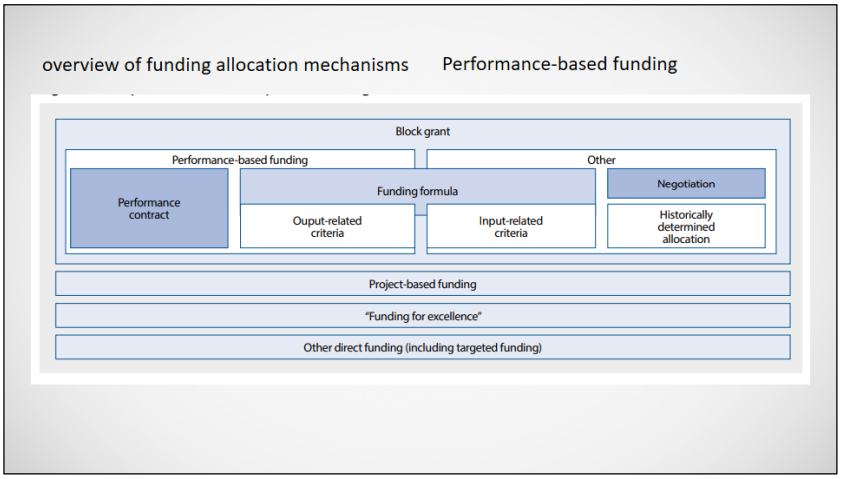
Dr. Halima Akbar Wakabi

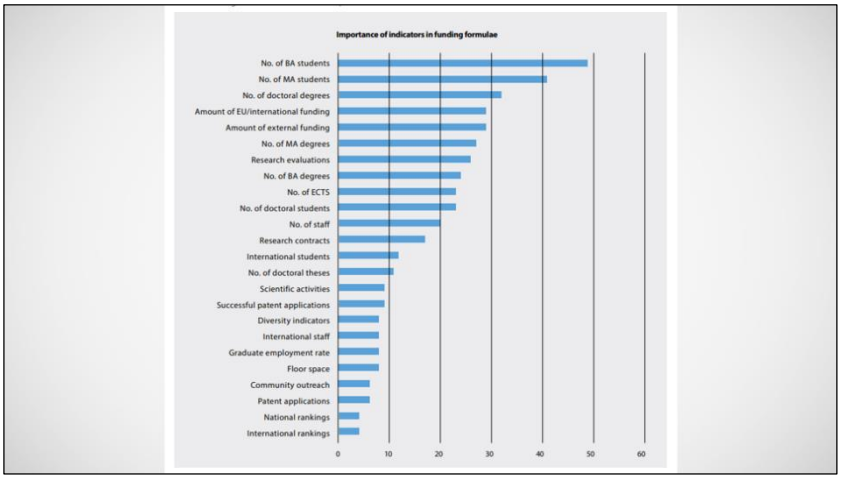
Academic Registrar, Islamic University in Uganda

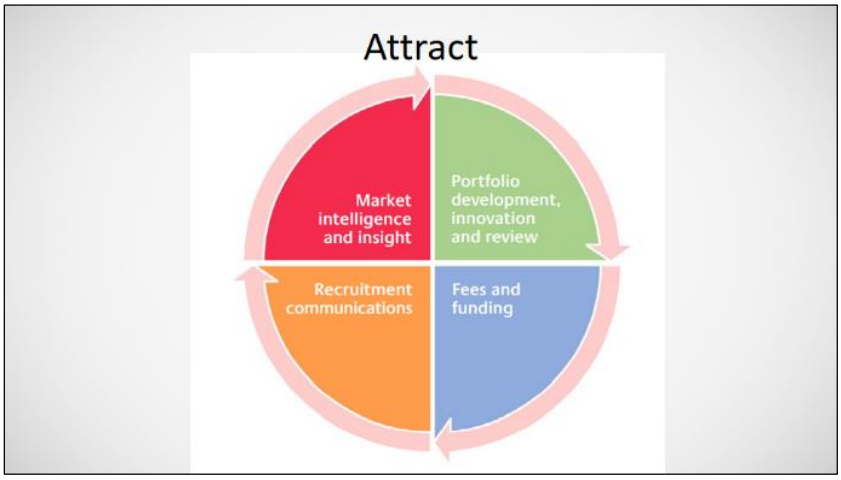
1.1 Private Universities Funding Strategies for Attraction and Retention of Students

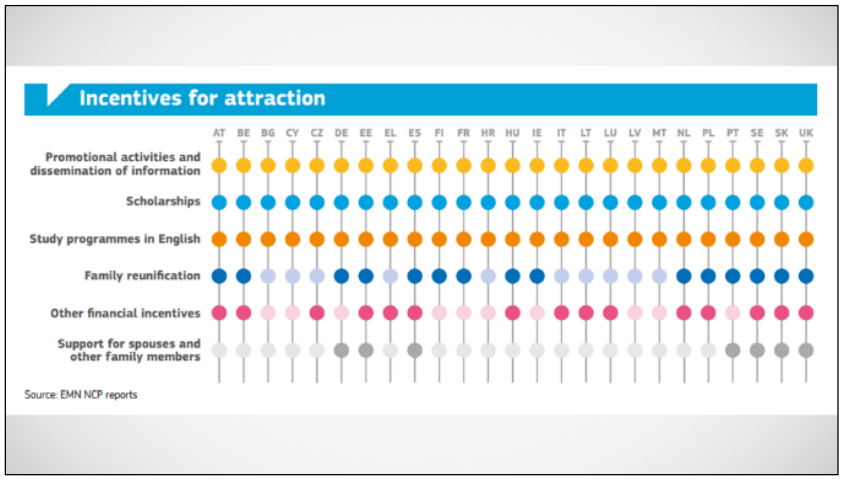


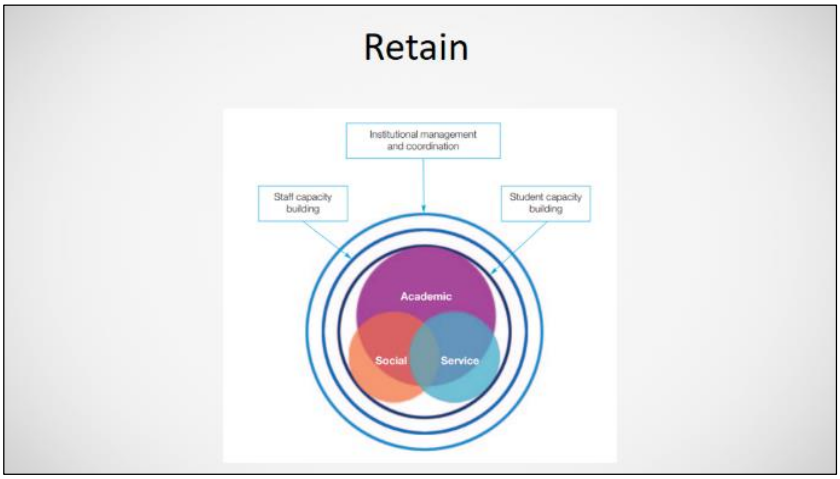



overview of funding allocation mechanisms
Performance-based funding
Block grant
Performance-based funding
Other
Performance contract
Funding formula
Negotiation
Ouput-related criteria
Input-related criteria
Historically determined allocation
Project-based funding
"Funding for excellence"
Other direct funding (including targeted funding)

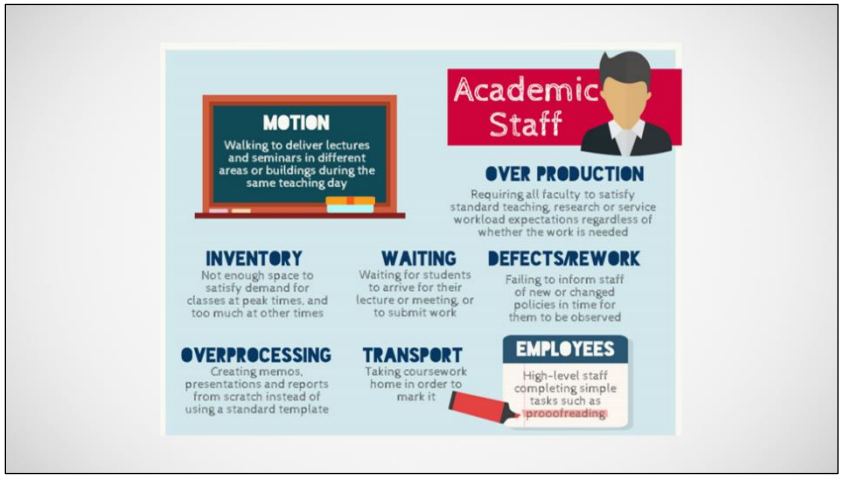

Importance of indicators in funding formulae
No. of BA students
No. of MA students
No. of doctoral degrees
Amount of EU/international funding
Amount of external funding
No. of MA degrees
Research evaluations
No. of BA degrees
No. of ECTS
No. of doctoral students
No. of staff
Research contracts
International students
No. of doctoral theses
Scientific activities
Successful patent applications
Diversity indicators
International staff
Graduate employment rate
Floor space
Community outreach
Patent applications
National rankings
International rankings
0
10
20
30
40
50
60

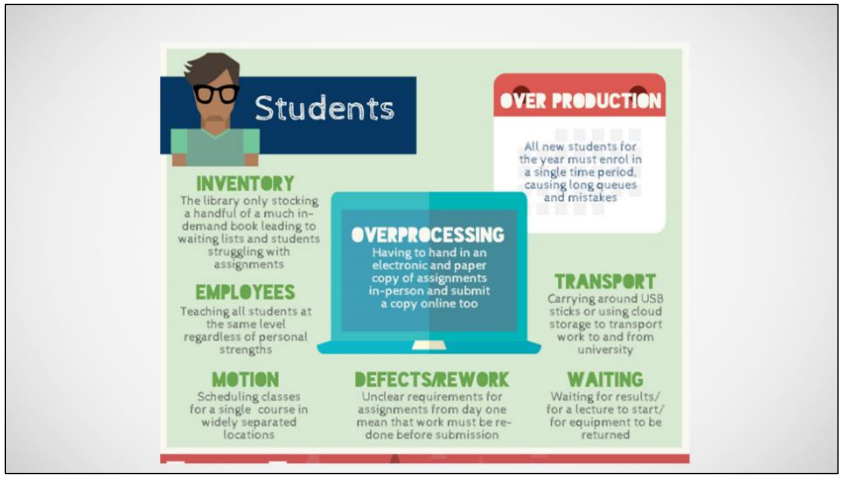

Attract
Market intelligence and insight
Portfolio development, innovation and review
Recruitment communications
Fees and funding


Incentives for attraction
AT BE BG CY CZ DE EE EL ES FI FR HR HU IE IT LT LU LV MT NL PL PT SE SK UK
Promotional activities and dissemination of information
Scholarships
Study programmes in English
Family reunification
Other financial incentives
Support for spouses and other family members
Source: EMN NCP reports


Retain
Institutional management and coordination
Staff capacity building
Student capacity building
Academic
Social
Service

Cost
Administrative Staff
OVERPROCESSING
Completing reports that are no longer necessary or in a level of detail no longer required
TRANSPORT
Handing off work between several people in order to complete a task
OVER PRODUCTION
Having to process a large number of applications, loan forms and graduate results all at once
INVENTORY
Printing new brochures and prospectuses every year and throwing out old copies, when much of the information remains the same
EMPLOYEES
Not using staff to the best of their abilities due to ignorance of skills or time pressures
MOTION
Walking to and from poorly located office machines or meeting rooms
WAITING
Waiting for decisions to be approved
DEFECTS/REWORK
Inability to process admissions due to missing or incorrect information


Academic Staff
MOTION
Walking to deliver lectures and seminars in different areas or buildings during the same teaching day
OVER PRODUCTION
Requiring all faculty to satisfy standard teaching, research or service workload expectations regardless of whether the work is needed
INVENTORY
Not enough space to satisfy demand for classes at peak times, and too much at other times
WAITING
Waiting for students to arrive for their lecture or meeting, or to submit work
DEFECTS/REWORK
Failing to inform staff of new or changed policies in time for them to be observed
OVERPROCESSING
Creating memos, presentations and reports from scratch instead of using a standard template
TRANSPORT
Taking coursework home in order to mark it
EMPLOYEES
High-level staff completing simple tasks such as proofreading


Students
OVER PRODUCTION
All new students for the year must enrol in a single time period, causing long queues and mistakes
INVENTORY
The library only stocking a handful of a much in-demand book leading to waiting lists and students struggling with assignments
OVERPROCESSING
Having to hand in an electronic and paper copy of assignments in-person and submit a copy online too
EMPLOYEES
Teaching all students at the same level regardless of personal strengths
TRANSPORT
Carrying around USB sticks or using cloud storage to transport work to and from university
MOTION
Scheduling classes for a single course in widely separated locations
DEFECTS/REWORK
Unclear requirements for assignments from day one mean that work must be re-done before submission
WAITING
Waiting for results/ for a lecture to start/ for equipment to be returned

Brunel University London
Business School
Thank you
manojkdora

Plenary Discussion : The emerging issues

i) Tuition fees is the main source of income for Ugandan Universities like those of their counterparts in UK. Participants observed the need by Ugandan institutions to hire out their facilities to generate income as the case is with UK Universities. A need by Ugandan Universities to diversify their sources of income was noted.

ii) Some institutions pay more attention online teaching and less on online learning. To this end, it was noted that lecturers should be equipped with skills/competencies to facilitate both online learning and online teaching.

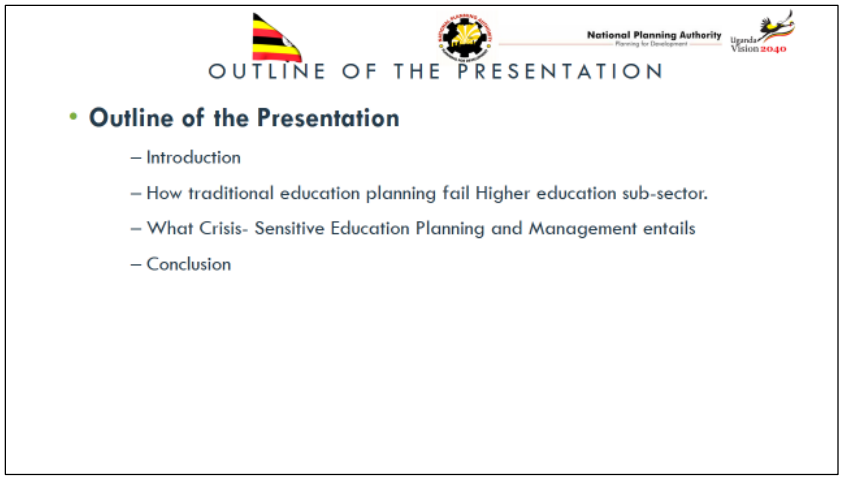
iii) The cost of international education can be cheaper with online/blended learning, that is, students can study certain courses online from their respective home countries.

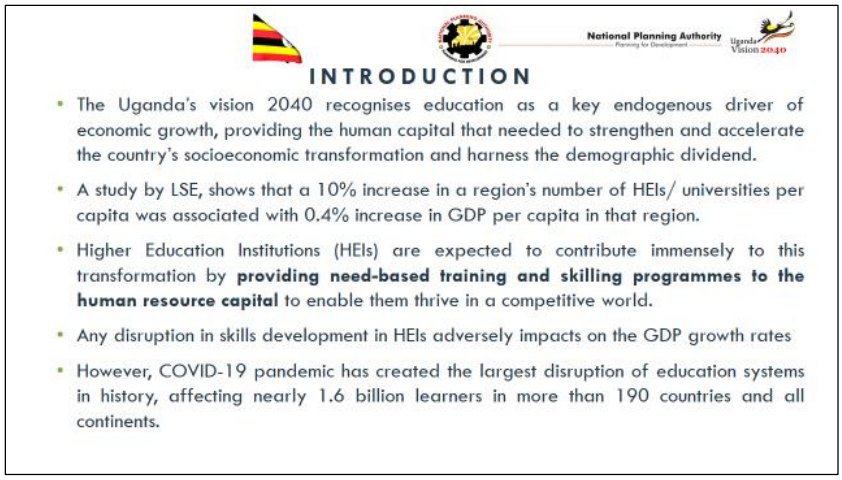
iv) Participants noted that the proposed Government tax on internet data would affect online learning. The NCHE was urged to engage Government on the same.

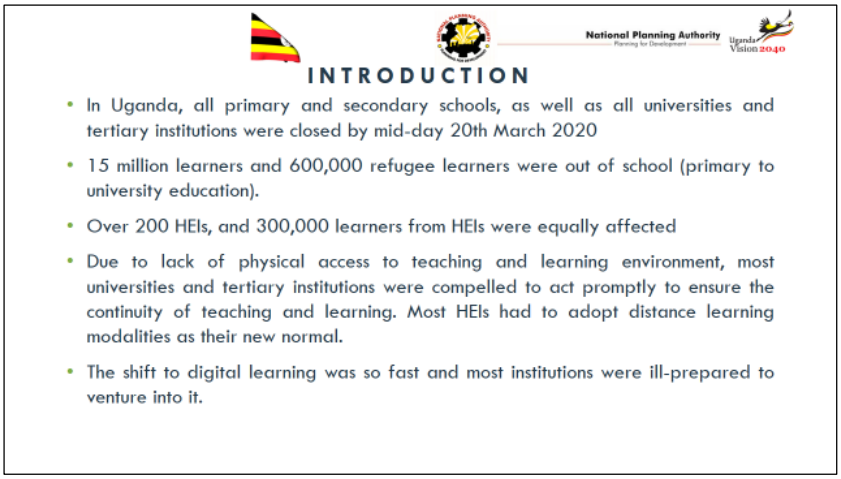
v) The need to develop a national framework to ensure continuity of online/blended learning was noted.

