ITU WORKSHOP ON MEANINGFUL CONNECTIVITY
10 MAY 2023

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TOPIC: A multifaceted approach to achieving sustainable and meaningful connectivity in schools and communities

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Observations are drawn mainly from

'Co-creating sustainable operating models for connected schools in Kenya: ITU study'

OTHER ITU INTERVENTIONS MENTIONED INCLUDE

1. **Broadband connectivity for schools in Kenya funded by the Universal Service Fund**: assessment report.
2. **Universal Service Financing Efficiency Toolkit - ITU** (available online. Used to deliver capacity training to the ICT national regulator staff on efficient financing approaches)
4. **School-to-infrastructure mapping** (Giga) - interactive connectivity maps developed.
5. **Assessment of Last Mile Connectivity Projects in Kenya** (ongoing study).

Background

- Kenya has made significant progress in terms of internet connectivity with increased access to mobile phones and 'affordable' data plans.
- Meaningful connectivity however remains a challenge for many, particularly those in rural areas and low-income households.
- From a policy perspective, the government recently approved the implementation of the Kenya Digital Superhighway Project that seeks to strengthen the nation's ICT backbone by increasing fibre network coverage across the country, reducing the cost of internet connectivity, and enhancing the delivery of eGovernment services.

Background

- From the ongoing study on 'co-creating sustainable operating models for connected schools in Kenya', we observe the following:
  - Whilst the government and private sector such as Giga (ITU-UNICEF partnership) are working to provide connectivity in many schools, major **challenges** still exist that need addressing if the project outcomes are to be realized.
  - *Some of these challenges include: affordability; infrastructure gaps particularly in rural areas; unreliable internet connectivity particularly in hard-to-reach areas; low bandwidth; unreliable energy; inadequate computer teachers and technicians; inadequate devices and equipment; digital literacy challenges; need for mind-set shift; need for reliable statistics; local content & services challenges; need for capacity building etc.*

Unreliable Internet Connectivity

- **Unreliable internet connectivity** that has **frequent downtimes** is a major challenge in schools.
- Furthermore, due to **low bandwidth**, the internet connection does not cover all classrooms, and **in some cases, only connected to the staffroom**, hence students do not benefit as much as they should from it.

Unreliable energy

- ***Addressing the energy gap is an essential step towards achieving meaningful and sustainable connectivity*** *(Meaningful school connectivity: An assessment of sustainable business models, Giga in collaboration with Boston Consulting Group (2021)).*

Availability of devices

- Some schools are unable to offer ICT skills training due to inadequate or lack of devices (obsolete or few in relation to No. of students).
- Lack of skills or inadequate skills to repair devices

More teachers than students have access to connectivity due to inadequate devices. (Broadband connectivity for schools in Kenya funded by the Universal Service Fund: assessment report.)

Inadequate digital skills

- Inadequate computer teachers and technicians.
- Also inadequate digital skills in non-computer teachers: sometimes only one teacher knows how to troubleshoot connectivity.
- Hence the need to invest in capacity building so that when the initial implementers leave, the school is left with capacity.
  - *Develop innovative digital literacy capacity-building strategies to help those who do not see the Internet as relevant to them as well as those who already recognize the Internet's importance. (ITU-UK-Kenya DAP Partners Open Day, May 4 2022)*
  - *Sensitize and build capacity involving responsible digital access through practicing cyber hygiene and cybersecurity behaviour change. (ITU-UK-Kenya DAP Partners Open Day, May 4 2022)*

Infrastructure gaps

- Inadequate digital infrastructure can significantly affect meaningful connectivity. *(lack of sufficient broadband networks, internet exchange points, data centers, and other critical components of the digital ecosystem, particularly in rural and remote areas.)*
- **These gaps can lead to poor connectivity quality** *(slow internet speeds, high latency, and unreliable connections).* This, **in turn, can impede users' ability to access and benefit from or contribute to the digital economy.**
- **Infrastructure sharing is a possible approach to lowering cost.** But more discussions are needed to ensure those who laid out the infrastructure can get a return on investment.

Cost

- For digital inclusion efforts to be successful, they must **recognize the role that persistent poverty plays in shaping people's ability to access and use computers and the Internet.** *(ITU-UK-Kenya DAP Partners Open Day, 4 May 2022)*

  - *Connectivity not integrated in the school budget (Only 1% of schools had a basic infrastructure and device budget, and only 42% of those surveyed were exploring ways of covering opex) – Assessment of Broadband connectivity Project.*

Local content and services

- **Connectivity for what?**
- *The importance of providing **relevant content for all** and **in the languages that the intended audience understands** must be emphasized as critical to ensuring meaningful connectivity." (ITU-UK-Kenya DAP Partners Open Day, May 4 2022); Co-creating sustainable operating models for connected schools in Kenya (upcoming report);*

Mindset shift

There is **need to shift people's mentality**, **as once someone thinks government services should be free, they will not find ways to pay**. (*(ITU Workshop on Co-creating sustainable operating models for connected schools in Kenya, March 22 2023 + visit to a community-led connectivity in Kilifi County*)

Help people appreciate the value of connectivity. How?

