The possibilities provided by technology in the education landscape: Change, Transformation and Structure

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Objectives

1. Discuss the importance of ICT to education in Nigeria
2. Discuss the gaps and current rate of ICT use in education in Nigeria
3. Discuss how ICT may be used in knowledge transfer to ensure global competitiveness of Nigerian youths
4. Outline recommendations for change and transformation
5. Create a roadmap and structure for ICT integration in Nigeria's education sector
“Only Technology will drive the intervention in Nigeria’s Education Chaos”
Let’s look at what technology can do for education in Nigeria.

We have a large university structure, but we have an even larger population. We have much more demand than supply. Technology can help us alleviate this issue by providing supply. A supply at scale.

E-learning is a direct descendant of correspondence courses run since the 19th century. The University of Dar es Salaam, the University of Nairobi, and Makerere University were all originally part of the University of London, set up as branch campuses.

E-learning can allow us to deliver education across all demographics, across all corners of the country in a more efficient way.

Technology can lower barriers to education access and the cost for the government to maintain costly physical campuses and extensive university systems. It further networks the nation.
Importance of ICT

Importance of integrating ICT in Nigeria’s Education

- **Funding:** ICT reduces the amount in investments needed in the Education Sector.

- **Equality:** ICT provides equality in gender access to education

- **Knowledge:** ICT presents a gateway for unlimited resources bringing about a balanced serving of knowledge for students.

- **Accessibility:** Anyone anywhere at anytime can have access to learning

- **Collaboration:** Learn with no boundaries, connect with the globe

- **Creativity:** Innovate in learning styles and pedagogy approaches

- **Competitiveness:** Universal curriculum exchange for equal competitiveness
Gaps

Gaps in the Education Sector with a potential for ICT transformation

- Funding Gap
- Equality Gap
- Knowledge Gap
- Accessibility Gap
- Collaboration Gap
- Creativity Gap
- Competitiveness Gap
Results from our Research implementation

We can generate learning for university age students, providing another stream of supply.

We use hybrid approaches, some face to face, to maximize the impact of social learning.

We develop programs and materials that are specific to the local context, the local needs and career prospects of our students.

We are extending that through mobile learning

Goal is to make use of those other 20 hrs of the day when one is not in a physical classroom. A holistic approach is to make learning a daily discipline.
Recommendations

Get Schools Connected to the Internet

1. Access to global knowledge networks
2. Access to an assortment of resources
3. Engage in global academic interaction
4. Access to global job opportunities

Use of Digital Libraries in the Curriculum

1. Automatically revised textbooks
2. Cut the cost of textbooks for students
3. Better revenue for Institutions
4. Get local authors to a wider audience
5. Standardization of textbooks
6. Availability of textbooks 24hrs daily
Technology Assisted Learning

1. Improved students learning experience
2. Optimize the effectiveness of teachers
3. Better administrative records keeping
4. Improved academic records keeping

Tertiary Research Networks

1. Collaborative research gateway
2. Unified educational services
3. Standardization of information services
4. Collaborative research funding security
5. Affordable bandwidth

*There is a need to broaden the scope of the NgREN
Online, Mobile and Hybrid Learning

1. Create a supply at scale
2. Reach the underserved last mile
3. Affordable Open access to education
4. Offer a student-oriented learning
5. Rigorous as would be in physical learning

Shift to Students as Creators not Consumers

1. Highly engaging learning for students
2. Students become more responsible
3. Students familiarize with on the job learning
4. Peer to Peer level learning
5. Knowledge creators and curators
Agile approaches to change

The rapid rate at which technology keeps changing education means that our leaders need the best possible advice on how to actively approach the change. This will ensure we have graduating students with most relevant knowledge for the market place.

As in education, technology continues to rapidly change the tools, processes and knowledge applied in the workplace. There is a need to have an agile review of curriculums to adjust to the change. Students need to get knowledge that is relevant for them in the workplace.
**ICT integration framework**

- **Policy and Vision**
  - Technology Literacy
  - Knowledge Deepening
  - Knowledge Creation

- **Curriculum and Assessment**
  - Basic Knowledge
  - Knowledge Application
  - 21st Century Skills

- **Pedagogy**
  - Technology Integration
  - Complex Problem Solving
  - Self Management

- **ICT Tools**
  - Basic Tools
  - Complex Tools
  - Pervasive Tools

- **Organization and Administration**
  - Standard Classrooms
  - Collaborative Groups
  - Learning Organizations

- **Teacher Development**
  - Digital Literacy
  - Manager and Coach
  - Teacher as model learner

*Based on the UNESCO ICT competency framework*
ICT Integration Stages

Emerging Stage
- Becoming Aware of the importance of ICT in Education
- Applying productivity tools
- Design of Policies

Applying Stage
- Learning how to use ICT in subject teaching
- Enhancing traditional teaching
- Test run of Policies

Infusing Stage
- Understanding how and when to use ICT in education
- Facilitating blended learning in subjects
- Roll out of Policies

Transforming Stage
- Specializing in the use and design of ICT in pedagogy
- Creating & Managing interactive L.E's
- Review of Policies

*Based on the UNESCO ICT competency framework
Policy Agency Roles

- Setting Standards
- Capacity Building
- Idea Lab
- Clearing House
- Catalyst for Cooperation

*Based on the UNESCO ICT competency framework*
Thank You

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