Challenges of ICT Skills Development in East Africa

THE CASE OF BURUNDI

Workshop: ICT Industry and Academia in the East Africa Region

Kigali, 2016 June 20th

Challenges of ICT Skills Development in East Africa

Context➔we exploit the fact that:

❑ By definition Academia is a system of entities that collaborate to achieve a common goal. A goal of knowledge and skills production,sharing and development. The academia's role is therefore preparing, providing the market and the society with highly qualified Human Ressources (HR) that meet expectations of the labor, the community and/or the research results.

❑ The ICT sector is a rapidly growing cross-cutting field and with the expansion, the ICT skills specialized requirements,

❑ As a specific area of the academia's role, the ICT skills preparation, production is a long process that involves collaboration of many stakeholders and requires highly qualified HR. The ICT skilled people are rare and highly appreciated on the market. And It is known that rare and highly valued resources are priced high…

❑ The stakeholders like industries, universities or/and schools are expect(ed/ing) to be involved in the process of skills preparation and development by participating:

   ❑ In formulation /definition of the policy, of the strategies, of the motivation

   ❑ in preparation/formulation of the curricula in order to meet needed skills

   ❑ in managing (by providing, supporting, supervising or coordinating) the internships and/or research in order to meet the expectations

   ❑ In the choice of technological infrastructures & tools that facilitate and enable the ICT skills to be produced, to be acquired, to be shared, to be disseminated etc…

   ❑ In promotion of the use of the technologies as an enabler

Challenges of ICT Skills Development in East Africa

Objective is to be aware of

❑ **Policy and strategy need**
   ❑ Promote and build the capacity in skills' policy, strategy development of HR as required by industry or the community.

❑ **Collaboration expectations**
   ❑ Create the curricula and harmonize it to achieve the academia' goals that enable the production and development of highly qualified and skilled Human Resources (HR) as per requirements

❑ **Skills quality requirements**
   ❑ Produce and provide critical mass of skilled people
   ❑ Take into consideration the digital inclusion as a solution. An engine and an enabler for added value, wealth creation even for marginalized people living in remote area.

❑ **Technological enabler**
   ❑ Create an environment or platforms for a global collaborative ecosystems;
   ❑ Implement widely the home/electronic/mobile work-offices or class-rooms in order to produce/develop/offer or acquire quality skills from everywhere and instantly;

Challenges of ICT Skills Development in East Africa

Challenges

- ❑ The skills provided by the academia's systems do not meet fully the expectations of the research, labor market and this is true in ICT sectors as well. This is the result of:
  - ❑ Lack of policy, leadership, strategy and opportunity for industry and academia to involve each other as stakeholders
  - ❑ The industry is disapointed and has doubts with the quality of job seekers, their level of the skills especially when comes to handle the tiny specialized new ICT technologies
  - ❑ Conflict of the curricula model elaboration (professional vs research scientific or both)
  - ❑ Inadequate lecturering methodologies (are not often «learner-centered)
  - ❑ The pre-requisites are of poor quality
  - ❑ Academia implements programs that are outdated or do not solve society problems or of research.
  - ❑ Lack of MoUs for collaboration and acceptance of internship between academia and Industries.
  - ❑ The allocated time for internship is too short.
  - ❑ Weak capacity of industry to absorb and accept all requests for internships of students
  - ❑ Allow the acces or avail all resources including specific infrastructures that is often limited(the industry often says: expensive, secret, delicate or perishable…).
  - ❑ **Recrutments, contracts and performance management that do not follow the existing or ethical rules** and are managed selectively especially for the technological ones.
  - ❑ Expensive education services/products as well the education platforms and tools;
  - ❑ Perception as limited the current added value of technological solutions
  - ❑ **Bringing actors to implement technologies** especially the remote use and access to materials (Internet of things, sensors, IS and applications, etc…) needed for skills development

Challenges of ICT Skills Development in East Africa

The collaboration

Academia as HR provider for industry has involved different partners in the curricula development and harmonization in Burundi

PUBLIC

PRIVATE

ENA. Ecole Nationale d'Administration

UP G GITEGA Université Polytechnique

UN PROJET DANS LA COMMUNAUTE, POUR LA COMMUNAUTE ET PAR LA COMMUNAUTE

etc.

Challenges of ICT Skills Development in East Africa

The collaboration

Academia as HR provider for industry has involved different partners in the curricula development and harmonization in Burundi

1. **On national level, curricula harmonisation process != uniformization done** (For ICT/Computer Sciences and engineering in December 2015 for ICT/IT fields for Burundi) inspired on the «Decree No. 100/97 of 18 April 2014" on the ICT industry in Burundi and the «Politique Nationale de Developement des TIC – PNDTIC (2010-2025), November, 2010 . The last document is about the strategic policy and pillars on ICT for Burundi.