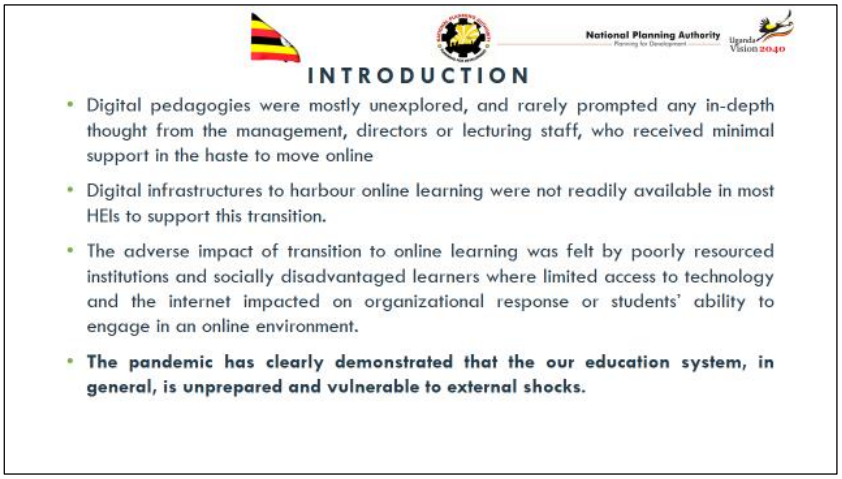
A need to review NCHE capacity indicators for various educational facilities, such as lecture rooms, and staffing under online/blended learning was noted by the participants

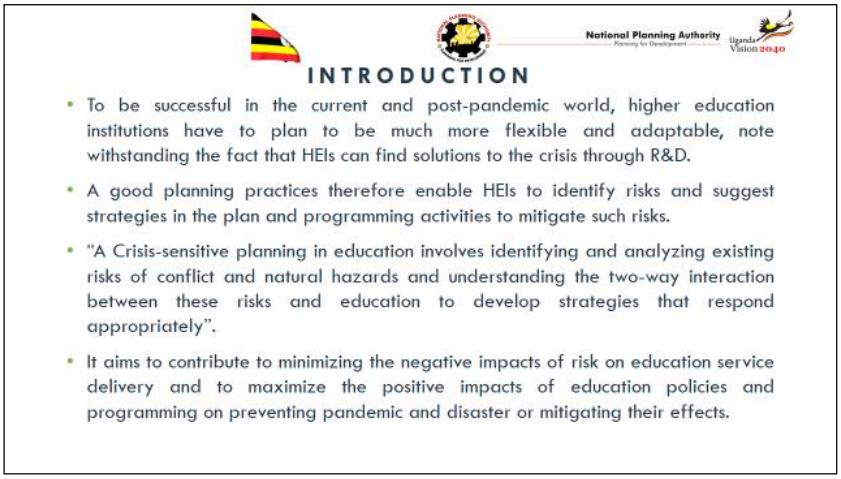
1.2 Crisis- Sensitive Higher Educational Planning and Management

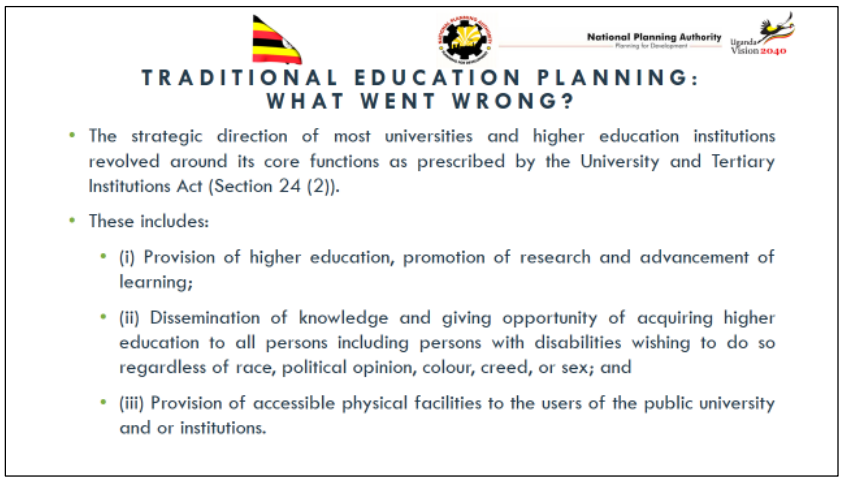


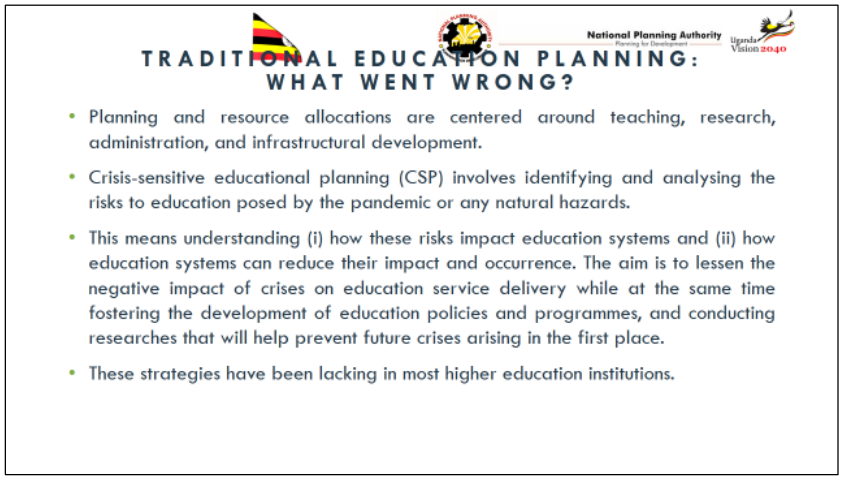


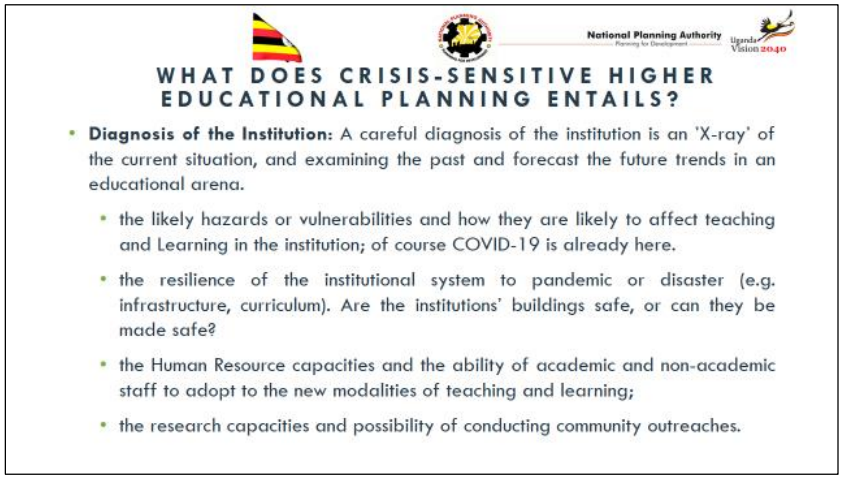

National Planning Authority
Uganda Vision 2040
INTRODUCTION
In Uganda, all primary and secondary schools, as well as all universities and tertiary institutions were closed by mid-day 20th March 2020
15 million learners and 600,000 refugee learners were out of school (primary to university education).
Over 200 HEIs, and 300,000 learners from HEIs were equally affected
Due to lack of physical access to teaching and learning environment, most universities and tertiary institutions were compelled to act promptly to ensure the continuity of teaching and learning. Most HEIs had to adopt distance learning modalities as their new normal.
The shift to digital learning was so fast and most institutions were ill-prepared to venture into it.

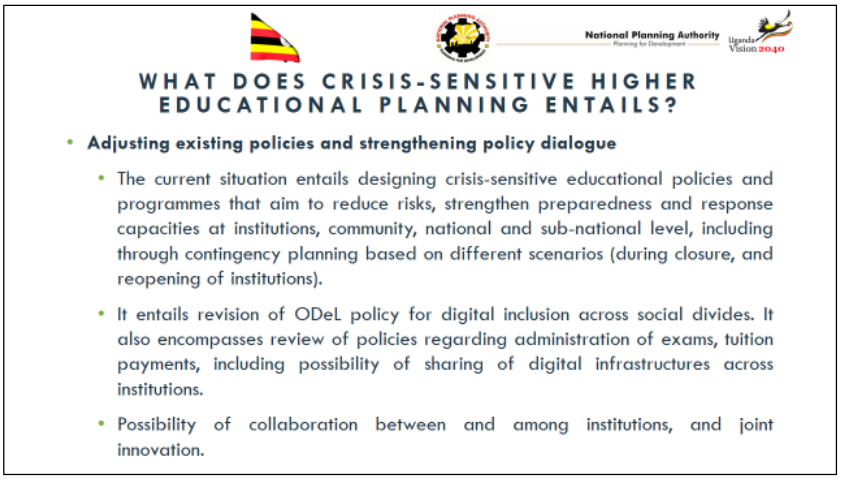

National Planning Authority
Uganda Vision 2040
INTRODUCTION
Digital pedagogies were mostly unexplored, and rarely prompted any in-depth thought from the management, directors or lecturing staff, who received minimal support in the haste to move online
Digital infrastructures to harbour online learning were not readily available in most HEIs to support this transition.
The adverse impact of transition to online learning was felt by poorly resourced institutions and socially disadvantaged learners where limited access to technology and the internet impacted on organizational response or students' ability to engage in an online environment.
The pandemic has clearly demonstrated that the our education system, in general, is unprepared and vulnerable to external shocks.

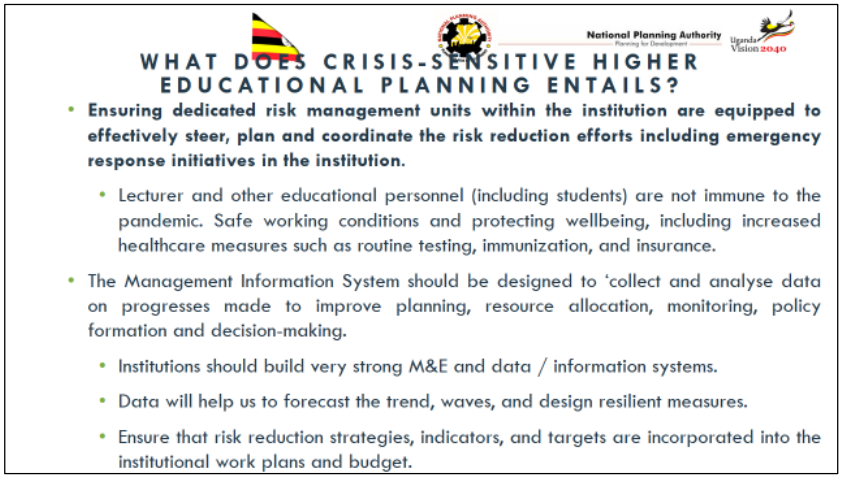

National Planning Authority
Uganda Vision 2040
INTRODUCTION
To be successful in the current and post-pandemic world, higher education institutions have to plan to be much more flexible and adaptable, note withstanding the fact that HEIs can find solutions to the crisis through R&D.
A good planning practices therefore enable HEIs to identify risks and suggest strategies in the plan and programming activities to mitigate such risks.
"A Crisis-sensitive planning in education involves identifying and analyzing existing risks of conflict and natural hazards and understanding the two-way interaction between these risks and education to develop strategies that respond appropriately".
It aims to contribute to minimizing the negative impacts of risk on education service delivery and to maximize the positive impacts of education policies and programming on preventing pandemic and disaster or mitigating their effects.

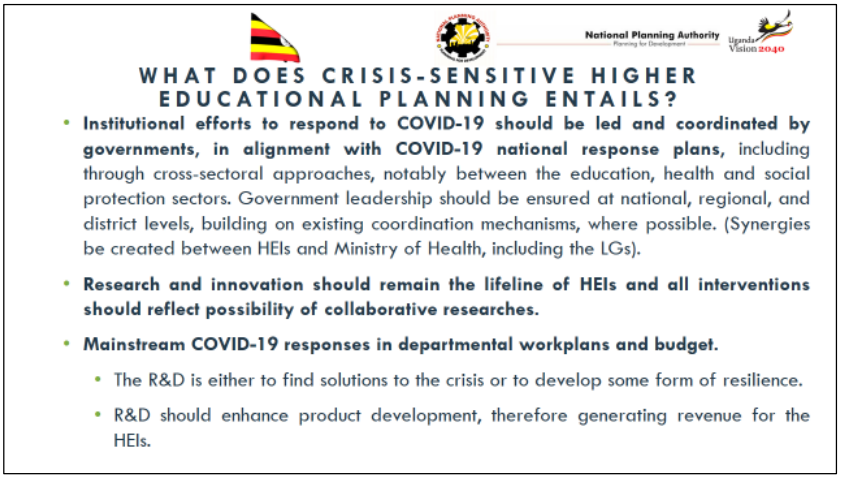

National Planning Authority
Planning for Development
Uganda Vision 2040
TRADITIONAL EDUCATION PLANNING: WHAT WENT WRONG?
• The strategic direction of most universities and higher education institutions revolved around its core functions as prescribed by the University and Tertiary Institutions Act (Section 24 (2)).
• These includes:
• (i) Provision of higher education, promotion of research and advancement of learning;
• (ii) Dissemination of knowledge and giving opportunity of acquiring higher education to all persons including persons with disabilities wishing to do so regardless of race, political opinion, colour, creed, or sex; and
• (iii) Provision of accessible physical facilities to the users of the public university and or institutions.

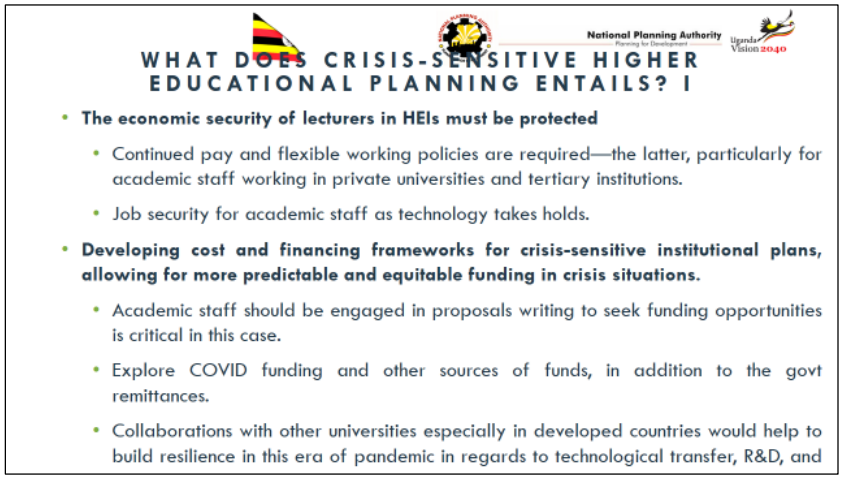

National Planning Authority
Planning for Development
Uganda Vision 2040
TRADITIONAL EDUCATION PLANNING: WHAT WENT WRONG?
• Planning and resource allocations are centered around teaching, research, administration, and infrastructural development.
• Crisis-sensitive educational planning (CSP) involves identifying and analysing the risks to education posed by the pandemic or any natural hazards.
• This means understanding (i) how these risks impact education systems and (ii) how education systems can reduce their impact and occurrence. The aim is to lessen the negative impact of crises on education service delivery while at the same time fostering the development of education policies and programmes, and conducting researches that will help prevent future crises arising in the first place.
• These strategies have been lacking in most higher education institutions.

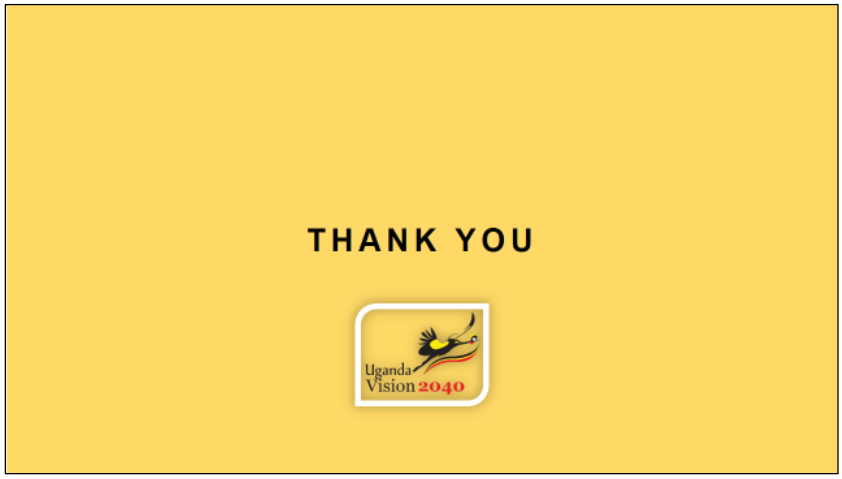

National Planning Authority
Planning for Development
Uganda Vision 2040
WHAT DOES CRISIS-SENSITIVE HIGHER EDUCATIONAL PLANNING ENTAILS?
• Diagnosis of the Institution: A careful diagnosis of the institution is an 'X-ray' of the current situation, and examining the past and forecast the future trends in an educational arena.
• the likely hazards or vulnerabilities and how they are likely to affect teaching and Learning in the institution; of course COVID-19 is already here.
• the resilience of the institutional system to pandemic or disaster (e.g. infrastructure, curriculum). Are the institutions' buildings safe, or can they be made safe?
• the Human Resource capacities and the ability of academic and non-academic staff to adopt to the new modalities of teaching and learning;
• the research capacities and possibility of conducting community outreaches.


National Planning Authority
Uganda Vision 2040
WHAT DOES CRISIS-SENSITIVE HIGHER EDUCATIONAL PLANNING ENTAILS?
• Adjusting existing policies and strengthening policy dialogue
• The current situation entails designing crisis-sensitive educational policies and programmes that aim to reduce risks, strengthen preparedness and response capacities at institutions, community, national and sub-national level, including through contingency planning based on different scenarios (during closure, and reopening of institutions).
• It entails revision of ODeL policy for digital inclusion across social divides. It also encompasses review of policies regarding administration of exams, tuition payments, including possibility of sharing of digital infrastructures across institutions.
• Possibility of collaboration between and among institutions, and joint innovation.


National Planning Authority
Uganda Vision 2040
WHAT DOES CRISIS-SENSITIVE HIGHER EDUCATIONAL PLANNING ENTAILS?
• Ensuring dedicated risk management units within the institution are equipped to effectively steer, plan and coordinate the risk reduction efforts including emergency response initiatives in the institution.
• Lecturer and other educational personnel (including students) are not immune to the pandemic. Safe working conditions and protecting wellbeing, including increased healthcare measures such as routine testing, immunization, and insurance.
• The Management Information System should be designed to 'collect and analyse data on progresses made to improve planning, resource allocation, monitoring, policy formation and decision-making.
• Institutions should build very strong M&E and data / information systems.
• Data will help us to forecast the trend, waves, and design resilient measures.
• Ensure that risk reduction strategies, indicators, and targets are incorporated into the institutional work plans and budget.


National Planning Authority
Uganda Vision 2040
WHAT DOES CRISIS-SENSITIVE HIGHER EDUCATIONAL PLANNING ENTAILS?
• Institutional efforts to respond to COVID-19 should be led and coordinated by governments, in alignment with COVID-19 national response plans, including through cross-sectoral approaches, notably between the education, health and social protection sectors. Government leadership should be ensured at national, regional, and district levels, building on existing coordination mechanisms, where possible. (Synergies be created between HEIs and Ministry of Health, including the LGs).
• Research and innovation should remain the lifeline of HEIs and all interventions should reflect possibility of collaborative researches.
• Mainstream COVID-19 responses in departmental workplans and budget.
• The R&D is either to find solutions to the crisis or to develop some form of resilience.
• R&D should enhance product development, therefore generating revenue for the HEIs.

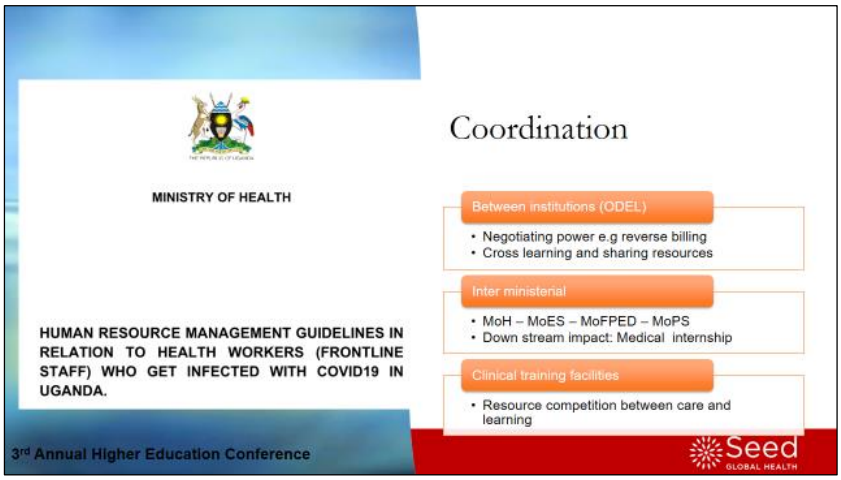

National Planning Authority
Uganda Vision 2040
WHAT DOES CRISIS-SENSITIVE HIGHER EDUCATIONAL PLANNING ENTAILS? I
The economic security of lecturers in HEIs must be protected
Continued pay and flexible working policies are required—the latter, particularly for academic staff working in private universities and tertiary institutions.
Job security for academic staff as technology takes holds.
Developing cost and financing frameworks for crisis-sensitive institutional plans, allowing for more predictable and equitable funding in crisis situations.
Academic staff should be engaged in proposals writing to seek funding opportunities is critical in this case.
Explore COVID funding and other sources of funds, in addition to the govt remittances.
Collaborations with other universities especially in developed countries would help to build resilience in this era of pandemic in regards to technological transfer, R&D, and


THANK YOU
Uganda Vision 2040

1.3 Strategies for continuity of sustainable Health education and training in Higher education

Equity
Access
Vocational training
Crowded homes
Bread earners
New schools
Privately sponsored
Location
International students
Small institutions
Chronic diseases
Internet access

Ebola
PPE
Laundry
Marburg
Resistant TB
Clinical coat
IPC training
Ebola Crowded hospitals
Safety
NCHE 3rd Annual Higher Education Conference
Seed
GLOBAL HEALTH


MINISTRY OF HEALTH
HUMAN RESOURCE MANAGEMENT GUIDELINES IN RELATION TO HEALTH WORKERS (FRONTLINE STAFF) WHO GET INFECTED WITH COVID19 IN UGANDA.
Coordination
Between institutions (ODEL)
• Negotiating power e.g reverse billing
• Cross learning and sharing resources
Inter ministerial
• MoH – MoES – MoFPED – MoPS
• Down stream impact: Medical internship
Clinical training facilities
• Resource competition between care and learning
3rd Annual Higher Education Conference
Seed
GLOBAL HEALTH

IPC Online Training Class
Safe schools drive
prevention and control for
COVID-19 via, Google Classroom
Needs assessment
ODEL capacity building
Infection prevention and control training
Change management
How to join classroom:
When classroom opens, Click the (+) symbol upper right conner and select "Join"
and click "Join" tab at upper right conner
Go to classwork and start reviewing materials
Course Code: mcylx3u
Certificate of completion of course
NCHE 3rd Annual Higher Education Conference

Prioritizing finalists / skills for physical learning
Safety: Phased reopening
Inclusive re-opening guidelines
NCHE 3rd Annual Higher Education Conference
Seed GLOBAL HEALTH

Thank you!
NCHE 3rd Annual Higher Education Conference
Seed GLOBAL HEALTH

DAY 1 - SESSION 3

Thematic Area:

Open Distance and electronic Learning (ODeL) – Context relevant strategies for Teaching

Chairperson:

Dr. Olive Sabiiti

Deputy Vice Chancellor, Cavendish University

1.4 Effective Pedagogical Practices for Online Teaching and Learning

UNIVERSITY MAKERERE

EFFECTIVE PEDAGOGICAL PRACTICES FOR ONLINE TEACHING AND LEARNING

BY

ASSOC. PROF. PAUL BIREVU MUYINDA

MR. RICHARD KAJUMBULA

PRESENTATION AT THE 3rd ANNUAL HIGHER EDUCATION CONFERENCE 2021

NATIONAL COUNCIL FOR HIGHER EDUCATION

Kampala, Uganda

18 – 20 May 2021

Emergency ODeL Evaluation

Some Quotes from the Evaluation of the Emergency ODeL System at Mak:

"I did what my lecturers told me to do. When they asked us to meet in class, we went. When they asked us to do online activities, we did" (Student A– Student of Bachelor of Commerce)

"It is costly and tiresome to sit behind Zoom lectures from 8am to 5pm five days in a week. This online learning thing is impossible". (Student B – Student of Education)

"It was my first time to learn online. I didn't know what to do" (Student C – student of B.Ed.)

