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Summary

Raising Learning Outcomes.
The opportunities and challenges
of ICT for learning

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Raising Learning Outcomes: the opportunities and challenges of ICT for learning

Executive Summary

There is a growing global consensus that 21st-century learning ought to look rather different from 19th-century learning but that in practice, for the vast majority of learners, it does not. International academic, policy and provider organizations are in the process of rethinking learning outcomes and learning environments, and some are even engaged in a fundamental review of the very purpose of education in a more digitally enabled, complex and fast changing world. New learning frameworks are emerging, many in response to UNESCO's 2030 Agenda for Sustainable Development – an aspirational and universal agenda to wipe out poverty through sustainable development by 2030, which captures ambitions for education.

Characteristically,¹ these frameworks promote the integration of:

- Cognitive and non-cognitive (sometimes called soft) skills;
- Behaviours or traits (team-work; risk-confidence; and self-regulation);
- Dispositions (leadership; entrepreneurship; and creativity); and

- Character (values; empathy; and global citizenship)

These so-called 21st-century learning outcomes are often marginalized by schools, due to their low status and their invisibility in summative assessments, and also in the instance of under-developed curricula, and the low skills of teachers in these areas.

⁽¹⁾ See also (Four-Dimensional Education, Deep Learning Progressions, Graduate Performance System, Foundations for Young Adult Success, Education for

Life Success, Skills for Social Progress, *Life Skills and Citizenship Education Initiative Middle East and North Africa*

UNICEF understands that this debate is as relevant in Africa as in any other part of the world. Maybe even more so. As the continent with the world's fastest growing youth population² and some of the world's fastest growing economies, alongside many challenging political, social and economic circumstances, low levels of resources and high rates of out-of-school-children (OOSC), countries in Africa are well motivated to accelerate progress towards these 21st-century learning outcomes. These factors create a necessity – and therefore an opportunity – for innovation and alternative modes of education. The more agile an education system can be in response, the more the learners within that system will benefit.

The role of technology has defined the acceleration of many industries and sectors, with education likely to be no exception. Yet with the potential of technology comes risks. Technology can be introduced to schooling and learning to the detriment of learning outcomes. Equally, access to technology can expose children and young people to new risks that – left unmitigated – can do them serious harm. In recognition of this, UNICEF has developed *Global Guidance* to ensure that technology can be a positive force for learning and children's rights. They include five key policy recommendations:

- All UNICEF's ICT for education initiatives and policies must first focus on the intended educational outcomes rather than on the technologies;
- UNICEF should play a stronger global role in advocating and ensuring that international and national ICT for education policies and practices should first of all focus on the poorest and most marginalized;
- Issues of security and the dark side of using ICTs for education are insufficiently addressed in most ICT for education initiatives, and should be of the highest priority for UNICEF given its commitment to child safety and security;
- UNICEF should take a global lead in working in collaborative and consensual partnerships, especially with other UN agencies; and

- Language really matters. UNICEF should ensure that there is consistent use of language relating to the use of ICT in education and for learning throughout the organization.

In this context, the UNICEF regional offices in sub-Saharan Africa commissioned the Innovation Unit, Aga Khan Education Services (AKES) and the Aga Khan Foundation (AKF) to lead a research project to inform the development of a UNICEF's thinking on ICT for learning. The project built on previous work completed for AKES in which the team investigated learning technology stories from diverse contexts, including many that are complex and resource-constrained. For UNICEF, the team looked in particular at stories from the African continent, supplementing the AKES data set with new examples identified by UNICEF ESARO and WCARO.

In particular, the research process was designed to answer the following questions:

- What is the role of ICT for learning to ensure effective and relevant learning outcomes?
- How can ICT for learning promote educational inclusion?
- What are other partners and organizations doing in ICT for learning?
- Who are the partners and donors to work with in the area of ICT for learning?
- What is UNICEF's role in the ICT for learning space?

This paper shares the key findings of the research project. It is supplemented by three sets of insights in relation to ICT for learning:

1. lessons from the experience of introducing ICT for learning in Singapore, New Zealand and Brazil;
2. examples of ICT for learning initiatives that were selected to draw out learning from a range of implementation stories – success and failures – and provide a broad set of examples of use of ICT for learning examples that are relevant for the sub-Saharan African context; and
3. country case studies providing background as well as the experience and prognoses for ICT for learning of UNICEF country offices.