2. The **national harmonization workshops saw the Involvment and collaboration** with the:
   - **Ministry** of Education and Scientific Research - Burundi
   - **Inter University Council for East Africa (IUCEA)** as referer and funder
   - Representatives of **local Industry** especialy ICT related fields
   - **Universities** and other education institutions with their domain lecturers
   - Representatives of **Students**

Challenges of ICT Skills Development in East Africa

The collaboration

Academia as HR provider for industry has involved different parteners in the curricula development and harmonization in Burundi

The harmonization process in BDI was concerning

Programmes levels:

- **Bac(3)+**   **=> Harmonazed and Validated**
- **Msc(2)+**   **➜In the process**
- **PHD(3+1) ➜ in process**

The accepted programs for ICTs domain are: IT, Computer Sciences & Enginiering programs

- **Computer Engineering**
- **Communication Engineering (Networks & Telecoms)**
- **Computer Science**
- **Information Technology**
- **Business IT (Informatique de Gestion)**

# Challenges of ICT Skills Development in East Africa

Results

- ➢ ICT curriculas developed and the harmonization/validation process (with the region and locally) took place in december 2015 for the adopted BMD system (Bolonia process) since 2011 in its HE system.

- ➢ Burundi experts participation in the regional curricula harmonization process organized by the IUCEA

- ➢ The elaboration and harmonization of the different ICT curriculas have seen the involvement and participation of the professionals of ICT industry. The collaboration is hense a reality

- ➢ Policy and strategies available

- ➢ Some HE institutions in Burundi are implementing the eLearning platforms, the proposed in house or prpoietary solution like moodle).

- ➢ Mobile learning and work access remotly and thr perspective of implementing the model of EaaS

Perspectives: Mobile Technologies In Education
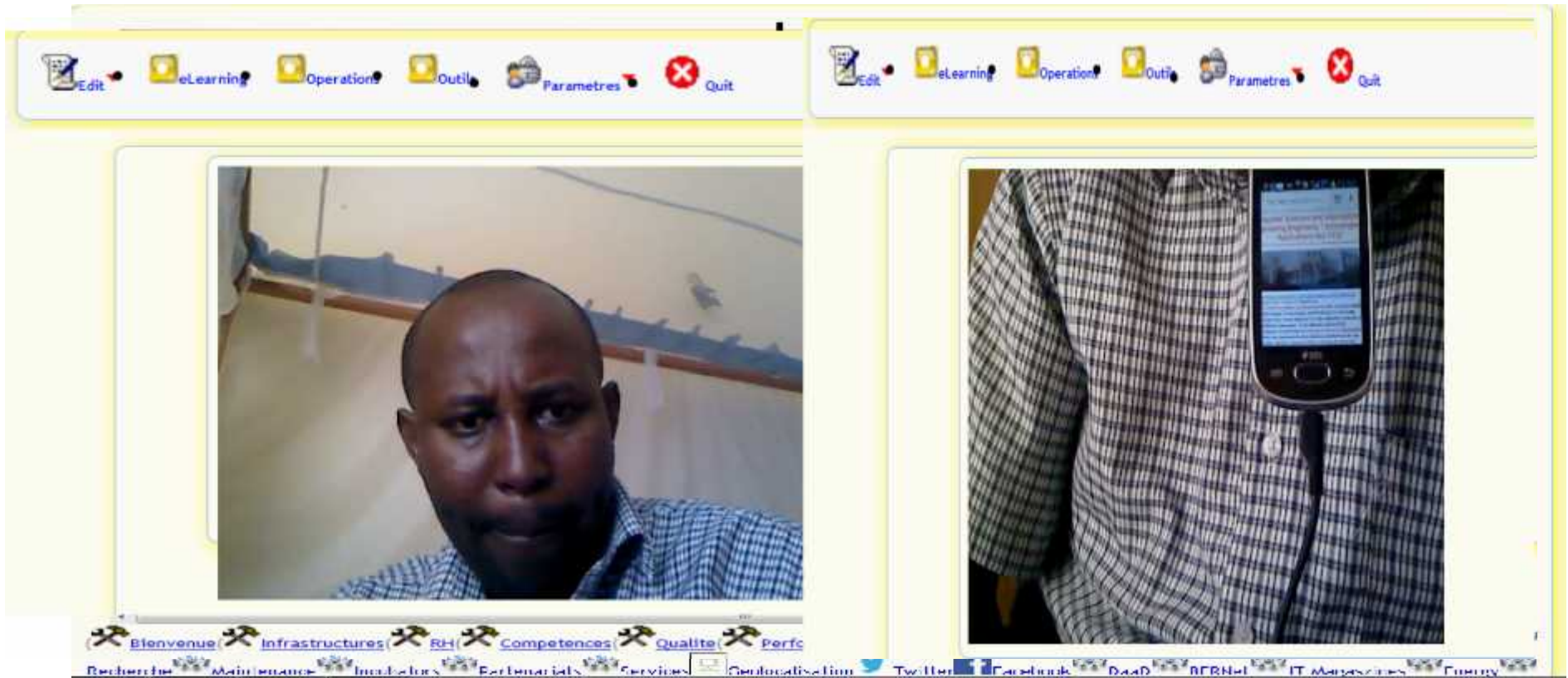
Thank You
Murakoze
Merci
Asante Sana

Dr William Sahinguvu   University of Burundi