15th Ministerial Round Table

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"Education, Digital Transformation and the Youth Bulge"

Dakar Senegal May 25 2023

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Communiqué

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The 15ᵗʰ eLearning Africa Ministerial Round Table took place in Dakar, Senegal on May 25, 2023. Participants included Ministers and Representatives from more than 17 African countries. Presentations by Ministers, global EdTech businesses and non-profit organisations working in Africa, addressed issues facing governments, development partners, and EdTech companies and organisations. These include scaling up technology supported education to meet the demands of Agenda 2063 for a skilled and well educated population; and the development of stable, educated and productive societies committed to global sustainable development.

The theme of the 2023 Ministerial Round Table (MRT) was **"Education, Digital Transformation and the 'Youth Bulge'**. African Governments and, in particular, ministers and officials responsible for economic development, technology and education, are at the crossroads of history, facing some fundamental challenges. These challenges are concentrated in three main areas: the digital economy, the education system and the continent's increasingly youthful population. How Governments and Ministers respond to these challenges will determine the speed and sustainability of Africa's 'transformation': investing to end widespread poverty, disease and conflict. They are at the heart of the African Union's Agenda 2063 vision, but in many countries, they still await the establishment of clear plans of action. The future: of societies, of economic success in the 4IR, and of developing a broad base of educated and skilled youth; is centred around the harnessing of digital opportunities. So how can Governments best grow the digital economy across Africa, within sub-regions and within countries? How can a burgeoning digital sector help to transform education and training, widening opportunity, enhancing employability and fostering economic growth? What structural, organisational and legislative change is needed? How can Governments create a productive dialogue with the private sector? What external help and support is available? What are the leading examples of global best practice? The African context is one of rapidly increasing population over the remainder of the 21st century. For education, 'business as usual' is no longer an option. The growing demand for education infrastructure, for teaching capacity, and for 21st century skills, means that education has to increasingly harness digital solutions to meet these demands.

Africa faces enormous challenges together with enormous opportunities, such as the African Continental Free Trade Area (AfCFTA). If a prosperous future depends on an educated population to run a technology driven economy, and a confident and competent younger generation, then equitable access to quality education is a key priority for national investment for economic and social progress. Africa needs to build on its rich heritage and indigenous knowledge, and utilise the opportunities technology offers to develop future skills, and provide a robust basis for sustainable development. Technology is not something for the few: the ability to use, and manipulate, technology is increasing a skill required for every aspect of life, and for all kinds of work. Education needs to provide, not just skills for today, but the flexibility to continue learning and developing skills throughout life, as technology becomes increasingly central to everyone's life.

Report on the use of ICT in education and remote learning during crises, and the required investment in digital transformation for African countries.

Albert Nsengiyumva, Executive Secretary of the Association for the Development of Education in Africa (ADEA) with funding from the Islamic Development Bank (IsDB) and the African Development Bank (AfDB) launched this report at the MRT. The study encompassed 34 African countries, and looked at issues of infrastructure, teacher training and ongoing training for learners and administrators. Covid caused major disruptions to education and ongoing progress, and led to state school closures for sometimes up to a year. Mitigation was insufficient, in terms of quality, continuity, inclusivity and equity. The objectives of the report included: design of an ICT orientation in education, providing support to do this, and highlighting the key issues to be addressed.

Key findings of the report included:

- Country policies on ICT in education varied widely.
- In half of the countries researched, less than 50% of the population had access to electricity.
- Radio penetration is far higher than TV penetration, though both had been use to promote education during the pandemic.
- Mobile/mobile broadband penetration is growing but both penetration, and access to digital devices, are still limited.
- ICT infrastructure in schools varies widely, and is most sparse in rural areas.
- Because of lack of mobile/broadband penetration, access and use of devices is particularly limited in rural areas.
- Teacher workforce digital competence is insufficient, and a focus must be put on development of teachers' ICT skills for education.
- Educational ICT initiatives were widespread, but relatively limited in scope.
- In very few places was there a comprehensive policy and strategy in place

The lessons taken from these findings are that priority must be given to:

- Having a clear set of education policies in place which recognise the centrality and importance of ICT provision in the service of education.
- Basic ICT infrastructure (including electricity) needs to be in place for education, aiming for universal access and affordability.
- Teacher capacity needs to be rapidly developed across the whole of the education system in the use of ICT in education.
- Developing partnerships should be a key element of building capacity for ICT in education:
- Working with the private sector and development partners. Partnerships should be based on on national (or regional) priorities, rather than private sector priorities.
- Utilising peer learning : within and between ministries, and between countries. Build on others' successful approaches.

The Executive Secretary of ADEA noted that the 'ADEA ICT in Education Task Force' will be reactivated in 2023. There will be a conference in 2024 to take this report forward. Three Ministers spoke on their experience in developing ICT in education in their countries.