- *Outline **a distinct value proposition for the community**, such as connecting connectivity to the new curriculum (CBC), which frequently mandates that students use the internet for homework. (data collected during the study on co-creating sustainable operating models for connected schools in Kenya)*

Prioritize rural areas and persons with disabilities and specific needs

To ensure connectivity initiatives are inclusive and equitable.

- *Address their unique needs through policy shift & partnerships.*

Map Ecosystem Players & Involve them to ensure end-to-end solutions

- Need to recognize each partner's unique strengths as no partner can do everything.
- Map stakeholder ecosystem and identify the role each player can play best.
- Understand actors at macro, meso and micro levels in order to engage them.

Sustainability should not be an afterthought

a. **Embed sustainability in the project design.**
b. **Conduct a needs assessment** to understand current state of connectivity & identify needs. Use this information to design a connectivity project that is tailored to the unique needs and constraints of the school.
c. **Identify priority areas of the school & the community as they may have bigger needs**, link priority areas to connectivity or provide both at the same time. Engage the community as a stakeholder.
d. **Address financial, social, governance and environmental sustainability** of the project.

Systemic enhancement and enabling environment

- Critical to creating a more enabling environment is identifying and addressing existing gaps at the **community** and **national levels**.
- In Kenya, ITU has been working with government agencies (CA, USF, ICTA) jointly.
  - *Primary aim is to align our objectives with those of the government, thus ensuring that our efforts support and complement the government's priorities and contribute to the advancement of their agenda.*

Need for reliable & consistent statistics

- For how can meaningful connectivity and sustainability be achieved without the correct data or having different statistics on the same variable?
  - *Without accurate and up-to-date statistics, it is difficult to understand the current state of connectivity in a given school, community or region, identify gaps in connectivity, and measure the impact of connectivity initiatives.*

Clarity on project ownership

- It is important to establish clarity on who the driver of the project is. When ownership is unclear, it can lead to confusion, delays, and ultimately, project failure.
  - *Who is responsible for initial funding of the project? Who is responsible for OpEx? Is there a budget-line for internet connectivity at the school level? Who is responsible for continuous digital skilling of teachers, maintenance, equipment and device replacement, security, monitoring and evaluation etc?*
  - *Without clarity on who the project owner is, accountability, resource allocation, communication, and sustainability of the project can be jeopardized.*

Innovative / New Connectivity Approaches

- A sustainable connectivity operating model is one that is ***'a good idea right from the beginning'***

Summary Ideas 1/3

1. **Utilization of Existing Infrastructure**: Using existing infrastructure to connect schools can be a cost-effective approach. Schools can then manage recurring costs, potentially through novel/innovative revenue generation methods.
2. **Financial Sustainability**: Beyond the initial funding, schools must have a financial plan to support their connectivity. This guarantees continuous access to digital learning resources.
3. **Understanding Ground Reality**: Long-term connectivity solutions must be tailored to the unique contexts of the schools. Understanding the ground realities is essential for this.
4. **Prioritizing Disability Needs**: When designing connectivity models, students with disabilities' needs should be prioritized. This encourages diversity in connectivity.
5. **The Importance of consistent and accurate data**: consistent and accurate data and information sharing can improve stakeholder collaboration. This can lead to more effective school connectivity solutions and strategies.

Summary Ideas 2/3

6. **Localized Technical Support:** Having localized technical support can be extremely beneficial to schools. This ensures that any connectivity issues are addressed as soon as possible, increasing the efficiency of digital learning.
7. **Workforce Development**: Schools should hire computer teachers or technology support personnel. This can help support the use of digital resources in schools and ensure that technical issues are addressed as soon as possible.
8. **National Strategy**: Countries should be encourage to treat connectivity as a national project with its own budget. This can hasten the realization of universal access to digital learning resources.
9. **Partnership with the Private Sector**: Strong business cases can attract private sector funding for school connectivity. This can supplement government funding while also leading to innovative and long-term solutions.

Summary Ideas 3/3

10. **Cluster Procurement**: Schools should be encouraged to group together to purchase connectivity services. This could result in better deals and more affordable connectivity.
11. **School Pairing**: Schools that can afford to cover their connectivity costs should be encouraged to 'twin' with struggling schools.
12. **The Kenya Universal Service Fund** has played, and continues to play a critical role in addressing meaningful connectivity.