"My course cannot be taught online. It requires real-life field experience. So I did not bother undertaking your training"(Teacher A – A faculty from CAES)

"Online teaching freed my time. I uploaded content for the learners to serve themselves as I went to do my other academic engagements" (Teacher B – A faculty from CEES)

Lessons (1)

Quote	Lessons
"I did what my lecturers told me to do. When they asked us to meet in class, we went. When they asked us to do online activities, we did".	• Teachers still play a very important role even in online teaching and learning • Success of online teaching and learning depends on the teachers acceptance and adoption of the same • Once teachers adopt online learning, learners follow suite
"It is costly and tiresome to sit behind Zoom lectures from 8:00am to 5pm, five days in a week. This online learning thing is impossible".	• Teachers find it less demanding to mimic classroom teaching practices in online learning environments • When classroom practices go to online classes, dividends of online pedagogy are not attained • There was limited capacity for asynchronous online facilitation • There were no instructionally sound courses on the LMSs • The cost of Internet will make online learning unaffordable

Lessons (2)

Quote	Lessons
"My course cannot be taught online. It requires real-life field experience. So I did not bother to undertaking your training"	• This teacher lacks capacity of harnessing the affordances of different online teaching and learning technologies • This teacher is not aware of the concept of authentic learning • This teacher is immersed in the convention teaching methodologies. He needs to be 'cajoled' to partake of training on online pedagogy
"Online teaching freed my time. I uploaded content for the learners to serve themselves as I went to do my other academic engagements"	• This teacher denied learners of the badly needed learner – teacher interaction. Without this interaction learning is not meaningful and learners can resent online learning • This teacher was not mindful of the pedagogy of online facilitation

Lessons (3)

Quote	Lessons
"It was my first time to learn online. I didn't know what to do. Besides I didn't have necessary gadgets"	• Fear of the unknown • Such a learner will resist change • Such a learner needs to be scaffolded for online learning as per Gilly Salmon's guidance • Favorable policies needed

Paradigm Shifts

Teacher-centeredness	Learner-centeredness
Teaching	Facilitation of Learning
One fixed method (One size fits all)	Flexible multiple methods
Concentration on putting material online	Ensuring that learning takes place using materials put online

SOME PHILOSOPHIES & CONCEPTS

- Instructivism (Less) Vs Constructivism (More)
- Social constructivism
- Transformative Pedagogy
- Imaginal Education
- Competence Based Learning
- Student centered Learning
- Activity based learning
- The flipped classroom

Practices

1. Good module design – Sub-Saharan Onlinisation Pedagogy (Muyinda and Kajumbula, 2019).
2. Contextually train facilitators- Approaches recommended (Muyinda and Kajumbula, 2019).
3. Give learners chance to reflect on their learning by incorporating end of unit/topic quizzes.

4. Make learning Learner-centered and communicate this to the learners from the beginning. Inform learners that they are in charge of their learning.
5. Encourage learners to work together ie collaborate and cooperate to solve problems.
6. Scaffold Learners into online learning.

7. Allow learners to comment on the quality of the online course through evaluation ie feedback.

8. Have both asynchronous and synchronous sessions.

9. Use the teaching voice when presenting material online.

10. Learners learn through doing. Give them authentic tasks and activities.- Do not just upload documents (PDFs, MsWord) and PPT slides. That is not online facilitation/teaching.

11. Give clear instructions for E-tivities eg what to do, why, where to do it from, how to submit the artefact, where to submit the artefact.

12. Keep your online presence balanced.

13. Give learners feedback on their tasks.

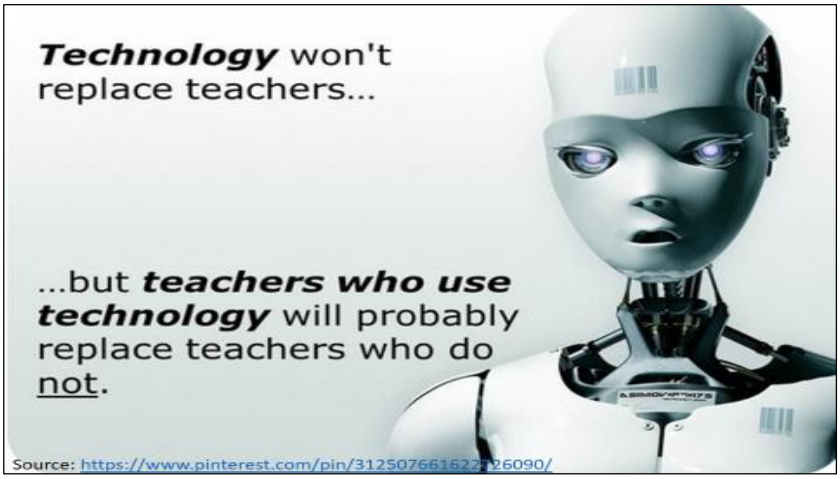
14. Follow good constructive alignment ie Intended Learning Outcomes (ILOs) related activities that you give and ensure that the assessment relates to the activities and ILOs.

15. Enhance good learner experience through attractive and relevant course presentation.
16. Look at learners as partners in knowledge co-creation. They also research and they know.
17. For Inclusivity, Blend approaches and technologies. Some may not access the online material while one method alone may not be effective for others eg learners with disabilities.

Capacity building and training needs

Soft/People Needs

- Mindset change/motivation to adopt transformative pedagogies
- Teaching and learning technology proficiency
- Online facilitation pedagogy
- Online instructional design and content development
- Learner scaffolding for online learning



1.5 Discussion : Emerging Issues

i) A module delivered in a physical environment cannot delivered in an online environment.
ii) Learning should be student centered.
iii) Learners should be accorded an opportunity to evaluate online teaching and learning.
iv) There is need to have both asynchronous and synchronous sessions.
v) Students should be given feedback on assigned tasks.
vi) Lecturers need to balance their online presence otherwise learners would be intimated with their full-time online presence.
vii) Clear instructions should be given for e-activities.
viii) A teaching voice should be used when presenting materials online.
ix) Online facilitators should be trained.
x) Learners should be encouraged to work as a team.

Day 2 – PUBLIC UNIVERSITIES

19th MAY, 2021

OPENING SESSION

Prof Mary N. Okwakol

Executive Director, NCHE

Keynote address:

Adaptation of current and future Challenges for public universities under COVID 19 Pandemic

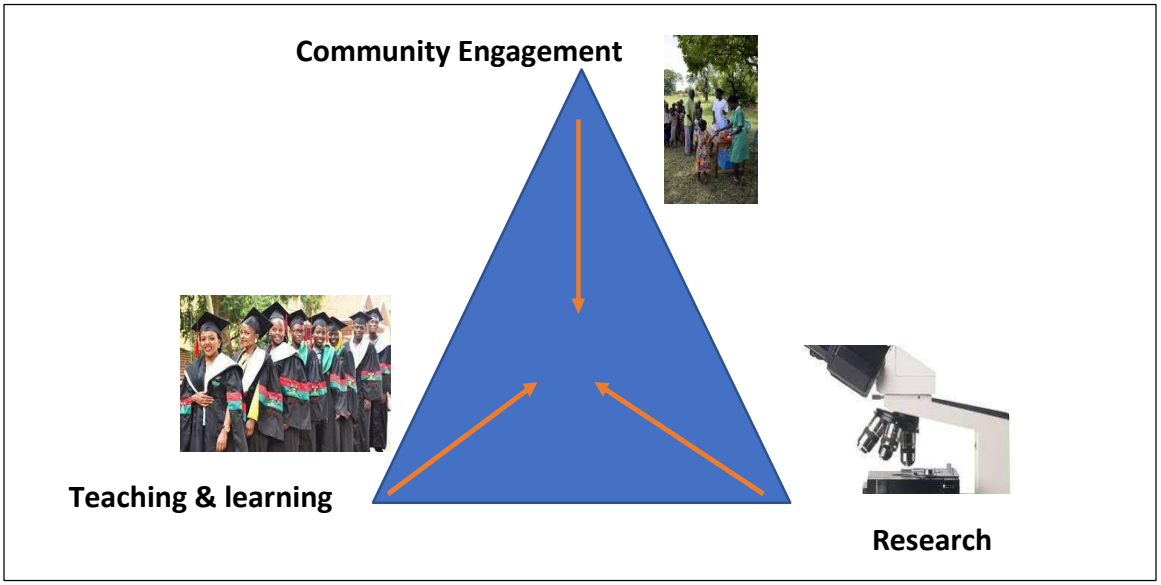
Jessica N. Aguti

Jessica.aguti@cees.mak.ac.ug
jnaguti@gmail.com

Presentation Outline

- Mandate of Public University
- Milestones in HE in Uganda
- Challenges in SSA
- Challenges faced by Public Universities
- COVID 19 and new realities for Public Universities
- Future Demands on Public Universities

Mandate of Public Universities



Milestone in Higher Education in SSA

-Increased enrolment in primary & secondary – higher demand for HE

-Expansion - annual rate of 4.3%,

Number of public Universities has grown

Liberalization of higher education – overall increase in number of universities

Increase in student enrolment - from about 5,000 students in MAK to about 180,000 2019/20

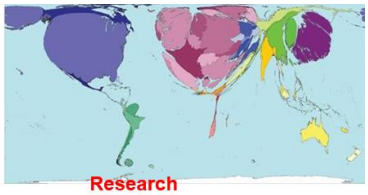
-Cost sharing – introduction of tuition fees

-Increased PhD graduations- 108 (71st MAK)

-Increased research output

Challenges in SSA

- High Population growth - demand higher
- Young populations
- Still low gross tertiary education enrolment despite increase (only 9.4% vs 38% globally)
- Tertiary Education Sector NOT coping with pressure/demand
- Student and staff unrests
- Inadequate research output
- Disparities



http://archive.worldmapper.org/display.php?selected=205

COVID 19 and new realities for Public Universities

- School & University closures – in Africa 77% of universities closed

Table 2: Impact on teaching and learning by region

	Not affected	Classroom teaching replaced by distance teaching and learning	Teaching suspended but the institutions is developing solutions	Teaching cancelled
Africa	3 %	29 %	43 %	24 %
Americas	3 %	72 %	22 %	3 %
Asia & Pacific	1 %	60 %	36 %	3 %
Europe	Almost zero	85 %	12 %	3 %

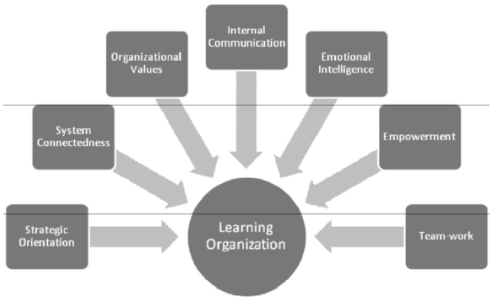
IAU 2020 - https://www.iau-aiu.net/IMG/pdf/iau_covid19_and_he_survey_report_final_may_2020.pdf

COVID 19 and new realities for Public Universities

- Loss of revenues
- Weakened partnerships
- Need for various research - opportunity for HEIs
- New skills for new jobs & new work environments – retraining/re-skilling
- Unemployment & loss of jobs - retraining/re-skilling

Adaptation To Challenges During & Post COVID 19

1. Growing learning institutions *'Continuous improvement requires a commitment to learning'* (Garvin, A https://hbr.org/1993/07/building-a-learning-organization)
   - Willingness to uncover & face problems in organization preparedness, resilience, change…)
   - Shared vision
   - Team learning
   - Self assessment and self evaluation



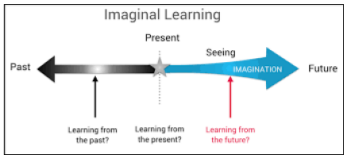
Adaptation To Challenges During & Post COVID 19

5. Increased investment in ICTs and ICTs in education
   - Partnership with telecom companies
   - Better national Internet backbone, support infrastructure & policies
   - Staff & student training & retraining
   - Development of digital content

6. Grow ODeL & blended learning
   - Appropriate technologies
   - Capacity building for staff & students
   - Infrastructure development
   - Partnerships in resource sharing – (OER?)
   - Exploiting flexibility strategies that ODeL provides

Adaptation To Challenges During & Post COVID 19...

- Paradigm shifts in teaching/learning
  - Integration of transformative pedagogies (Constructivism, empowering learners & independent learning)
  - Integration of ICTs
  - Virtual & blended Learning
  - Education today for today & tomorrow



- Review of curricula to include 21st Century skills & other new market demands including training for employability & entrepreneurship

- Introduction of less traditional programmes – retraining & reskilling

Food for thought

"The oak fought the wind and was broken, the willow bent when it must and survived."

(Robert Jordan (1993) The Fires of Heaven)

SESSION 2

Thematic Area:

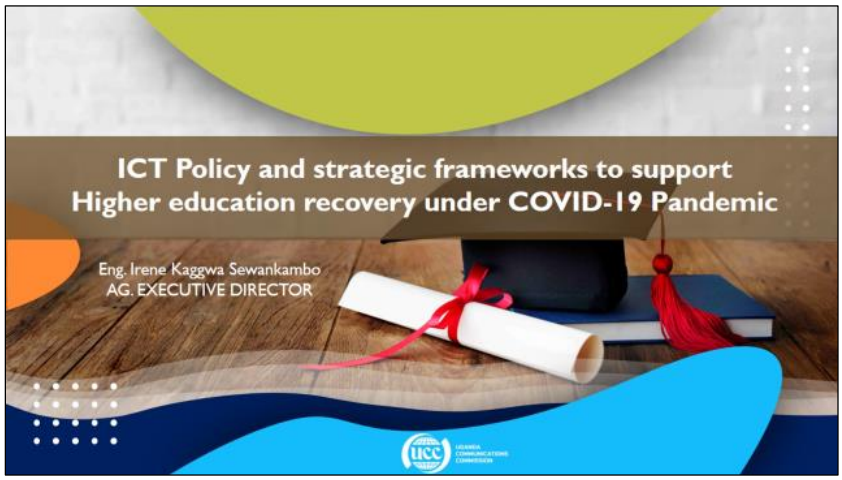
Strategic policy and planning Frameworks for recovery and sustainability in the Covid-19 era

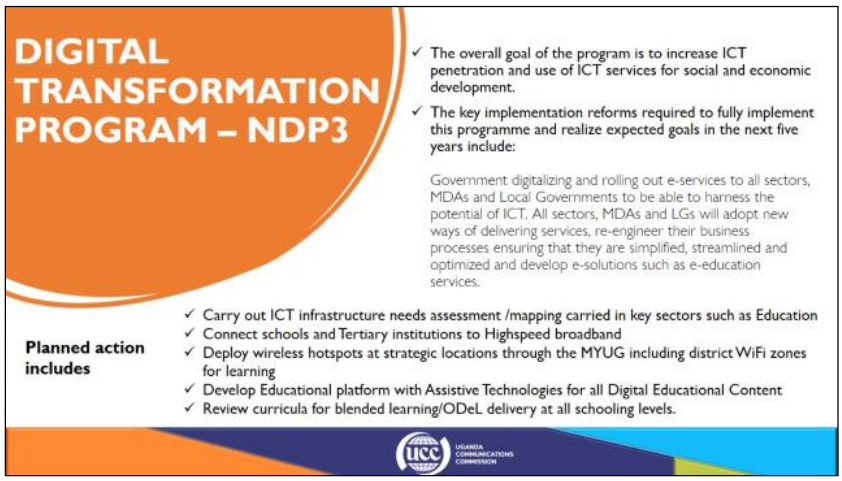
Chairperson:

Professor Christine Dranzoa

Vice Chancellor, Muni University

2.1 ICT Policy and Strategic Frameworks to Support Higher Education Recovery Under Covid-19 Pandemic

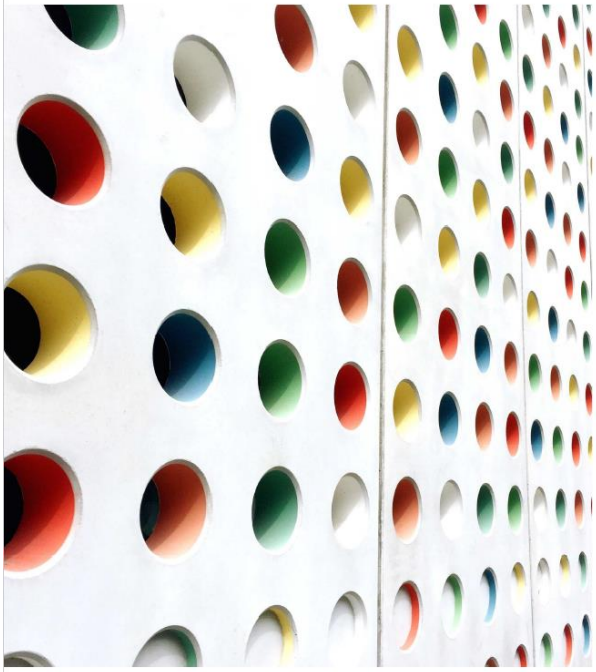




SOME OF THE REGULATORY & OTHER INTERVENTIONS
✓ Collaboration between MoES and MoICT to provide more computers and laptops to universities
✓ Excise duty tax exemption on internet connectivity for educational institutions
✓ Coverage –
▪ roll out obligations for licensees/operators,
▪ Uganda Digital Acceleration Project (Extension of NBI- last mile)
▪ public wifi – MyUG, border posts
▪ subsidizing roll out of coverage to unserved areas via UDAP & UCUSAF, and the satellite project
✓ RENU project of 300 eduroam Hotspots for Off-Campus Internet Access
✓ A National 4IR strategy has been developed
ucc
UGANDA COMMUNICATIONS COMMISSION

ucc
UGANDA COMMUNICATIONS COMMISSION
UCC House
Plot 42- 44 Spring Road, Bugolobi
P. O. Box 7376 KAMPALA
Phone: + 256 414 339000, +256 312 339000
Email: ucc@ucc.co.ug, Website: www.ucc.co.ug
Thank You
RCDF- Promoting Digital Literacy

2.2 Private Public Sector Collaborative Support for Higher Education Repositioning into the New Normal



Private, Public Sector Collaborative Support for Higher Education Repositioning into the New Normal

@ 3rd Annual Higher Education Conference
18 – 20 May 2021

ENG. DR DOROTHY OKELLO

DEAN, SCHOOL OF ENGINEERING, COLLEGE OF ENGINEERING, DESIGN, ART AND TECHNOLOGY (CEDAT), MAKERERE UNIVERSITY

CHAIRPERSON, RESEARCH AND EDUCATION NETWORK UGANDA (RENU)

Presentation Outline

WHAT'S HAPPENING.