Gambia, represented by Hon. Claudiana A. Cole, Minister of Basic Education, noted that the 2016 to 2030 plan was behind schedule by 2020, and by 2021 there was 'an uninvited guest' (Covid) causing disruption to education. The Minister set about *'taking the schools to the homes'*, using TV, radio and mobile phones. Unrest and floods caused further difficulties. They fast-tracked policy changes, with the tagline *'no child left behind'*. In Gambia most homes have radio, but fewer homes have TV. Most homes have at least one mobile phone. Post Covid, lessons learned include:

- We can learn anywhere, any time, and we need to build teacher capacity as a priority.
- ICT and education needs to be institutionalised, and renewed policy reform related to education technology is needed.
- ICT based informal education continues to grow, but a very clear growth area is the non-formal 'second chance': education for those who have dropped out of school, providing opportunities to gain appropriate school and other qualifications. This open education opportunity is proving extremely popular across the population, not just for those who dropped out of school.

South Africa, represented by Hon Dr. Makgabo Reginah Mhaule, Deputy Minister of Basic Education, has 25,000 schools, 450,000 teachers and 13 million students. Connectivity in rural areas remains a big issue, but 90% of schools can access TV and radio. Most households have mobile phones. For teacher development, there is provision for in-service training in ICT in education and ICT is now incorporated into preservice teacher education courses. There is a new challenge in South Africa, a crisis in regular provision of mains electricity. Many schools are installing solar panels for a stable electrical supply.

Rwanda, represented by Hon Claudette Irere, Minister of State in charge of ICT and TVET, is getting closer to universal internet access, using "Starlink" satellite connectivity. The government is looking to achieve a digital economy, with young people (who are generally more confident) acting as digital ambassadors. The government is promoting citizen learning, to increase service demand. The International Computer Driving Licence (ICDL) qualification is compulsory on university courses. In teacher training colleges, the training reflects the digital future. All teacher application forms are now electronic, with the aim of get digitally competent people into the teaching profession.

Post Covid, there has been a revision of education ICT policies, etc. to reflect new realities. There is now a database planning system in each school which is directly visible to the Ministry of Education, providing 'live' information on planning and student progress. The government is working with partners to raise skills, technologies etc. *'We have discovered that with increased volumes there is lower cost'*. The ministry has also developed a school meals coalition which provides one meal each day at school for every child. The government plans that all school board schools, and homes, will be electrified by 2024. *'We welcome ICT innovative products and mechanisms, as we see ourselves as a "proof of concept" country.'*

In session two, there was a presentation about a large scale project in Rwanda, with the Ministry in partnership with New Globe, represented by Clement Uwjeneza, Managing Director, Rwanda EQUIP, which focuses on improving learning outcomes. It involves 4000 schools, 43,000 teachers, 1.4 million pupils. The core learning from the project is that technology is essential, but not enough: the focus needs to be on learning outcomes. The project trains teachers, and provides resources for school and classroom. The project also trains teachers and school heads on tracking student data, and similar methods. The head collects data on teachers through class observation, and teachers can redesign lessons to better fit their classes. Evaluation suggests that learners are gaining 18+ months in achievement over a school year.

From the floor, **Zimbabwe** noted that an education radio and television system will be established by the end of 2023, and content is currently being developed and used by teachers, and the system will also be used for sharing information. **Kenya** noted the Drucker quote ' culture eats strategy for breakfast'. Digital devices don't teach, people do. **Mali** still needs policies to integrate ICT into education, but there is a national youth policy to facilitate access to jobs and training, including through technology.

Innovations.

The second session looked at practical examples of digital innovation in education.

The session opened with an overview of the enormous demand for education over the next few decades, and the need to transfer the aims of Agenda 2063 into practical action. Digitalisation can address the financial, geographical and skills constraints. Distance learning can be flexible, inclusive and provide equity, and the there is less constraint on numbers. The Digital University of Senegal is now the second largest in the country.

The presentation by Dr Jacques Dang, L'Université Numérique, France, which has 50+ collaborators, and 50,000+ courses, echoed the value of distance education in addressing growing demand in a cost-effective way. The issue remains one of access, which can be addressed though a multiplatform architecture, involving local servers and smartphone apps. Experience has shown the need for teacher support, and in finding the right mix of technology and pedagogy to suit a local context. Materials in a language appropriate for the learner is found to be beneficial for quick adoption. Examples and collaborations were provided involving Brazil, Gabon, Tanzania and West Africa.

Focus Education works in a number of countries in Africa, in skills and teacher training. Varda Berenstein, Senior Consultant at Focus Education and Dr Eli Vinakur, Gordon Academic College of Education, Israel provided examples of a learner focused teacher training methodology, which included providing teachers with 'case studies' of classroom issues, and getting them to find solutions. As with students, teacher education should not 'fill a container, but light a fire'.

