

Digital Technology and Transformation in HEI in Africa: Opportunities, Challenges and Responses

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OUTLINE

- Digital innovations
- Transformations in HEIs
 - Academic life cycle
- Challenges
- Responses



Digital Technologies

- Digital platforms
- Video conferencing technology
- QR Code
- Blockchain
- Analytics
- Social media
- Smartphones
- Embedded systems
- AIs



Digital Transformation

- Digital innovation transformation
 - Replacing face-to-face contact with mediated contacts
 - Replacing paper-based communication with digital communication
 - Replacing physical documents with digital documents: storage and transfer
 - Capture data in native digital formats
 - Replacing lecturers with AIs
- In SSA, this has largely been triggered by the Covid-19 pandemic



Academic-Student Life Cycle



Common Realities

- Advertisement-digital platforms and social media
- Application-digital platform
- Admission-digital platform
- Online orientation-digital platform
- Online registration-digital platforms
- Teaching and learning-interactive platforms
- Assessment and examination-LMS
- Graduation-virtual video platforms



Other Opportunities

- Digital certificates
- Joint degrees—in country and cross-country
- Shared laboratories
- Shared infrastructure (beyond online libraries)



Challenges

- Costs of digital infrastructure of SSA HEIs
- Instability of internet and related infrastructures
- Low bandwidth
- Digital divide
- Fake certificates
- Student signing into class and doing other things
- Outsourcing of assignments, assessment and examinations
- Digital security-hacking for exam questions and grades
- Designing systems to fit specific disciplinary needs
- Imported digital systems sometime not suitable to local context



Address Challenges and Embrace New Opportunities

- Shared digital infrastructure, e.g. shared virtual laboratories, cloud resources etc.
- Collaborate with governments and Telco's to improve internet infrastructure on both institutional and user sides.
- Use QR Code and blockchain to address fake certificates.
- Create video-based virtual examination centres
- Develop local expertise to design digital technologies of SSA



Thank you