WHAT'S NEXT.

CONCLUDING REMARKS.

What's Happening

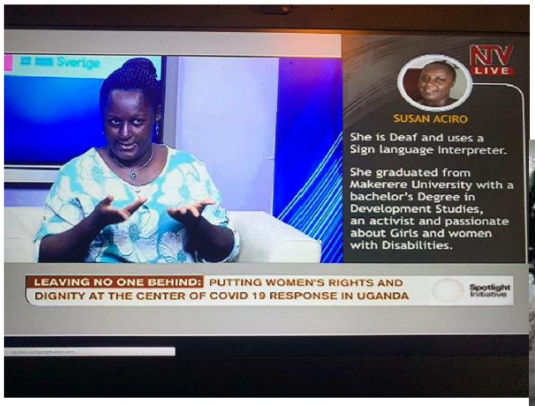
- COVID-19 has resulted in disruption of HEI activities
  - Remote/online access is a solution but with concerns about the quality of HEI activities (teaching, research and community engagement) as well as the potential increase of inequality of learning opportunities

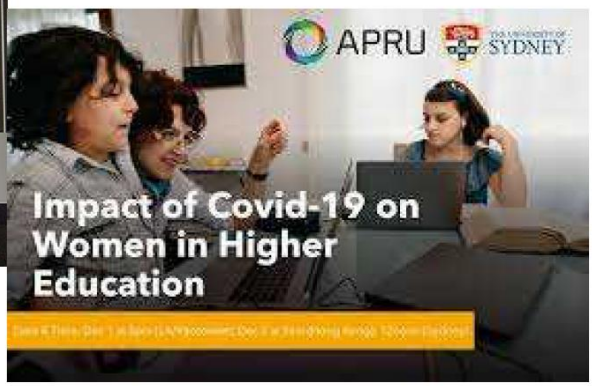
- HEIs are under significant pressure to cope in the current "new normal"
  - Preventing dead academic year(s)
  - Ensuring future planning despite high degree of uncertainty
  - Minimizing risk of decreasing private and public funding

What's Happening – Focus on Africa .../2

- HEIs have high risk that COVID-19 will exacerbate already existing inequalities
  - Need to address cooperation with governments and other societal stakeholders

- Women make up about 43% of Sub-Saharan Africa's tertiary students
  - Mawazo Institute's May 2020 report showed greater disruptions in coursework and research among women due to COVID-19





Source: Google Images

What's Happening – A Silver Lining

- HEIs that conduct COVID-19 research are recognised by their governments as source of relevant expertise and consulted
  - HEIs contributing to public policies via institutional leadership, researchers, etc.

- COVID-19 fight has demonstrated importance of higher education for society
  - There is recognition of importance of HEI by society
  - How to build upon this good will?

What's Next .../2

- Current transition to online learning presents a prime opportunity to intentionally design systems to reduce social inequalities

- Social justice requires higher education systems serve to reduce social inequities
  - Expand opportunity to women, low-income and rural populations, and vulnerable/minority groups.

What's Next

- Online education is here to stay – we need to adapt to it
  - Students need to stay involved and teachers to remain engaged
  - Need for Trained teachers, Refreshed-revitalized curricula, Tailor-made tools/Learning Management Systems
  - Opportunity for collaboration with public and private sector

"Higher education sector in Sub-Saharan Africa has demonstrated that it is capable of making large-scale changes in a short period of time with laudable results"

What's Next – The Case for RENU

- Research and Education Network Uganda (RENU) celebrates 15 years of enabling research and education collaboration

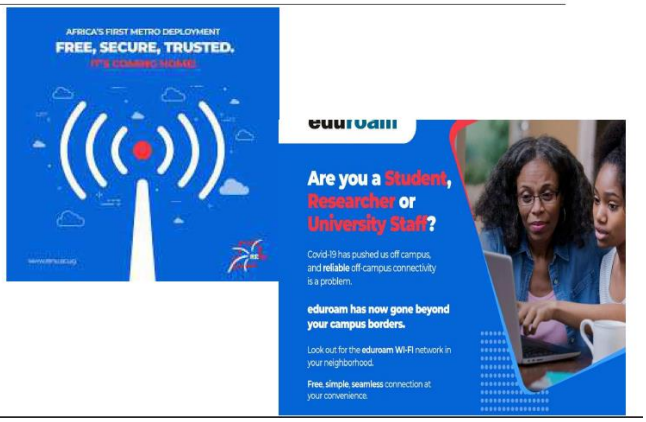
- National Research and Education Networks (NRENS) across Africa been active
  - NRENs have discussed with telecommunication operators about zero ratings for educational websites
  - In Zambia, ZAMREN installed Moodle offering free hosting for 22 member institutions
  - In Kenya, KENET is offering a discounted data bundle to university students.
  - In Mozambique, MoRENet has requested a capacity upgrade to access UbuntuNet network and support better capacity for member institutions

What's Next – The Case for RENU .../3

Despite the disruptions ..

- RENU's membership still grew to a total of 216 connected campuses as of April 2021

- Metro deployment collaboration includes HEIs, Uganda Communication Commission (UCC), Telecommunication operators



Concluding Remarks

- COVID-19 pandemic taught us that things that can be done differently!

- New ways of doing things were promoted - there was urgency to go digital

- Collaboration with government, private sector and civil society key for HEIs to innovate in their activities of teaching, research and community engagement

- Beyond COVID-19 times, digitisation presents more efficient ways for HEI activities

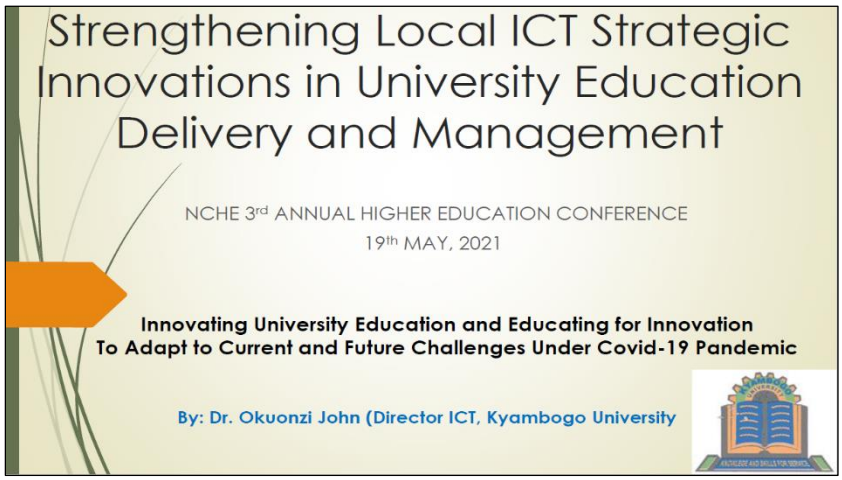
References

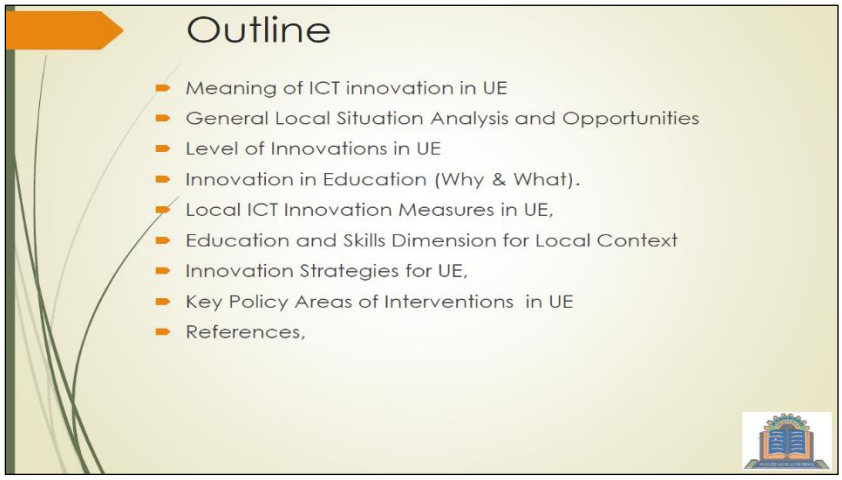
1. The Impact Of COVID-19 on Higher Education Around the World, IAU Global Survey Report, Giorgio Marinoni, Hilligje van't Land,Trine Jensen. International Association of Universities (IAU), May 2020, https://www.iau-aiu.net/IMG/pdf/iau_covid19_and_he_survey_report_final_may_2020.pdf
2. Challenges in higher education during and after COVID-19pandemic in India, Tanusree Sahaa*, Partha Pratim Dasb*, Riya Singh, 2021, Journal of Physics: Conf. Ser.1797 012065, https://iopscience.iop.org/article/10.1088/1742-6596/1797/1/012065/pdf
3. Reasons to be optimistic about Sub-Saharan HE after COVID, Himdat Bayusuf, Imed Hammouda, Zeblon Z Vilakazi, Chelsey R Canavan and Wafaie W Fawzi . University World News, 20 February 2021, https://www.universityworldnews.com/post.php?story=20210216103536969
4. NRENS in Africa - COVID19 in focus, https://africaconnect3.net/covid19-in-focus/
5. RENU Newsletter: The Harsh Reality of COVID-19: Challenges, Opportunities, Lessons, https://renu.ac.ug

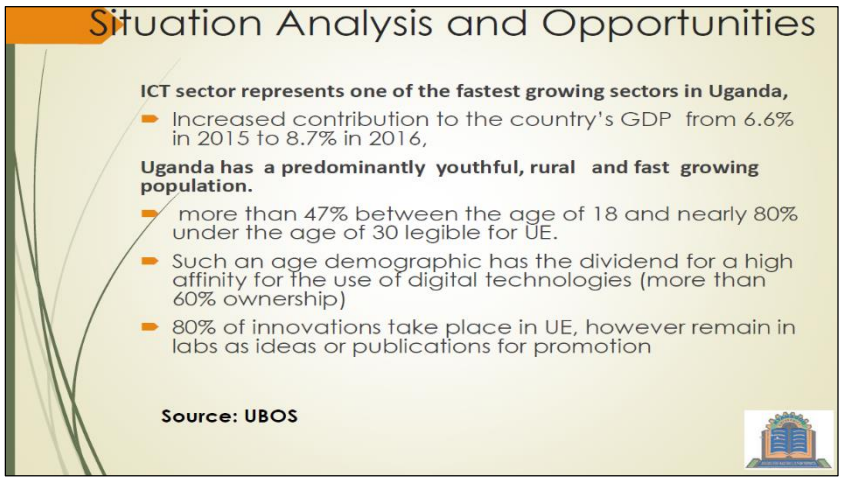
Thank You for Your Kind Attention

Dorothy Okello
dorothy.okello@mak.ac.ug

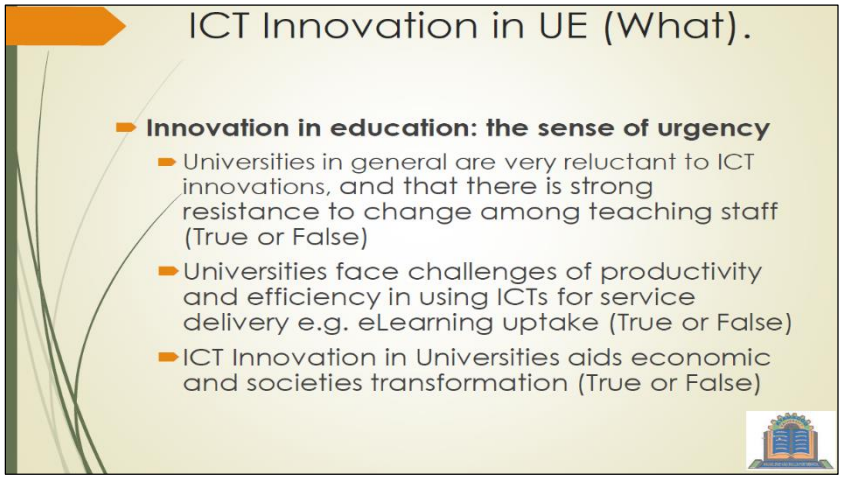
2.3 Strengthening Local Capacity for ICT Strategic Innovations in University Education Delivery and Management



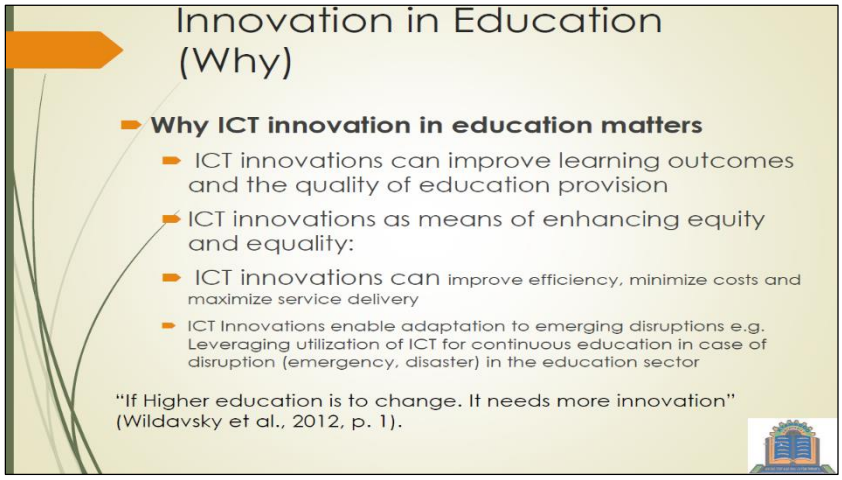


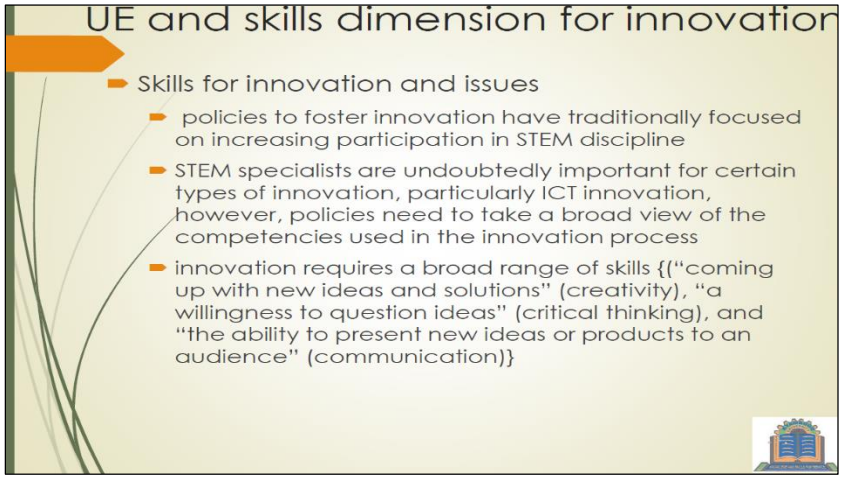


Opportunities
Leadership and stakeholder support (NCHE Leadership)
Digital Infrastructure and Connectivity – NBI/EGI/RENU
e-Government Services (UCC-NITA-U)
Local Content, Research and Innovation
Cyber Security, Data Protection and Privacy
4IR Development Strategy
Human Capital Development-programme in NDP III
Legal and Regulatory Framework
CoVID-19 Impact
UE ICT agenda should is premise strategies on these Opportunities so as to Strengthen means to take advantage of the existing environment.


ICT Innovation in UE (What).
Innovation in education: the sense of urgency
Universities in general are very reluctant to ICT innovations, and that there is strong resistance to change among teaching staff (True or False)
Universities face challenges of productivity and efficiency in using ICTs for service delivery e.g. eLearning uptake (True or False)
ICT Innovation in Universities aids economic and societies transformation (True or False)

Benefits of Strengthening ICT for Education service delivery
Expand Educational Opportunities.
Increase Efficiency.
Enhance Quality of Learning.
Enhance Quality of Research and Innovation.
Enhance quality of Teaching, Assessment, and Teacher Professional Learning and Development.
Enhance ICT for Skills Development (TVET) and job-oriented areas of general education
Sustained Lifelong Learning.
Administration and Management of Educational Institutions using ICTs; and
Improving Policy Making and Implementation.


Innovation in Education (Why)
Why ICT innovation in education matters
ICT innovations can improve learning outcomes and the quality of education provision
ICT innovations as means of enhancing equity and equality:
ICT innovations can improve efficiency, minimize costs and maximize service delivery
ICT Innovations enable adaptation to emerging disruptions e.g. Leveraging utilization of ICT for continuous education in case of disruption (emergency, disaster) in the education sector
"If Higher education is to change. It needs more innovation" (Wildavsky et al., 2012, p. 1).


UE and skills dimension for innovation
Skills for innovation and issues
policies to foster innovation have traditionally focused on increasing participation in STEM discipline
STEM specialists are undoubtedly important for certain types of innovation, particularly ICT innovation, however, policies need to take a broad view of the competencies used in the innovation process
innovation requires a broad range of skills {("coming up with new ideas and solutions" (creativity), "a willingness to question ideas" (critical thinking), and "the ability to present new ideas or products to an audience" (communication)}

Categories of skills for ICT innovation
FIT-ness for Innovation in EU
Grouped in 3 broad categories (Being FIT- Being Fluent with Information Technology Encompasses):
Intellectual Capabilities
Information Technology Concepts
Information Technology Skills
Source: National Research Council, 2002

Intellectual Capabilities

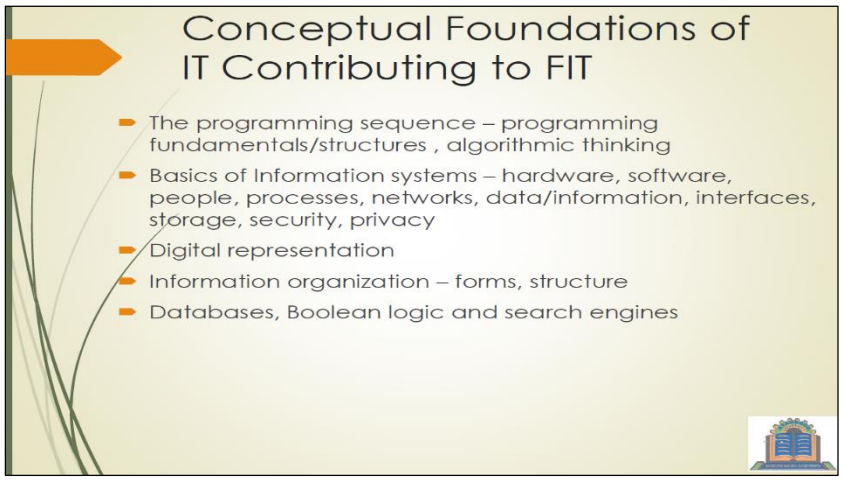
- **One who is fluent with technology (FIT)**
  - Engages in sustained reasoning – defines, clarifies, revises, tests etc. using programs, design tools, visualization and modeling environments, web resources
  - Manages complexity involving a number of tasks as problem clarification, solution formulation, design, implementation, testing, evaluating the outcome
    - Plans, designs, integrates, responds to the unexpected, diagnoses (debugs)
    - Manages resources – memory, storage, bandwidth, time effective benchmarks
    - Understands the linkages and interdependencies – word size, modem speed, dedicated lines, cable or DSL connections