Education = integration *(of different types of learning)* **x innovation** *(using different approaches to learning)*

The presentation by Asma Ennaifer, focused on Orange Digital Centres, a network established in 25 countries, 17 in Africa and the Middle east, and 8 in Europe. The centres, which are free and open to all, aim to support technical innovation and entrepreneurship. They provide support, training and mentoring for youth, women and innovative project leaders, A Digital Centre includes a coding school, a FabLab for digital manufacturing, a startup accelerator, as well as Orange Fund investment in the most talented startups. Orange Digital Centres provide physical infrastructures in cities and inside universities elsewhere, equipped with hardware and machines, but also with strong local and international partners (Ministries, NGOs, training partners, employment partners, etc.), 129 partner universities, and committed teams of managers and experts. Operating as a network, Orange Digital Centers enable the exchange of experience and expertise from one country to another, creating business for start-ups and opportunities for young people across Europe and Africa.

The final session looked at broader approaches to innovation and transformation, using digital approaches.

The first presentation, by Trina Angelone of GlobalEd, focused primarily on technology supported education and teacher training at scale. Technology is a tool to help us to attain growth and sustainability. This includes micro- and stackablecredentials for the teaching workforce: ongoing teacher in-service development through short training episodes for which a recognised 'micro-qualification' is available. Over time, teachers develop a wide range of recognised credentials that make them better teachers, and more likely to get promotion, specialisms, etc.
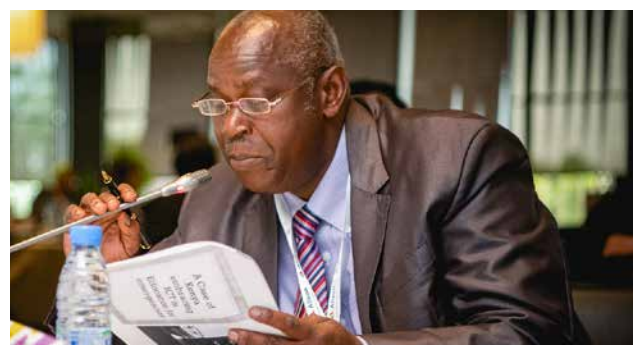
One size does not fit all, '*facts are a commodity*' but the methodology of learning has to be appropriate for the context in which the learning takes place. A local curriculum needs to cover what the students need for life and for work, but also the skills needed for ongoing learning. How do we develop a range of pathways to deliver different learning outcomes? Collaborative partnerships must put the requirements of the educators/users before those of the providers. It is the needs of the future that we need to be addressing now.

The next presentation, by Verna Lalbeharie of EdTech Hub, focused on data and evidence of the efficacy of technological interventions. Technical innovations and potential are not being accessed, because of gaps in the evidence of efficacy, and gaps in the use of the available research. 'Empower people by giving them the evidence they need to make informed decisions'. The helpdesk has received 157 requests for advice from donors developing technical assistance programmes. This advice, based on data and evidence, has affected about 117 million learners. They proposed five questions for EdTech developers, for an evidence-driven future. These are questions developers should ask themselves, and the governments, or other clients, should be asking developers.

Questions about EdTech solutions

Will this use of technology

- Lead to a sustained impact on learning outcomes?

- Work for the most marginalised children, and enhance equity?

- Be feasible to scale in a cost-effective manner, that is affordable to the context?

- Be effective in the specific implementation context?

    - Align with government priorities and lead to the strengthening of national education systems?

EdTech Hub 2022

The final presentation, by Roger Clark of ApplianSys, looked specifically at maximising connectivity within a low bandwidth context. The presentation was based on extensive research over 20 years in over 160 countries, covering 130 million classroom lessons a year, and is being shared through the UN's Partner2Connect (P2C) approach to the '*hardest to reach*' schools. The presentation focused on '*good husbandry*' of available connectivity, rather than solely seeking higher bandwidth provision and consumption. The gap between developed nations connectivity and connectivity in developing countries is widening. Connectivity underpins all aspects of education from the curriculum to school and system management, and yet it remains problematic. There is an urban/rural divide, ever increasing costs of connectivity, and poor return on investment in bandwidth, due to the teaching & learning process' intrinsically inefficient bandwidth utilisation. Meaningful connectivity is based on a combination of bandwidth and (more importantly) the efficiency of use of whatever bandwidth is available. Pilot projects have demonstrated between 60-95% efficiency gains through efficient use of available connectivity. This provides 20-40 times more effective access. The basis of the efficient use of bandwidth is the C.O.R.E. approach: Conserve, Optimise, Recycle, Extend .

The C.O.R.E. approach to bandwidth utilisation: Conserve, Optimise, Recycle, Extend.