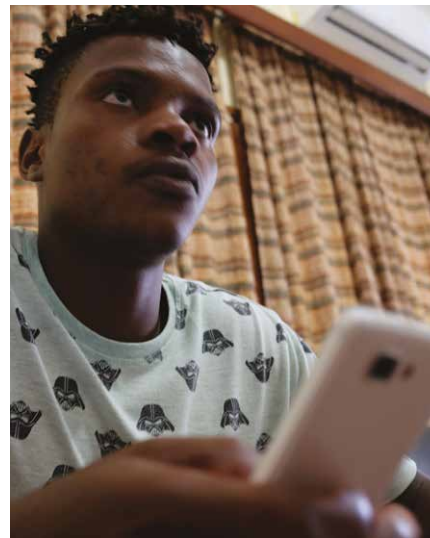
(2) "By 2030 Africa's under-18 population will increase by nearly 170 million. By 2050 40% of the world's children under 18 will live in Africa." See UNICEF (2014)

Generation Africa 2.0: Prioritizing investments in children to reap the demographic dividend. United Nations Children's Fund.



▶ Ines is speaking live from Abidjan during the weekly young reporters' radio show broadcasted in 9 locations across Côte d'Ivoire.

▼ Valter, 21 year old, participates in a user testing session for the mobile service Internet of Good Things (IoT) in Maputo, Mozambique.













▶ Schoolchildren at Binga Primary school take time to familiarise themselves with computers at the school.

▶ In the computer lab at the Boys Remand Home in Accra, Ghana on 12 May 2015.



This research project identified ten issues that UNICEF's regional offices in sub-Saharan Africa should consider as they develop their position and begin formulating their strategy around ICT for learning:

1.  **Purpose and problem solving** - to what extent is there clarity around the purpose of introducing technology in education and which learning problem(s) it is helping to solve?
2.  **Student capability** - what are the existing and needed technical capabilities of students, and how do these vary across each student population?
3.  **Teacher capability** - which skills do teachers need to use new technology, and what is the relationship between these skills and broader teacher competency? In particular, how is the ability of teachers to create powerful learning environments/ experiences enhanced by technology?
4.  **Student and teacher agency** - how can students and teachers engage as active participants in the introduction and implementation of ICT for learning?
5.  **Technological infrastructure** - what are the technical requirements of the technology and are these in place (e.g. power, bandwidth, data security)?
6.  **Implementation and change** - what is the role of local leaders and what support do they need to create a culture of innovation and improvement?
7.  **Enabling environments** - what are the conditions that support a thriving learning ecosystem, enhanced by technology?
8.  **Resources** - what is required for effective and sustainable use of ICT for learning, including on-the-ground support capability?
9.  **Coalitions** - what role might partnership play in 'bundling' solutions to complement and amplify ICT for learning?
10.  **Risks** - which risks are associated with ICT for learning, and how might we mitigate against them?

With a nascent evidence base about the impact of ICT on learning outcomes and a loose global community of entrepreneurs, philanthropists, educators and policy makers still learning in real time about what works (and what does not), to say 'the jury is still out' on ICT for learning would be a gross understatement. Therefore making recommendations would be ill advised.

However, a further learning and consultation agenda does emerge from the challenges and opportunities explored during the research process. There are three urgent priorities for UNICEF to consider:

1. **Building knowledge and confidence about ICT for learning across the region:** UNICEF should consider how best to engage country offices in contributing to a stronger evidence base, locally and globally. This area requires more flexibility and openness to different ways of designing and delivering programmes of work.
2. **Enabling strategic and practical action:** To mobilize a real sense of practical possibilities within the ICT for learning landscape, UNICEF should consider how best to move from knowledge to action. As an influential international agency, UNICEF is in a position to inject a growing understanding of the opportunities and challenges of ICT for learning into existing global, regional and national education work streams.; and
3. **Coordination, coherence and integration:** UNICEF should consider building active partnerships committed to ICT for learning internally and more widely. It should actively coordinate its efforts to offering more clarity and coherence within the ICT for learning landscape.

The above areas for action are not intended as recommendations but as starting points for further discussion. To fully understand the possibilities of the above, UNICEF should consider how to test these areas of action in a multitude of countries and regions, with a range of frontline stakeholders (school leaders, teachers, students) as well as key agents of change (donors, providers, ministries). Building energy and buy-in across global, regional and local ecosystems will be critical to enable transition from a fragmented and dislocated landscape to clear and coherent visions of the role ICT for learning can play in enhancing teaching and learning towards impact on outcomes.