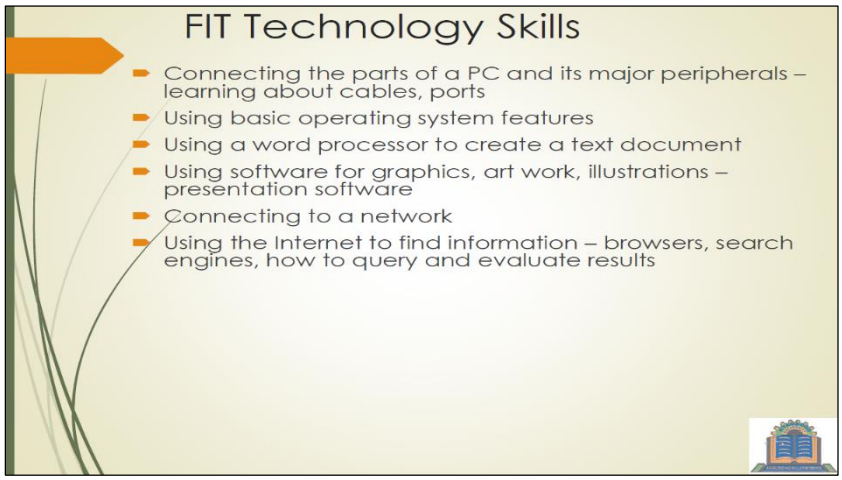
Intellectual Capabilities Cont…

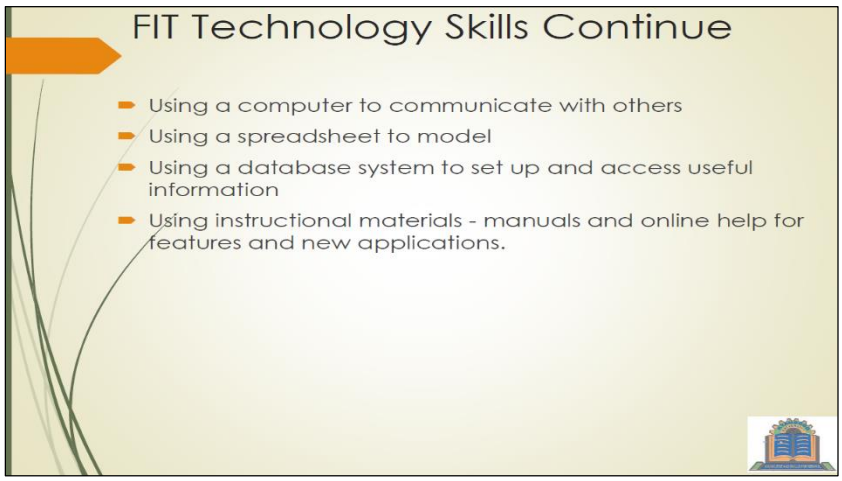
- Collaborate – work in groups to complete a complex project
- Communicate at appropriate levels
- Convey proper information to right audiences – experts, novices, providing documentation

Intellectual capabilities for FIT continued Testing a solution

- Understands ICT designs that meets user needs.
- Tests an ICT solution
- Comprehends the connections between iterative design, testing, implementation
- Organizes and navigates information structures and evaluates information


Conceptual Foundations of IT Contributing to FIT
The programming sequence – programming fundamentals/structures , algorithmic thinking
Basics of Information systems – hardware, software, people, processes, networks, data/information, interfaces, storage, security, privacy
Digital representation
Information organization – forms, structure
Databases, Boolean logic and search engines


FIT Technology Skills
Connecting the parts of a PC and its major peripherals – learning about cables, ports
Using basic operating system features
Using a word processor to create a text document
Using software for graphics, art work, illustrations – presentation software
Connecting to a network
Using the Internet to find information – browsers, search engines, how to query and evaluate results


FIT Technology Skills Continue
Using a computer to communicate with others
Using a spreadsheet to model
Using a database system to set up and access useful information
Using instructional materials - manuals and online help for features and new applications.

Shaping Skills for innovation in UE

- Manage UE solutions
- Ability to find and evaluate information
- Reading a manual
- Using online help
- Applying Boolean logic
- Evaluating sources and information- valid, relevant, timely, complete, accurate. appropriate

FIT-ness

- Able to apply productively to work and everyday lives in complex situations understanding consequences
- Understands when IT assists or impedes
- Adapts to changes and advancements
- Involves communications, information processing, and problem solving

The technology Innovator

- ✓ Has knowledge –everyday pervasiveness, use, tradeoffs between costs and benefits
- ✓ Understands benefits and risks, seeks information about new technologies, participates in (ways of thinking and acting)
- ✓ Can apply capabilities

(**Source**: The National Academy of Engineering Technically Speaking, 2002)

Innovation strategies for Education

National innovation strategies for the education sector

1. Uganda Government Vision 2040

- calls for a comprehensive ICT skills development plan (*in addition* to investments in ICT infrastructure and innovation)

"..ICT shall be mainstreamed in education to take advantage of ICT-enabled learning, and to prepare future generations of ICT-savvy workers, and ensure their effective utilization"

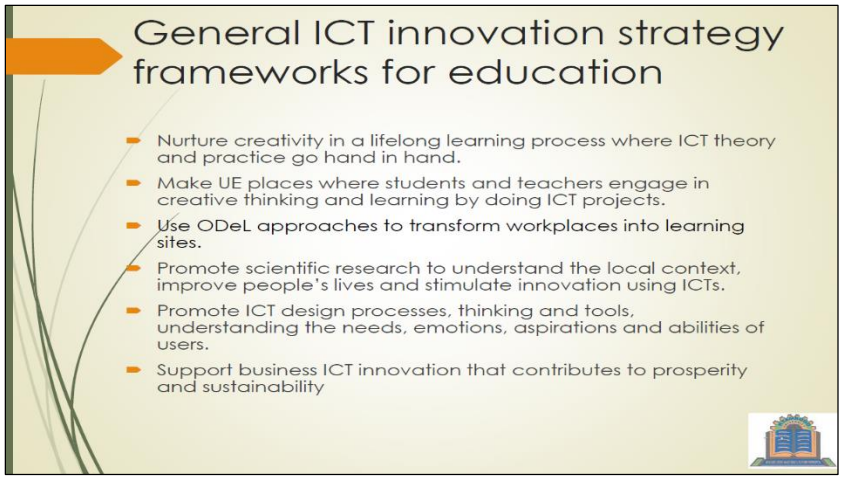
2. NDP III Digital Transformation Program

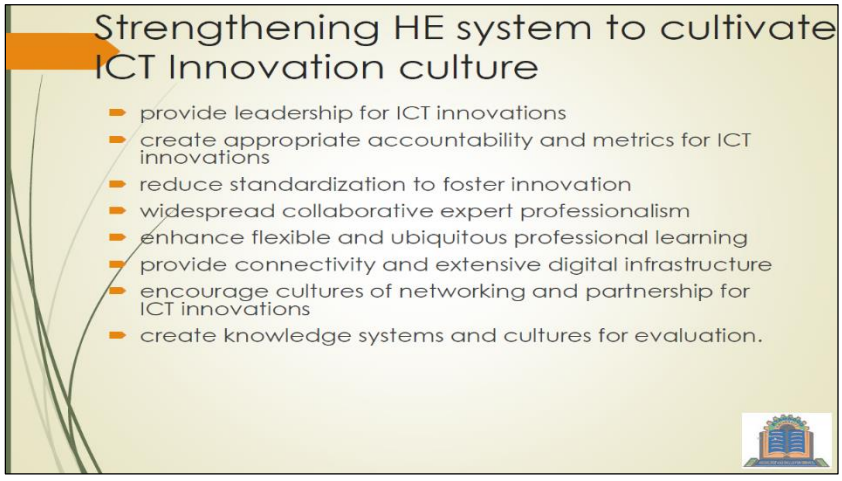
3. The Education and Sports Sector Strategic Plan (ESSP) 2017/18 - 2019/20 and its successor ESSP 2021 – 2024:

calls for the promotion of e-learning and computer skills in Secondary and Tertiary institutions.

- **National Digital Agenda and Policy for Education under development**

Strategies for Sparking local ICT innovation in HE
Provide a compelling vision of the future
Set ambitious goals that force innovation:
Create choice and competition:
Pick many winners:
Benchmark and track progress:
Combine greater accountability and autonomy:
Invest in and empower agents of change:
Reward successes (and productive failure):


General ICT innovation strategy frameworks for education
Nurture creativity in a lifelong learning process where ICT theory and practice go hand in hand.
Make UE places where students and teachers engage in creative thinking and learning by doing ICT projects.
Use ODeL approaches to transform workplaces into learning sites.
Promote scientific research to understand the local context, improve people's lives and stimulate innovation using ICTs.
Promote ICT design processes, thinking and tools, understanding the needs, emotions, aspirations and abilities of users.
Support business ICT innovation that contributes to prosperity and sustainability


Strengthening HE system to cultivate ICT Innovation culture
provide leadership for ICT innovations
create appropriate accountability and metrics for ICT innovations
reduce standardization to foster innovation
widespread collaborative expert professionalism
enhance flexible and ubiquitous professional learning
provide connectivity and extensive digital infrastructure
encourage cultures of networking and partnership for ICT innovations
create knowledge systems and cultures for evaluation.

KEY ISSUES

- QUALITY ASSURANCE
- MINDSET
- INCLUSION
- LOCAL CONTENT DEVELOPMENT
- AFFORDABILITY
- CAPACITY GAPS

Summary: areas of intervention

- **Innovation measurement:** at different levels in the system, regular data collection should assess changes over time in improved pedagogical and organizational practices
- **strong and efficient system of ICT knowledge creation and diffusion**; extending from scientific research into teaching and learning, to the more applied bodies of knowledge in the teaching profession and knowledge entities in the system.
- **smart implementation and use of ICTs** in a way that leverages potential for better teaching and learning practices, competitive advantage, cost cutting and efficiency of operations.
- **appropriate governance model**: identifying key agents of change and champions, defining the roles of stakeholders, tackling pockets of resistance, and conceiving effective approaches for scaling and disseminating innovations.
- **strong evaluation.** Without a broad and widely shared culture of evaluation, innovation in UE will remain stuck at the level of well-intended but isolated pioneering efforts. Finding out what really works, what doesn't and why is key to developing a body of knowledge that can guide future innovations.
- **ICT Knowledge valorization:** staff and student can create ICT knowledge and make it valuable by providing working solutions to local challenges.

End?

SESSION 3

Thematic Area:

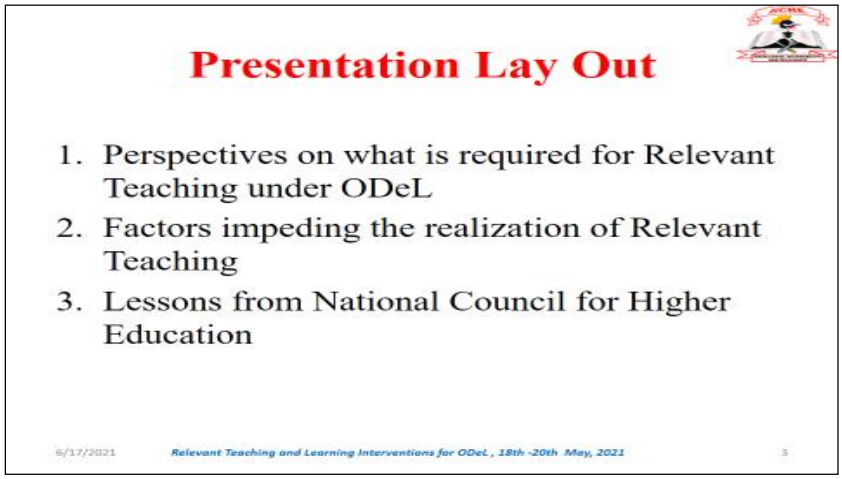
Open Distance and electronic Learning (OdeL) – Context Relevant Strategies for Teaching and Learning Interventions

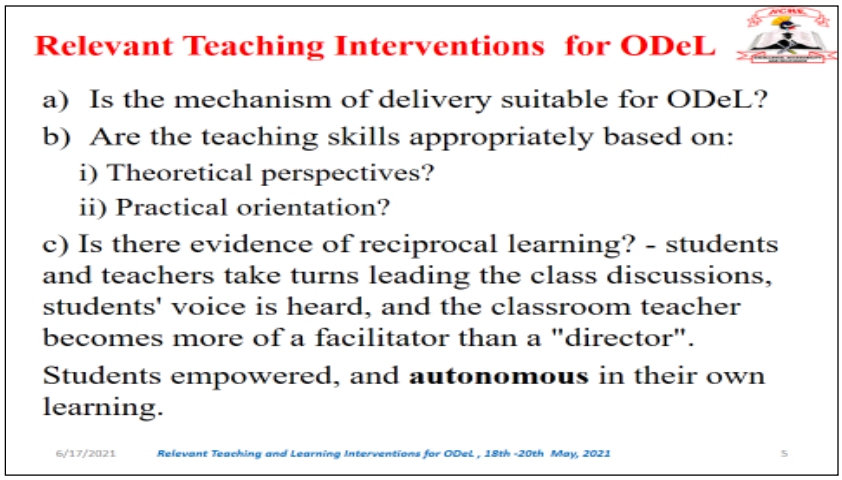
Chairperson:

Professor Openjuru George

Vice Chancellor, Gulu University

2.4 Relevant Teaching and Learning interventions for ODeL





Educational environments

a) The educational environments we create,
b) The ways in which we teach,
c) The learning activities we devise, and
d) The assessment procedures we use,

Have significant effect on students' learning.

Learning Environment

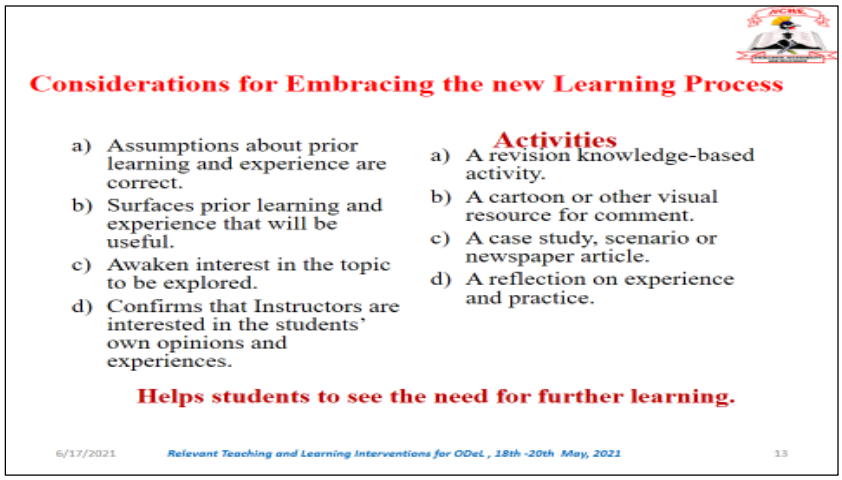
Environments conducive for learning should:

a) Ensure students have adequate prior knowledge and understanding.
b) Match content to the intellectual stage of development students have reached.
c) Help students to perceive relevance and to develop interest in the syllabus.
d) Encouraging students more independent, purposive, and reflective ways of studying.
e) Offer choice in both courses or topics studied and assignments.
f) Provide a syllabus which encourages depth and avoids an excessive workload.
g) Teach in ways which explain concepts fully, with enthusiasm and empathy.

Learning Interventions for ODeL

Can be addressed by considering:

a) What are the aims of Learning interventions?
b) What learning interventions are most effective?
c) Whether some kinds of learning technologies e.g. multimedia such as phones, have significant advantages over others; and
d) In some systems, who is the best person to undertake the contact.


Considerations for Embracing the new Learning Process
a) Assumptions about prior learning and experience are correct.
b) Surfaces prior learning and experience that will be useful.
c) Awaken interest in the topic to be explored.
d) Confirms that Instructors are interested in the students' own opinions and experiences.
Activities
a) A revision knowledge-based activity.
b) A cartoon or other visual resource for comment.
c) A case study, scenario or newspaper article.
d) A reflection on experience and practice.
Helps students to see the need for further learning.
6/17/2021
Relevant Teaching and Learning Interventions for ODeL , 18th -20th May, 2021
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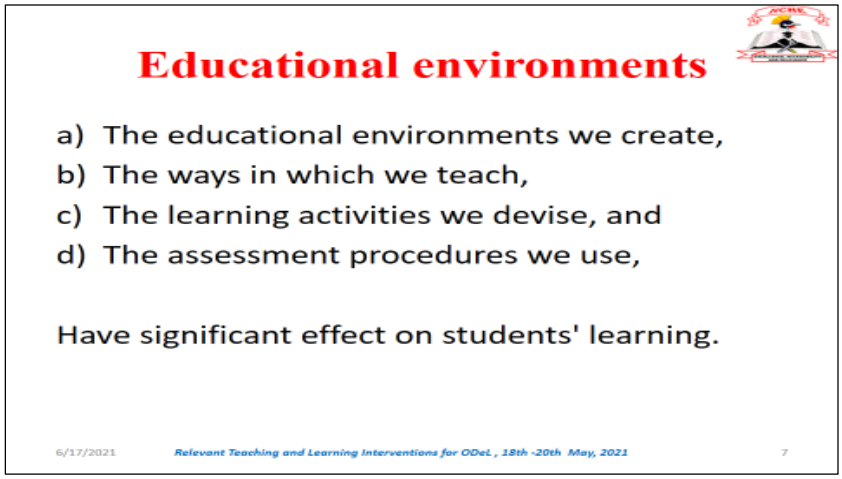
Educational environments
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Have significant effect on students' learning.
6/17/2021
Relevant Teaching and Learning Interventions for ODeL , 18th -20th May, 2021
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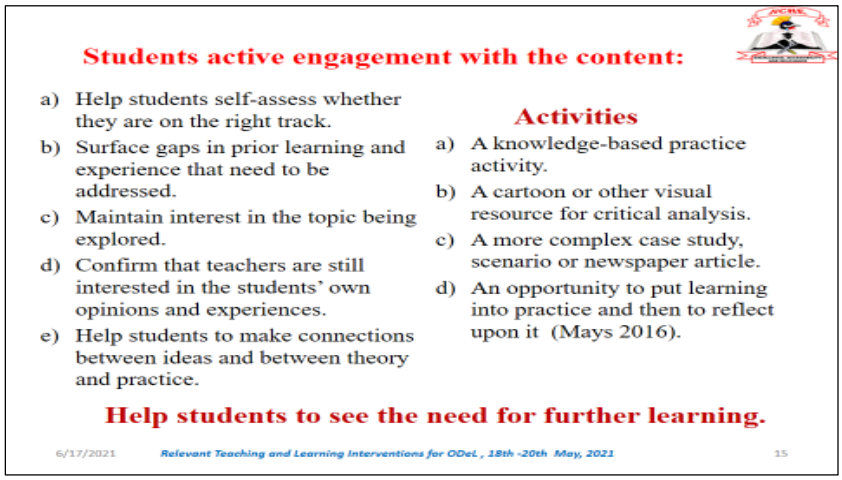
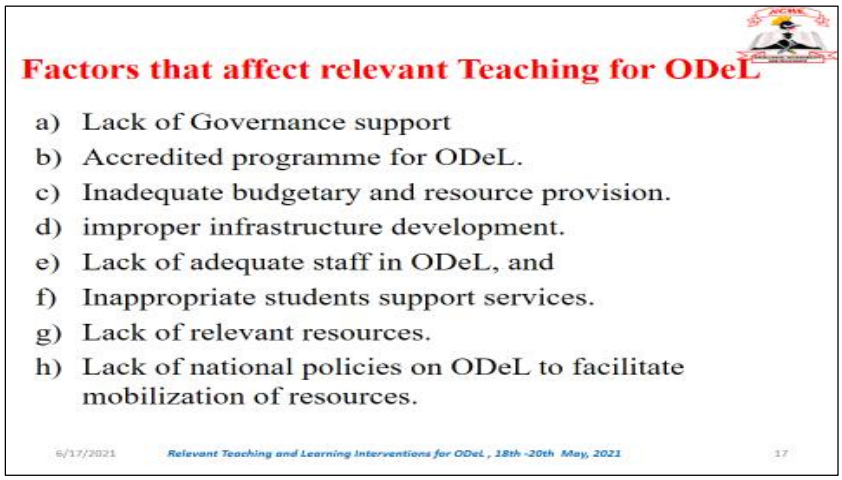
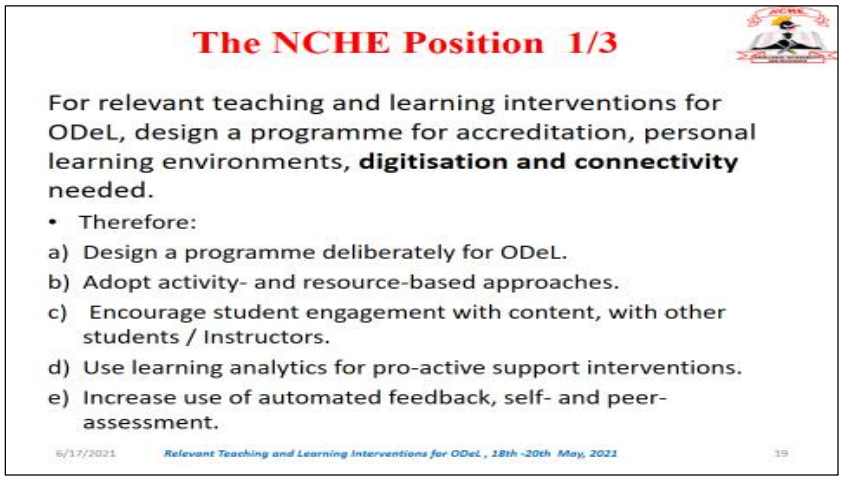
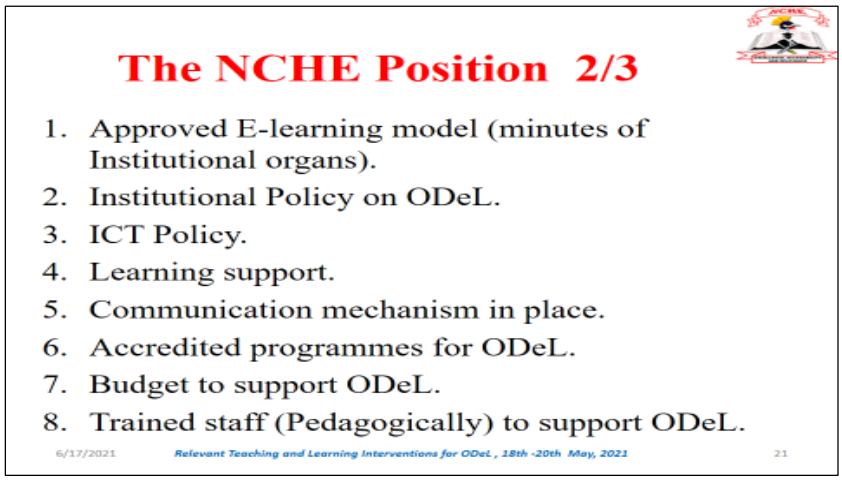