Conserve: only use internet for high priority. Store learning objects locally

Optimise: make learning objects smaller and easier to transmit

Recycle: Avoid downloading the same content over and over.

Extend: Put unused bandwidth to use outside school hours.

Appliansys 2022

Using a selection of these strategies, a Senegal pilot project managed whole class e-learning through a 3.5 Mbps 4G connection. Using all of the strategies, an Ecuador pilot obtained 97-98% bandwidth savings, and drew 40Mbps from a 1 Mbps pipe.

General Recommendations from the Ministerial Round Table.

- Incorporate digital approaches into education policies and curriculum renewal.

- Make digital a key element is scaling up access to, and quality of, education at all levels.

- Rethink approaches to connectivity.

- Gather the evidence on which to base policy, connectivity and curricular decisions.

- Think about sustainability from the start.

- Rethink the role of qualifications, in particular the ongoing updating of teacher credentials.

- Increase local content and use local examples.

  - Promote partnerships, and collaboration: internationally with development partners, businesses, and governments; nationally, within and between government ministries: locally, promote partnerships and collaboration between and within schools, and between local government, local businesses and the local community.

Programme Thursday, May 25

Start: 10:30   Tea/Coffee

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11:00 - 13:00   **Opening Session:**

Chairperson: Albert Nsengiyumva, Executive Secretary, ADEA, Côte d'Ivoire

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11:00 - 11:20   **Welcome, opening speech**

by **H.E. Prof Moussa Balde,** Minister of HE and Research, Senegal

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11:20 - 12:40   **Launch of the Study on the Situational analysis of ICT4E in 34 African countries**

Hon. Aurelie Ilimatou Adam Soule, Minister of Digital Economy and Communications, Benin
Hon. Claudette Irere, Minister of State in charge of ICT and TVET, Rwanda
Hon. Dr Makgabo Reginah Mhaule, Deputy Minister of Basic Education, South Africa

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12:40 -13:00   **Questions and Discussions**

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13:00 - 14:15   Lunch

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14:15 - 15:40   **Session two: The Role of Digital Innovation in Education Transformation**

Chairperson: Trina Angeloni, GlobalED, USA

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14:15 - 14:30   **A Call to Action: The Scale of Change Required to Meet Access and Skills Needs Over the Next 20 - 30 years**

Moubarack Lô, Mayor of the Municipality of NIOMRE, Director General of the Economic Prospective Bureau, Senegal

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14:30 - 14:45   **Teacher Development and Digitalisation**

Dr Eli Vinokur, Gordon Academic College of Education & Focus Education,
Varda Berenstein, Senior Consultant at Focus Education, Israel

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14:45 - 15:00   **The Digital Transformation of Higher Education for Economic Development and Economic Development and Inclusion: from Vision to Implementation**

Jacques Dang, L'Université Numerique, France.

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15:00 - 15:15   **Unleashing the Full Potential of Technology: A holistic Approach to Education Transformation**

Clement Uwajeneza, Managing Director Rwanda EQUIP & NewGlobe Education, Rwanda

15:15 - 15:30   **Example of good practice on a global scale - Orange Digital Center: Developing skills for new digital professions and boosting youth entrepreneurship**

Asma Ennaifer, Director of CSR, Communication and Orange Digital Center at Orange Africa and Middle East

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15:30 - 15:40   **Q&A and suggestions from floor**

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15:40 - 16:00   Tea/Coffee Break

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16:00 - 17:15   **Session 3: Scaling Up Access, Quality and Relevance of Education for New Generations of Africans: An Urgent Need.**

Chairperson: H.E. Prof. Muhammadou M.O. Kah, Ambassador Extraordinary and Plenipotentiary of the Republic of The Gambia to the Swiss Confederation and Permanent Representative to the United Nations in Geneva, the WTO and other international organizations in Switzerland and Professor of Computer Science and Information Technology and former Vice-Chancellor (Rector), University of The Gambia

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16:00 - 16:15   **Innovative Approaches to Tech Supported Education and Training at Scale. Rethinking What Education, Credentialing and Micro-Credentialing is/does for Young People**

Trina Angelone, GlobalEd, USA

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16:15 - 16:30   **Building a Movement of High-Impact and Evidence-Based EdTech in Africa: Evidence from Research and Practice**

Verna Lalbeharie, EdTech Hub, USA

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16:30 - 16:45   **An African Approach to Dealing with Low Bandwidth Connectivity: the UN led Multi-Stakeholder Partner2Connect Alliance**

Roger Clark, Appliansys, UK

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16:45 – 17:15   **General Discussion from floor, on the issues raised. Opportunities and constraints.**

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17:15 - 18:00   **Closing Session**
                    Chairperson: H.E. Prof. Muhammadou M.O. Kah,

Summary discussion of issues raised in the round table. Proposed action points for all from the three sessions, and close of the MRT.