Students active engagement with the content:
a) Help students self-assess whether they are on the right track.
b) Surface gaps in prior learning and experience that need to be addressed.
c) Maintain interest in the topic being explored.
d) Confirm that teachers are still interested in the students' own opinions and experiences.
e) Help students to make connections between ideas and between theory and practice.
Activities
a) A knowledge-based practice activity.
b) A cartoon or other visual resource for critical analysis.
c) A more complex case study, scenario or newspaper article.
d) An opportunity to put learning into practice and then to reflect upon it (Mays 2016).
Help students to see the need for further learning.
6/17/2021
Relevant Teaching and Learning Interventions for ODeL , 18th -20th May, 2021
15


Factors that affect relevant Teaching for ODeL
a) Lack of Governance support
b) Accredited programme for ODeL.
c) Inadequate budgetary and resource provision.
d) improper infrastructure development.
e) Lack of adequate staff in ODeL, and
f) Inappropriate students support services.
g) Lack of relevant resources.
h) Lack of national policies on ODeL to facilitate mobilization of resources.
6/17/2021
Relevant Teaching and Learning Interventions for ODeL , 18th -20th May, 2021
17


The NCHE Position 1/3
For relevant teaching and learning interventions for ODeL, design a programme for accreditation, personal learning environments, digitisation and connectivity needed.
• Therefore:
a) Design a programme deliberately for ODeL.
b) Adopt activity- and resource-based approaches.
c) Encourage student engagement with content, with other students / Instructors.
d) Use learning analytics for pro-active support interventions.
e) Increase use of automated feedback, self- and peer-assessment.
6/17/2021
Relevant Teaching and Learning Interventions for ODeL , 18th -20th May, 2021
19


The NCHE Position 2/3
1. Approved E-learning model (minutes of Institutional organs).
2. Institutional Policy on ODeL.
3. ICT Policy.
4. Learning support.
5. Communication mechanism in place.
6. Accredited programmes for ODeL.
7. Budget to support ODeL.
8. Trained staff (Pedagogically) to support ODeL.
6/17/2021
Relevant Teaching and Learning Interventions for ODeL , 18th -20th May, 2021
21

The NCHE Position 3/3

9. Security measures on ODeL.
10. Quality assurance for ODeL.
11. Survey on readiness for ODeL (Institutional, Staff and students)
12. Pre-training plan for both staff and students on e-learning.
13. Inclusivity plan in place (PWDs and others).
14. Action Plan /Remedial plan in place.
15. Assessment plan.
16. E-Learning evaluation.

6/17/2021 Relevant Teaching and Learning Interventions for ODeL , 18th -20th May, 2021 23

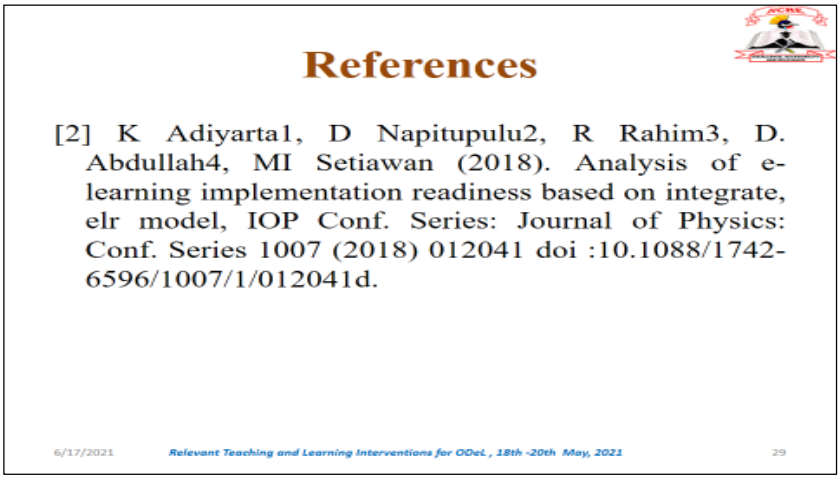
Parting Shots

- The emerging landscape..
- Need for reforms
- Urgency for sustainable strategies (e.g. collaborative efforts)
- Covid19 is a Challenge…

6/17/2021 Relevant Teaching and Learning Interventions for ODeL , 18th -20th May, 2021 25

Thank You for Listening

6/17/2021 Relevant Teaching and Learning Interventions for ODeL , 18th -20th May, 2021 27



Dr. Pius C. Achanga emphasized noted that:

i) Student empowerment, and acceptance was critical to implementation of emergency ODeL.
ii) Institutions need to prepare for ODeL, by assessing existing infrastructure, human resource, among other things.
iii) Only accredited programmes are authorized by NCHE for emergency ODeL implementation.
iv) Staff and students should be trained, and a budget for the same made available.
v) A national framework as proposed by some participants was necessary to ensure continuity of online/blended teaching and learning.
vi) Observed the need by NCHE to engage Government on the proposed tax on Internet data.

Action points:

i) The cost of Internet was still high for both students and staff.
ii) Requisite infrastructure, such as ICTs are key to ODeL implementation.
iii) Online lectures need to be recorded such that students can access them anytime.

Day 3 – OTHER TERTIARY INSTITUTIONS

20th MAY , 2021

OPENING SESSION

Keynote presentation:

Adaptation to Current and future challenges for OTIs, vocational education and training under the Covid-19 pandemic

Adaptation of current and future challenges for OTIs, vocational education and training under covid-19 pandemic

Keynote Address at the 3rd Annual Higher Education Conference organized by the National Council of Higher Education (NCHE)

Presenter : Dr Fredrick E. Kitoogo,

Principal, Uganda Institute of Information and Communications Technology (UICT)

Distinguished invited Guests (All protocol observed),

Members of the Press,

Ladies and Gentlemen.

I bring you greetings from the Uganda Institute of Information and Communications Technology (UICT), a Government tertiary institution specializing providing market-driven and emerging digital skills for all levels (basic, intermediary, expert and specialized).

Before, I deliver this key note address on the topic designated to me, I wish to express my sincere appreciation and congratulations to the National Council of Higher Education for hosting this conference as an integral part for growth and development of Higher Education in Uganda.

The current and future challenges of education in general under the Covid-19 pandemic

The global COVID-19 pandemic imposed abrupt and unprecedented pressures on governments and industries around the world, with virtually all sectors affected. However, OTIs and vocational education and training (VET) systems are being uniquely impacted, not only in relation to how they provide VET in the context of current social distancing and travel restrictions, but also in terms of how they are being required to anticipate and adapt to what could very well be a significantly changed Labour market in the coming months and years.

The current and future challenges of OTIs, vocational education and training under covid-19 pandemic

The pandemic particularly disrupted work-based learning, including apprenticeships, industrial training and specifically the systems used to assess skills and ultimately award qualifications.

Before I dive into the specific challenges, its imperative to note that whereas in the short-term this pandemic presents serious challenges for OTI and VET teachers, trainers and learners alike, the lockdown and social distancing may ultimately result in stronger and more resilient systems if the right choices are made today. In particular, scaling down of face-to-face education and training may result into learning providers adapting to system and technology innovations that will expand the use of distance learning and distance or alternative assessments.

Having noted the two sides to the impact of the pandemic and as we delve into the specific challenges, we note that whereas many OTIs and VETS quickly created or adapted digital platforms to replace school-based learning, to varying degrees of success, work-based learning programmes (WBL), including apprenticeships, are often much more difficult to provide and assess at a distance This is due to two key factors: first, the immediate disruption of provision caused by confinement and social distancing guidelines and regulations; and second, the fact that employers have historically tended to cut back on apprenticeship and industrial training during economic recessions. Specifically, the world has faced the following challenges:

a) **Disruption due to lockdowns, social-distancing and travel restrictions:** The main challenge for OTIs and VET students, including apprentices, is not being able to learn in classrooms, institute labs, workshops or workplaces. In some occupational fields, theory can be taught and learned online, but practical aspects cannot be effectively delivered because of a lack of access to tools, materials, equipment and machinery.

b) **Infrastructure, connectivity, resources and skills to use online learning:** At the start of the pandemic, few countries and training providers had sufficient equipment, connectivity, remote learning software and platforms, and pedagogical resources. In addition, most students and instructors initially lacked the digital skills to be able to adapt and use the teaching and learning services.

c) **Cuts in apprenticeship and Industrial Training offers:** The pandemic caused an economic recess in many countries including Uganda, this translated into ripple-effect challenges in sectors such as hospitality, manufacturing, agriculture, tourism, aviation and leisure services where demand is reaching historical levels. This primarily meant that some professions where are unable to work, it also means that by extension they are unable to offer or maintain apprenticeships due to not only a lack of staff to provide training, but also a lack of financial resources. Having said that, it is also reasonable to expect a reduction in OTI and VET enrolments (and therefore fewer prospective apprenticeships) for the coming school years, partly due to uncertainty as to whether students can effectively access WBL, whether a VET programme can be effectively provided on line, and whether students can complete all the requirements necessary to be enrolled on time.

The effects of the two highlighted challenges may be unseen in terms of skills and Labour market supply over the short-term, and indeed it may appear that supply is abundant in a time of layoffs and furloughs, but as the economy starts to recover, shortages of skilled workers will likely become apparent, thereby delaying the recovery process.

How do we adapt to these challenges?

There is urgent need to re-package the resilience measures to strengthen the capacity to respond to these current challenges as well as to adapt and respond effectively to both anticipated and unanticipated changes in Labour market requirements. Some of the good practice and initiatives from different authorities include but are not limited to the following:

a) **Increased and innovative of Open Distance and e-Learning solutions:** The is increased need to enhancement of utilization of distance-learning tools wherever possible to ensure the continuity of learning. Major private providers are also providing their online courses free of charge (Coursera, ITU, etc.). While distance learning cannot completely replace in-person training, and its effectiveness depends on the occupation, it can nonetheless help learners to remain engaged and continue to make progress in their studies. These efforts at online delivery and communications can enhance one-to-one digital and real-world interactions between learners, learning providers and employers. Subsidizing training, including the introduction of free online skill development courses at least during the pandemic, can help.

b) **Innovative ways of conducting practical work and access to labs and workshops virtually:** This involves the usage of innovative ways to ensure that VET students have access to virtual lab sessions. In addition, the is need to capitalize on the demand for digital, distance offerings by exploring options for innovative, digital pedagogical approaches such as simulators, augmented/virtual reality, artificial intelligence or live recorded lab sessions.

c) **Provide financial assistance to VET systems and learners** to undertake training in more future-proof sectors and occupations that will be critical to economic recovery in the long-term. For example, with a dramatic decrease in transport demand and a major oil surplus, the oil and gas industry is facing an existential crisis and putting millions of jobs in jeopardy. In addition, the current crisis is expected to accelerate the automation and digitalization of many occupations and tasks. In this context, stimulus packages can be better used to reskill, retrain and upskill workers in occupations at a high risk of automation or restructuring – as well as unemployed people – into more resilient, future-oriented and higher skilled ones such as renewable energy, IT or biotechnology.

d) **Increased engagement with employers, stakeholders and unions** at both local and national levels, considering that each sector is affected differently by the outbreak. Such engagement can open up lines of communication that may not currently be open, leading to greater engagement in the future. Such engagement may be considerably easier in the current context given increased acceptance of digital conferencing.

e) **Start planning today for changes in the labour market** that might be accelerated due to the pandemic, particularly if they have not been doing so already, including digitalization. In particular, given that occupations involving routine tasks are being transformed, restructured or disappearing entirely due to increasing levels of automation, VET systems will need to focus more on those occupations demanding higher levels of autonomy, planning, team-work, communication and customer service skills that are more able to resist automation.

f) **Examine policies and regulations** with regard to the awarding of **micro-credentials** and **digital badges** to ensure that progress made in the offering of **VET at a distance** can be appropriately rewarded with qualifications in a timely and effective manner.

g) Make sure that VET programmes are providing **opportunities** for **learning foundational skills** such as digital, basic and socioemotional skills. Such transferable, foundational skills can help economies recover more quickly following a crisis, by helping workers more easily transition into other sectors or jobs. The confinement period represents a significant opportunity to expand offerings of these kinds of skills, which to a certain degree can be easily taught and learned at a distance;

h) Pay particular attention to **vulnerable groups** including youth-at-risk, laid-off workers and refugees, in particular those who have no access to the Internet. These groups, who are often served by the VET system, are particularly vulnerable to crises including not only the ongoing pandemic, but also the expected recession. While many workers and groups are at risk of being left behind as the labour market evolves, close attention needs to be paid to inclusion and equity issues in every aspect of the VET system. Some specific equity initiatives may be needed depending on the context.

i) Focus on efforts to maintain and build a **highly qualified workforce of vocational teachers** and trainers. In countries such as Australia and the United States, initial teacher education and training courses are taught online, and this is a model that could be quickly replicated elsewhere. VET teachers also need high quality digital delivery skills and confidence in using web conferencing solutions, and this crisis can provide an opportunity to build those skills across the VET teaching workforce.

As I conclude, I wish to note that in the case of Uganda there is a commitment to lay a solid foundation for education in the country, Seek a cost-effective, efficient, robust, and flexible mode to educate all, be part of the global economy

Finally, as national governments, we cannot achieve much on our own, we thus implore our development partners, the private sector and other actors to collaborate and support such continental, regional and national initiatives.

I wish you fruitful deliberations and i have no doubt that by the end of this conference, the participants should have achieved the objectives of the conference.

I thank you all.

SESSION 3

Thematic Area:

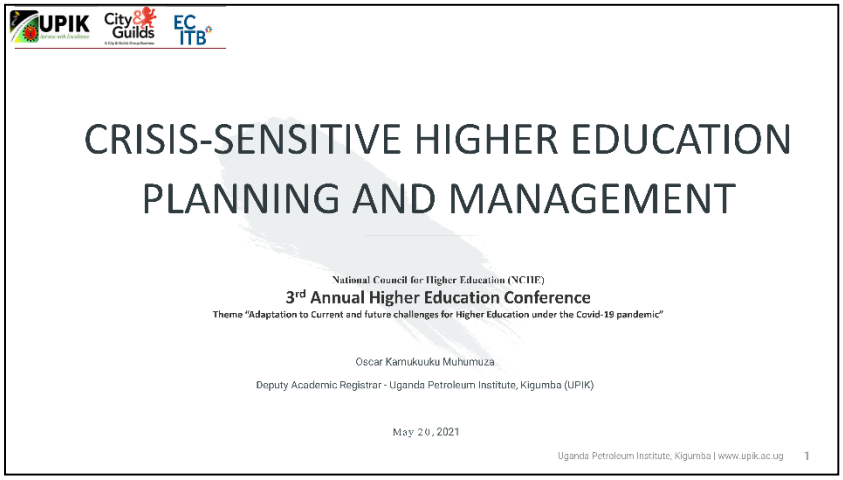
Strategic policy and planning Frameworks for recovery and sustainability in the Covid-19 era

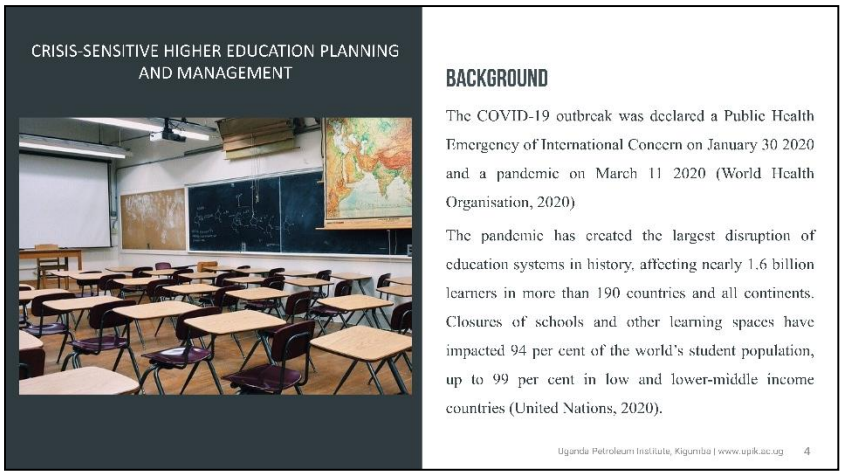
Chairperson:

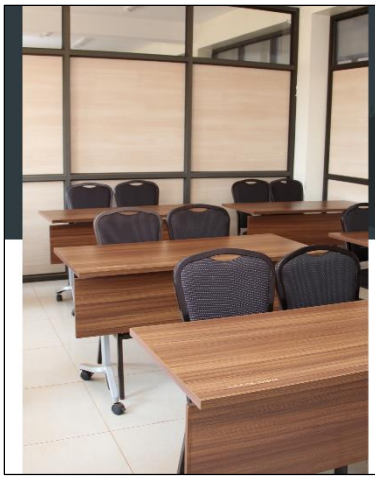
Mr. Benjamin Turyahikayo

Director at National Teachers College, Kabale

3.1 Crisis –sensitive Higher Education planning and Management







IMPACT ON HIGHER EDUCATION

The impact on higher education is not in any way less complicated than other sectors but even more complex and unique because education institutions play a vital role in restoring national stability – post-conflict or post-disaster (UNESCO, International Institute for Educational Planning (IIPE), 2006). Higher education specifically is vital in sustaining a supply of the critical skilled and qualified human resource required by a country to support all sectors of the economy.

Crisis-sensitive planning is critical for higher education institutions especially in anticipation of enrolling students who's learning at the lower schooling levels has been disrupted. Students will have varying academic levels as many students have had their education interrupted while others have been able to continue their schooling, but under new challenging circumstances.

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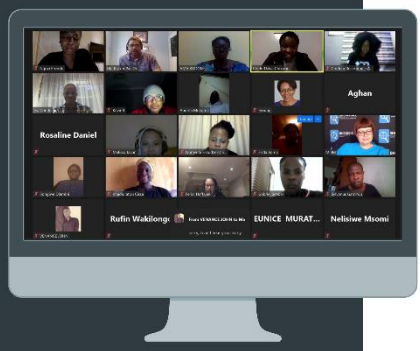

EMERGING EFFECTS OF COVID-19

A key challenge for higher education in response to the pandemic has been managing the abrupt move of teaching and learning from face-to-face to online delivery. Other issues include how to assess and evaluate students, support international students, manage travel restrictions, and ensure the psychosocial wellbeing of students, faculty and staff (Masri & Emma, 2020).

Online delivery of learning programmes remains a challenge with resistance from learners that feel the approach is not sensitive to their barriers towards accessing online platforms.

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A case in point is the 30th March 2020 anonymous online petition of a Uganda Christian University (UCU) student seeking to halt the online exams as organized by UCU. While a counter-petition had majority signatures in favour of the online intervention, the Ministry of Education and Sports (MoES) intervened to halt all online exams at all institutions on ground that an all-inclusive approach needed to be considered (Kabahizi, 2020).

While the MoES decision to halt online assessments at the peak of lockdown was on grounds of fairness, it has had full support towards exploring alternative means in times of crisis notably electronic means. Today, nearly every institution from Early Childhood Learning Centres to Institution of Higher Learning have had tremendous initiatives to engage either learners or parents in case of toddlers.

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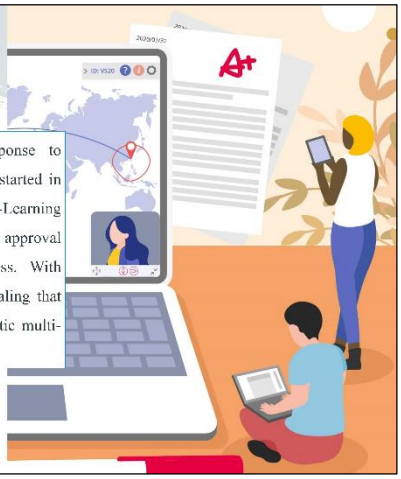
National Council for Higher Education (NCHE)'s response to continued learning in Higher education is reported to have started in April 2020 with the introduction of the Open Distance e-Learning (ODEL) minimum standards and later in September with the approval of emergency ODEL after inspection of institutional readiness. With the quick scan in Higher Education Institutions (HEI) revealing that most institutions lack the capacity to deploy ODEL, a holistic multi-stakeholder intervention that is crisis-sensitive is essential.



COULD WE HAVE ANTICIPATED A "COVID-19 LIKE" CRISIS?

While the exact magnitude of the COVID-19 crisis could not have been anticipated with precision, the world has inherently encountered several disasters whose outcomes have left different parts of the world in a crisis. These range from natural disasters such as floods, hurricanes, earthquakes etc. to manmade disasters such a conflict leading to protracted wars, genocide, refugee situations, collapse of economies, disruption of social services, etc. Unpreparedness therefore, in having an uninterruptable system for delivering services such as Education and healthcare should never arise and this is achievable with clear goals and crisis-sensitive planning.

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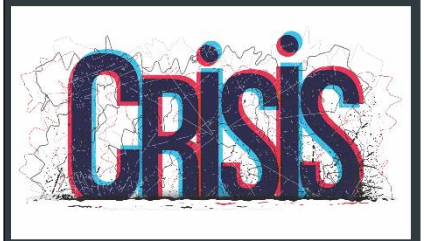
Crisis-Sensitive Higher Education Planning And Management



Short-term interventions

(Shelby, Jack, Noam, Susannah, & Rachel, 2020) propose a five-step plan that involves Engaging Communities in School Reopening Plans, Targeting Resources Where They Are Most Needed, Getting Learners Back to School, Making School Environments Safe and Recovering Learning Loss. For Crisis-sensitive planning, Community engagement is particularly necessary as it is the only way to assess the different ways in which different social groups are affected.

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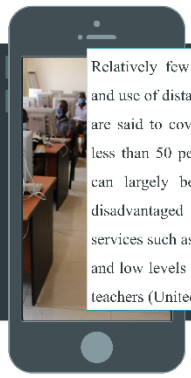
Long-term

As many education institutions turn to Information Communication Technology (ICT) world over, some modalities have been used more than others, depending on education level, with variability across regions. In areas with limited connectivity, governments have used more traditional distance learning modalities, often a mix of educational television and radio programming, and the distribution of print materials.



Relatively few countries are monitoring the effective reach and use of distance learning modalities. High income countries are said to covers about 80–85 per cent, while this drops to less than 50 per cent in low-income countries. This shortfall can largely be attributed to the digital divide, with the disadvantaged having limited access to basic household services such as electricity; a lack of technology infrastructure; and low levels of digital literacy among students, parents, and teachers (United Nations, 2020).

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Moving forward

Ensuring learning continuity during crisis time such as school closures should be priority for governments and all other stakeholders. This, among other interventions, calls for;

- Adequate policies at both governmental and education Institution levels
- Adequate investment in enabling ODEL for Institutions
- Result oriented capacity building for professionals delivering ODEL
- Massive investment to bridge the digital divide
- Safe learning environment in the case of vocational training where face-to-face interaction is inevitable
- Establish a sustainable funding mechanism for research

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Conclusion

A crisis-sensitive plan for higher education should be supported by multi-level policies with a clear implementation framework, adequate funding and an all-inclusive, well-coordinated engagement with: government and non-government actors, the private sector, national and international actors, bilateral and multilateral agency actors, civil society, learners, teachers, partner agencies, community members, local authorities and stakeholders outside of the education sector.

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thank you
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DAY 3 – SESSION 3

Thematic Area:

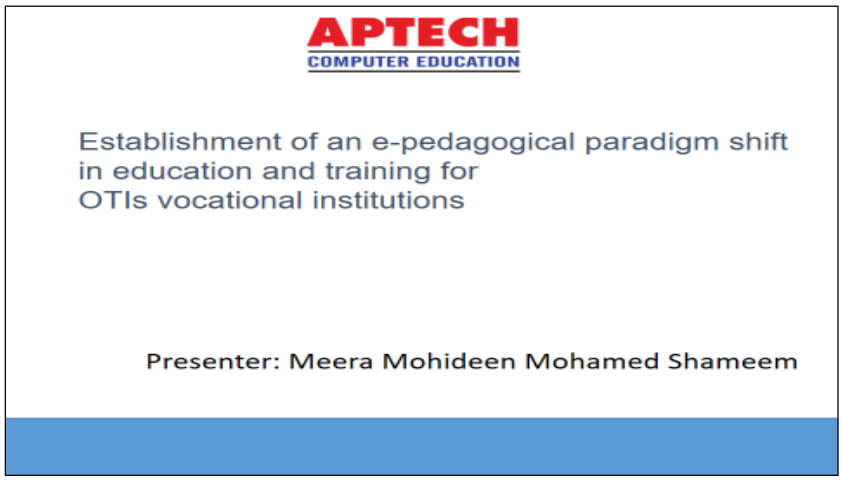
Open Distance and electronic Learning (ODeL – Context relevant strategies for Teaching and Learning Intervention

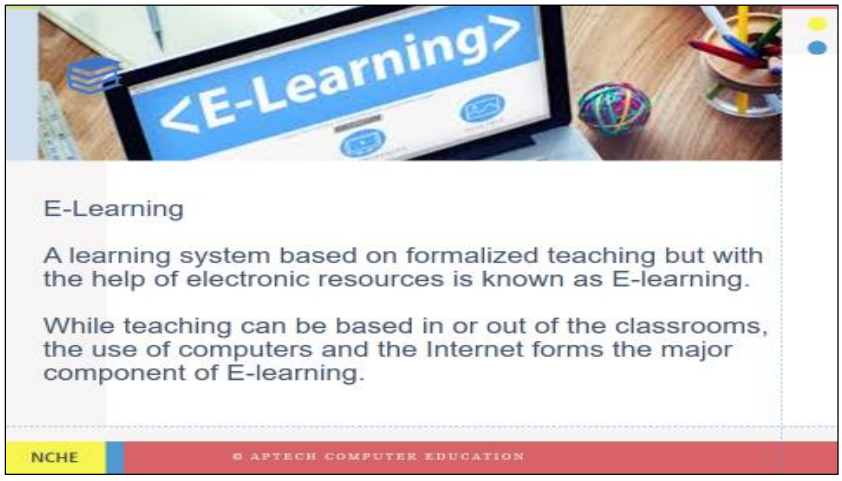
Chairperson:

Mr. Francis Katerega

Principal, National Teachers College, Mubende

3.2 Establishment of an e-pedagogical paradigm shift in education and training for OTIS





Advantages Of e-Learning
Ever Green.
Personalized learning.
Cost-effective.
Environment-friendly.
Access to different training modes.
Easy to switch.
NCHE
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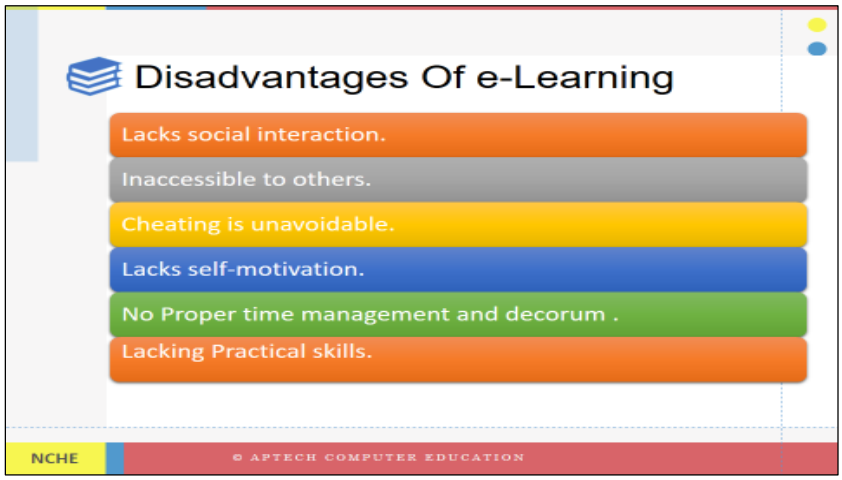
Disadvantages Of e-Learning
Lacks social interaction.
Inaccessible to others.
Cheating is unavoidable.
Lacks self-motivation.
No Proper time management and decorum .
Lacking Practical skills.
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Solutions to the challenges in e-learning
Using Online Interactive /Collaborative applications.
Offering offline contents with light weight applications.
Use of AI to monitor &proctor the learning activity.
Access to video contents of motivational speech and other relevant materials.
Applying stringent policies in the platform.
Using different technologies including use of simulators, cloud resource access etc
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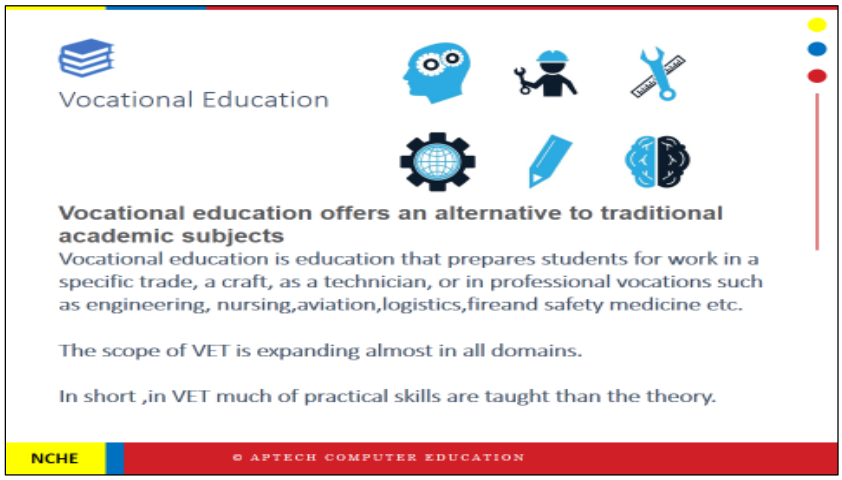
Vocational Education
Vocational education offers an alternative to traditional academic subjects
Vocational education is education that prepares students for work in a specific trade, a craft, as a technician, or in professional vocations such as engineering, nursing,aviation,logistics,fireand safety medicine etc.
The scope of VET is expanding almost in all domains.
In short ,in VET much of practical skills are taught than the theory.
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Can e-learning cater the need of VET ?
Answer is Yes !!!
Thanks to advancement in technologies .
Which allows us to take this paradigm shift in VET
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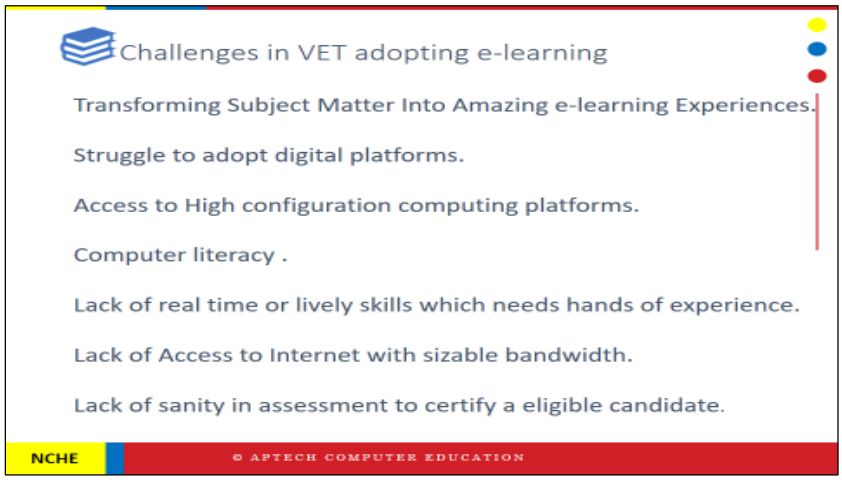
Challenges in VET adopting e-learning
Transforming Subject Matter Into Amazing e-learning Experiences.
Struggle to adopt digital platforms.
Access to High configuration computing platforms.
Computer literacy .
Lack of real time or lively skills which needs hands of experience.
Lack of Access to Internet with sizable bandwidth.
Lack of sanity in assessment to certify a eligible candidate.
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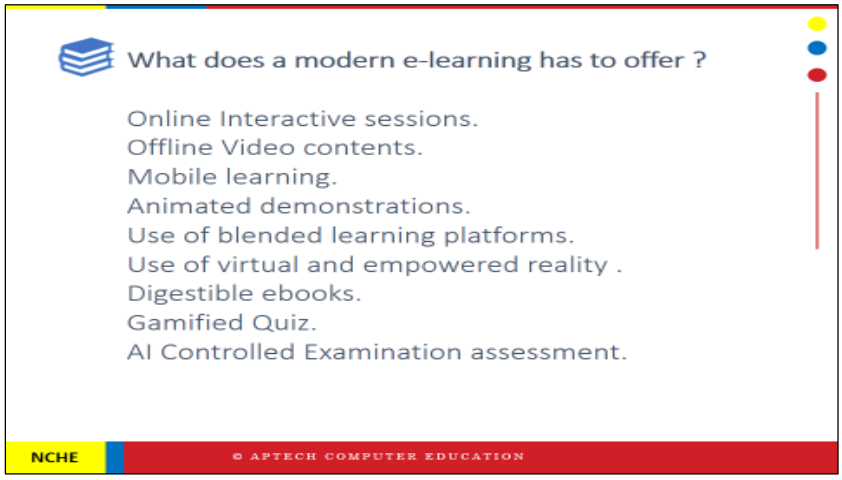
What does a modern e-learning has to offer ?
Online Interactive sessions.
Offline Video contents.
Mobile learning.
Animated demonstrations.
Use of blended learning platforms.
Use of virtual and empowered reality .
Digestible ebooks.
Gamified Quiz.
AI Controlled Examination assessment.
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Realistic real time learning environments using online meeting applications
Ex: Using Microsoft Teams,Zoom, Blue jeans etc
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E-Learning Visual Content
Well demonstrated Video Sessions:
These recorded sessions of a particular topics are ever green.
Can Played /Paused /Rewinded anytime anywhere which helps the learners to get immensive learning experience
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Incorporating Basic Computer Literacy Course

Providing the Visual content of basic computer literacy course.
Well demonstrated manuals with guided visual steps Can ensure even beginners to start adopting the digital platforms for their learning needs

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Using of Animated Contents

Animations that have a cognitive purpose can facilitate learning because they provide more and different information than static graphics.
They have the potential to help a learner build a more accurate mental model of a system's behavior compared to graphics alone

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Animated Contents -ctnd

Animation provides real to life scenarios faced in daily life during learning. This learning uses methods of learning by viewing, doing and coaching.

This helps in practical skill development and better knowledge retention. Animation adds fun to learning and motivates one to look for more information to learn.

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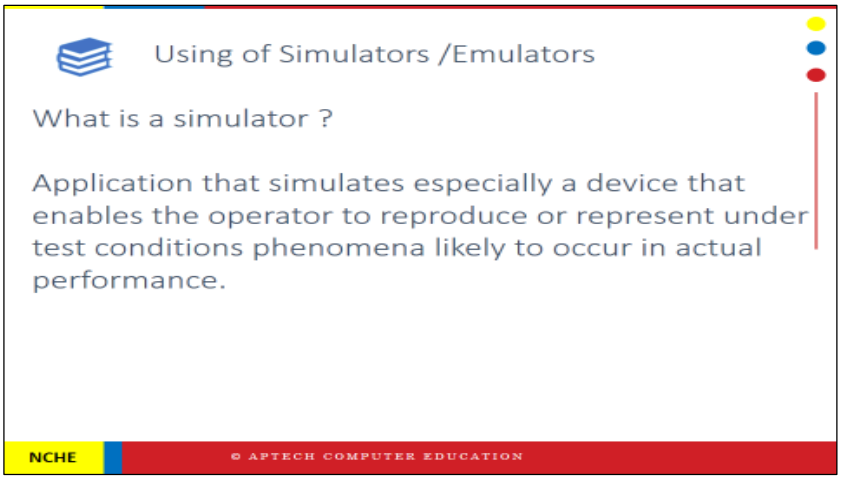
Using of Simulators /Emulators
What is a simulator ?
Application that simulates especially a device that enables the operator to reproduce or represent under test conditions phenomena likely to occur in actual performance.
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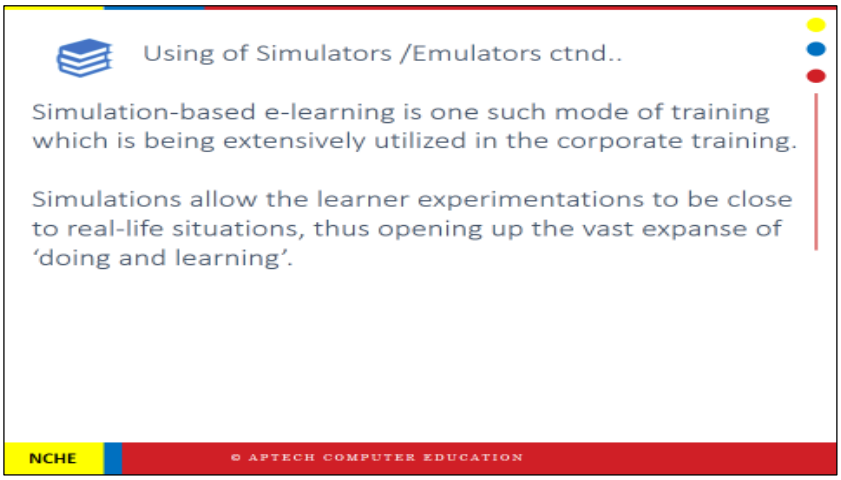
Using of Simulators /Emulators ctnd..
Simulation-based e-learning is one such mode of training which is being extensively utilized in the corporate training.
Simulations allow the learner experimentations to be close to real-life situations, thus opening up the vast expanse of 'doing and learning'.
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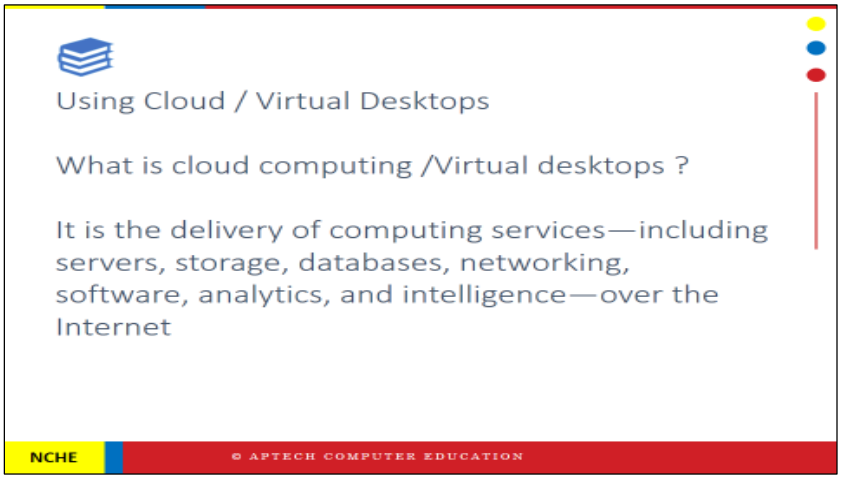
Using Cloud / Virtual Desktops
What is cloud computing /Virtual desktops ?
It is the delivery of computing services—including servers, storage, databases, networking, software, analytics, and intelligence—over the Internet
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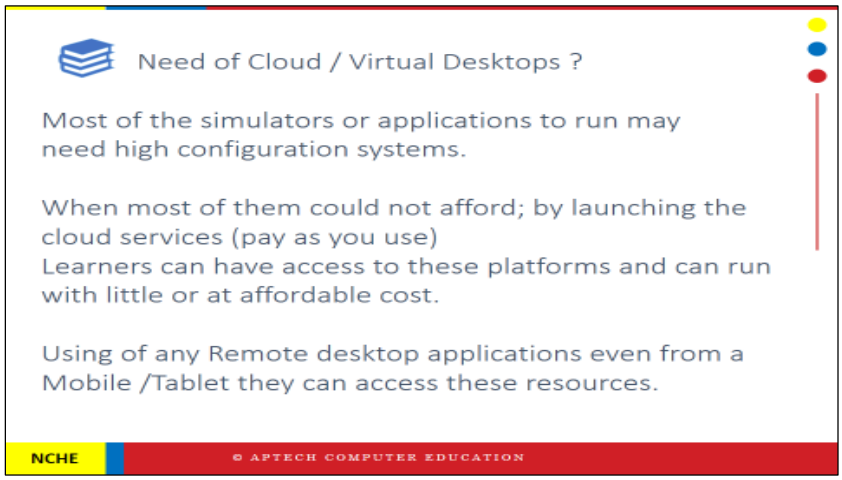
Need of Cloud / Virtual Desktops ?
Most of the simulators or applications to run may need high configuration systems.
When most of them could not afford; by launching the cloud services (pay as you use)
Learners can have access to these platforms and can run with little or at affordable cost.
Using of any Remote desktop applications even from a Mobile /Tablet they can access these resources.
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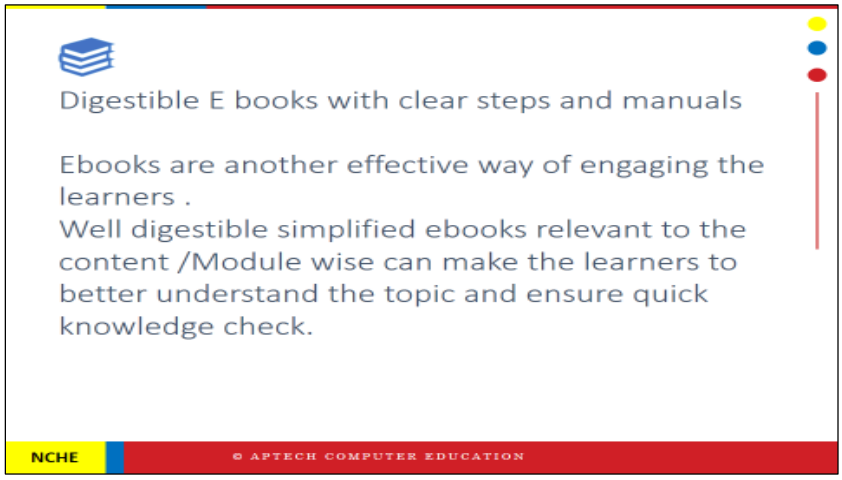
Digestible E books with clear steps and manuals
Ebooks are another effective way of engaging the learners .
Well digestible simplified ebooks relevant to the content /Module wise can make the learners to better understand the topic and ensure quick knowledge check.
NCHE
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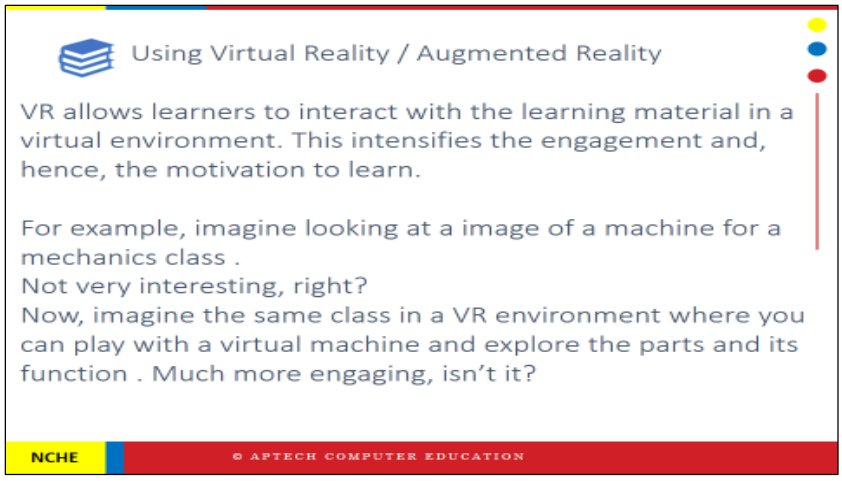
Using Virtual Reality / Augmented Reality
VR allows learners to interact with the learning material in a virtual environment. This intensifies the engagement and, hence, the motivation to learn.
For example, imagine looking at a image of a machine for a mechanics class .
Not very interesting, right?
Now, imagine the same class in a VR environment where you can play with a virtual machine and explore the parts and its function . Much more engaging, isn't it?
NCHE
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Virtual Reality in Action
NCHE
© APTECH COMPUTER EDUCATION

Augmented Reality in Action
NCHE
© APTECH COMPUTER EDUCATION

Augmented Reality Course on Personal Protective Equipment
NCHE
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Online Collaboration Tools

It helps to bring ideas together

Online collaboration tools makes the learners to work together on text documents, PowerPoint presentations, video chats, or detailed brainstorming projects.

The idea is that users do not need to be in the same room at the same time to work

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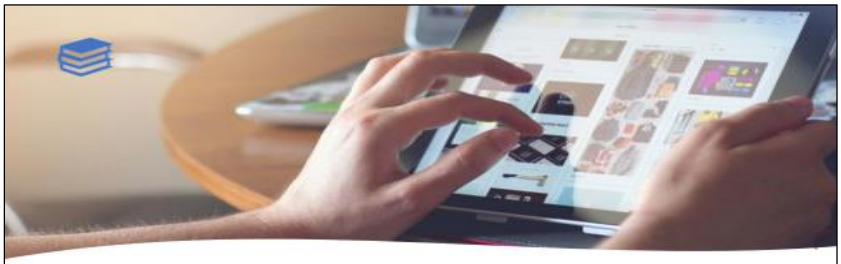

Learning anywhere using mobile devices
Since most of these online learning applications are heterogenous it can be accessed from any devices

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Conclusion

One major thing this pandemic made us to realize is that we haven't broken the full potential of all invented technologies.

Almost anything including e-Learning in VET is possible with the correct use of technologies.

Future of Learning is e-Learning
E-learning is not just a change of technology. It is part of a redefinition of how we as a species transmit knowledge, skills, and values to younger generations of workers and students.

Thank You

4. KEY HIGHLIGHTS FROM THE 3RD ANNUAL HIGHER EDUCATION CONFERENCE

S/n	Issues	Action point	Responsibility
1.	Disparity between private and public higher education institution with regard to infrastructure, connectivity and skills for E- Learning	The is need to Develop a National Framework for E-Learning for the Country	NCHE,Vice Chancellors' Forum, MoES
2.	High Taxes on Data affecting connectivity thus curtailing E-Learning	NCHE to negotiate the Government the need to harmonize and support both private and public higher education institution on data activation	UCC, URA, MoES
3.	Adopt a Regulatory tool for the new paradigm online tool for higher education institutions	There is need for flexibility in some of the capacity Indicators in the e-Learning era e.g. Staff student Ratio, institution physical infrastructure, % of contribution of students fees budget to our sources etc.	NCHE,,HEIs
4.	Disparity between private and public higher education institutions with regard to internet affordability	NCHE to negotiate on behalf of HEIs for internet affordability	NCHE, HEIs
5.	Deficiency in the digital skills in both the private and public higher education institutions	Promote the National Digital Agenda and conduct e-readiness survey	NCHE
Day Two			
6.	Supportive policy and framework	Operationalize the policy	UCC/ GoU
7.	Development Platform and shared resources (identify experts) and encourage collaborations	Identify experts Develop shared platform Develop shared resources Share resources	NCHE/ HEIs/UCC/ MoES
8.	Ensuring Quality (especially OdeL programmes)	Refine tools for quality assessment Share the tools Enforce Regular monitoring	NCHE/HEIs
9.	Self-assessment and peer reviews(Continuous improvement)	Enforce Monitor Use results for Continuous improvement	HEIs/NCHE
10.	Diversification of sources of funding especially growing alumni base	Build and grow alumni base	HEIs

11.	Research Research and patenting of universities research outputs Increase funding of research and extend to include private institutions in order to raise research output across HE Develop a model that includes private universities Encourage research that solves local problems	Develop a resource sharing model Develop local research agenda Provide competitive fund accessible to all researchers/ HEIs	GoU/HEIs/ UNCST/ URSB/ NCHE/ Partners and Donors
12.	Flexibility to adapt the new normal • Paradigm shift in training teaching and learning • integrate transformative pedagogies • Empower learns to become independent learners	Capacity building on curriculum development to suit current and future demands Curriculum reviews pegged to new norm and learner centered	HEIs/ NCHE
13.	Inclusivity including (marginalized groups, places and HEIs)	Increase access to Internet by all Reduce cost/ provide tax exemptions to stakeholders that support education activities	HEIs/UCC/NCHE / Telecom providers
14.	Increase investment in ICT and innovation Increase Collaborations with Partners such as RENU	Develop a hierarchically structured approach to investment on ICT Develop platform for collaborations	GoU/ MoES/NCHE /UCC
15.	Increase partnership with telecom companies a. Zero rating of access to university websites b. Increase access to internet backbone c. Growing OdeL d. Train students and staff in ICT e. Develop platforms for shared quality online resources for HEIs f. Increase access to hot spots and public wifi	i. Integrate mandatory requirement to support education services into the telecom regulatory framework ii.Operationalize the ICT supportive policy and framework for education Strengthen existing collaborations	GoU/ UCC/NCHE/ Partners

	Day Three		
16.	OdeL is very low among the OTIs as compared to the other Higher education Institutions	There is need for mind-set change and embrace Odel and continuously mitigate challenges that HEIs are facing OTIs at the moment.	GOU/NCHE/ OTIs
17.	Lack of access to e-learning services by OTIs and students	- Identify key priority areas such as establish e-learning centres of excellence - Engage National Planning Institutions, Regulatory bodies etc. to support one another in embracing technology and all challenges associated with it.	UCC/NCHE/ OTIs/ Partners
18.	High Taxes on e-learning applications and gadgets is a challenge to HEIs	NCHE shall constantly engage with government of reduction of taxes on e-learning applications and gadgets for institutions and students to embrace new technology;	GOU/NCHE/ HEIs

CLOSURE:

The conference was closed by Dr. Rev. Alex Kagume, Deputy Executive Director, National Council for Higher Education.

END OF CONFERENCE

Appendix 1

NATIONAL COUNCIL FOR HIGHER EDUCATION

THE 3rd ANNUAL HIGHER EDUCATION CONFERENCE (VIRTUAL)

THEME: Adaptation to Current and future challenges for Higher Education under the Covid-19 pandemic.

May 18th – 20th 2021

WEBINAR PROGRAMME

DAY 1	**18th May 2021- PRIVATE UNIVERSITIES**	
Time	**Activity**	**Rapporteurs:**
OPENING SESSION **Master of ceremony:** **Mr. Solomon Serwanja**		Mr. Dennis Omvia Mr David Musimaami
9:00 – 9.05:	**Welcome Remarks** Professor Mary J.N Okwakol – Executive Director NCHE	
9.05 -9.15	**Official Opening by Guest of Honour** Ms Rosa Malango -UN Resident Coordinator - Uganda	
9.15.9.30	**Keynote presentation:** **Adaptation to Current and future challenges for Private universities under the Covid-19 pandemic** **Presenter:** Professor Guido Van Huylenbroeck Ghent University, Belgium	
SESSION 2: **Strategic policy and planning Frameworks for recovery and sustainability in the Covid-19 era**		

Chairperson: Dr. Halima Akbar Wakabi – Academic Registrar ,Islamic University In Uganda	
9.30 - 9.55am	**2.1 Policy and strategic frameworks for Private Universities under COVID-19 pandemic**
	Presenter: Assoc. Professor Aaron Mushengyezi Vice Chancellor Uganda Christian University (UCU) , Mukono
9.55 -10.20	**2.2 Private universities Funding Strategies for attraction and retention of students**
	Presenter: Professor Dora Manoj- Brunel University UK
10.20- 10.45	**2.3 Crisis-sensitive Higher educational planning and management**
	Presenter: Dr. Joseph Muvawala – Executive Director, National Planning Authority - Uganda
10.45 -11.10	**2.4 Strategies for Continuity of sustainable Health education and training in Higher education**
	Presenter: Dr. Bonaventure Ahaisibwe - Country Representative, Seed Global Health
11.10 -11.40	***Discussions: Question & Answer session***
SESSION 3 **Open Distance and electronic Learning (ODEL) – Context relevant strategies for Teaching and Learning Interventions**	
Chairperson Dr John Mugisha -Vice Chancellor, Cavendish University	
11.40 -12.05	**3.1 Effective Pedagogical practices for online teaching and learning**
	Presenter: Assoc. Professor Birevu Muyinda , Deputy Principal of the College of Education and External Studies at Makerere University

12.05 -12.30	**3.2. Relevant Teaching and Learning Interventions for ODeL**	
	Presenter : Dr. Pius C. Achanga , Director , Quality Assurance and Accreditation Directorate , NCHE	
12.30-12.55	*Discussions: Question and Answer*	
12. 55 - 13.30	**WAY FORWARD and CLOSURE**	
	END OF DAY 1	
DAY 2	**19th May 2021 PUBLIC UNIVERSITIES**	
Time	**Activity**	
		Rapporteurs:
OPENING SESSION: **Master of ceremony:** **Mr. Solomon Serwanja**		Mr. Martin Osikei Ms Maria Nakachwa
9:00 – 9.05:	**Welcome Remarks**	
	Professor Mary J.N Okwakol – Executive Director NCHE	
9.05 -9.15	**Official Opening by Guest of Honour**	
	Hon. Judith Nabakooba- Minister for ICT& National Guidance	
9.15 -9.30	**Keynote presentation:** Adaptation to Current and future challenges for Public universities under the COVID-19 pandemic	
	Presenter:– Dr.Jessica Aguti - School of Education, Makerere University	
SESSION 2: **Strategic policy and planning Frameworks for recovery and sustainability in the Covid-19 era**		
Chairperson: Professor Christine Dranzoa- Vice Chancellor, Muni University		

9.30 -9.55	**2.1 ICT Policy and strategic frameworks to support Higher education recovery under COVID-19 Pandemic**
	Presenter: Ms Irene Kaggwa - Sewankambo - Executive Director, Uganda Communications Commission (UCC)
9.55 -10.20	**2.2 Private public Sector collaborative Support for Higher Education repositioning into the new normal**
	Presenter: Dr. Dorothy Okello , Chairperson RENU ,Dean School of Engineering , Makerere University
10.20- 10.45	**2.3 Crisis-sensitive Higher educational planning and management**
	Presenter: Professor Waswa Balunywa – Principal, Makerere University Business School
10.45 -11.10	**2.4 Strengthening local capacity for ICT strategic innovations in University education delivery and management**
	Presenter: Dr John Okuonzi , Director ICT Kyambogo University
11.10 -11.40	*Discussions : Question & Answer*
SESSION 3: Open Distance and electronic Learning (ODEL) – Context relevant strategies for Teaching and Learning Interventions	
Chairperson: Professor Openjuru George - Vice Chancellor, Gulu University	
11.40 -12.05	**3.1.Effective pedagogical practices for online teaching**
	Presenter: Professor Birevu Muyinda- Deputy Principal of the College of Education and External Studies at Makerere University
12.05 -12.30	**3.2. Relevant Teaching and Learning Interventions for ODeL**
	Presenter: Dr.Pius C. Achanga- Director , Quality Assurance and Accreditation Directorate , NCHE
12.30 -12.55	*Discussions: Question and Answer*
12.55 -13.30	**WAY FORWARD and CLOSURE**

	END OF DAY 2	
DAY 3	**20th MAY -OTHER TERTIARY INSTITUTIONS**	
OPENING SESSION: **Master of ceremony:** **Mr. Solomon Serwanja**		**Rapporteurs** Ms Jane Nabwire Ms Bernadette Nbabagala
9:00 – 9.05:	**Welcome Remarks** Professor Mary J.N Okwakol – Executive Director, National Council for Higher Education	
9.05 -9.15	**Official Opening by Guest of Honour**	
	Hon. Dr. Elioda Tumwesigye Minister for Science Technology and Innovation	
9.15 -9.30	**Keynote presentation:** Adaptation to Current and future challenges for OTIs , vocational education and training under the Covid-19 pandemic	
	Presenter: – Dr. Fredrick Kitoogo, Principal- Uganda Institute of Information and Communication Technology, Nakawa	
SESSION 2: **Strategic policy and planning Frameworks for recovery and sustainability in the Covid-19 era**		
Chairperson: Mr. Benjamin Turyahikayo - Director at National Teachers College, Kabale		
9.30 -9.55	**2.1 Policy and strategic frameworks for Vocation and other Tertiary Institutions recovery under COVID-19**	
	Presenter: Hajat Safina Museene – Commissioner BTVET, Ministry of Education and Sports	

9.55 -10.20	**2.2 Funding strategies for OTIs and Vocational education and training**
	Presenter: Mr. Wanyama O. Michael- Executive Director, Higher Education Students Financing Board
10.20- 10.45	**2.3 Crisis-sensitive Higher educational planning and management**
	Presenter: Eng. Bernard Ongodia, Principal- Uganda Petroleum Institute, Kigumba
10.45 -11.10	**2.4 Strategic Innovations for OTI s and vocational education and training**
	Presenter: Dr. Jane Egau Okou Director for Higher Technical Vocational Education & Training _ Ministry of Education and Sports
11.10 -11.40	*Discussions : Question & Answer*
SESSION 3: **Open Distance and electronic Learning (ODEL) – Context relevant strategies for Teaching and Learning Interventions**	
Chairperson: Dr. Francis Katerega, Principal, National Teachers College, Mubende	
11.40 -12.05	**3.1. Establishment of an e- Pedagogical paradigm shift in education and training for OTIs vocational institutions**
	Presenter: Mr. Meera Mohideen , Aptech Computer Education
12.05 -12.30	**3.2. Relevant Teaching and Learning Interventions for ODeL**
	Presenter: Dr. Pius C. Achanga- Director , Quality Assurance and Accreditation Directorate , NCHE
12.30 -12.55	*Discussions: Question and Answer*
12.55 -13.30	**WAY FORWARD and CLOSURE**
	END OF CONFERENCE

Appendix 2

MEMBERS OF THE ORGANIZING COMMITTEE

1. Dr. Nora Mulira	Chairperson
2. Mr. Martin Osikei	Member
3. Mr. Omvia Dennis Kaggwa	Member
4. Mr. George Ebine	Member
5. Mr. Arthur Babu Muguzi	Member
6. Ms. Faridah Nairuba	Member
7. Ms. Florence Nantege	Member
8. Ms. Jane Nabwire	Member
9. Mrs. Maria Nakachwa Ssemakula	Member
10. Ms. Annet Lyaka	Member
11. Mr. Saul Waigolo	Member
12. Mr. David Ssebulime	Member

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