Information Communication Technologies (ICT) and Education

- Summary note -

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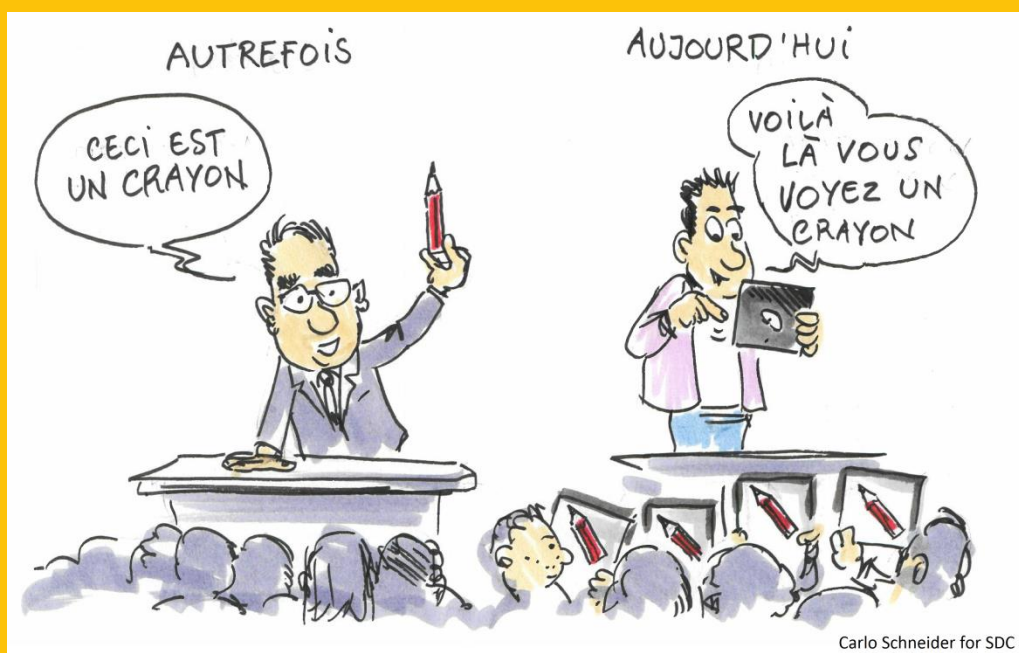
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The place of technology in the education sector

The growth of digital technology is leading to significant change across all sectors of international development work - including education. There are a growing number of examples of how technology can have transformative benefits within education programmes. However, there are also many examples of when the promise of technology has led to expensive investments with little or no positive impact.

Significant lessons have been learned in the last decade regarding the appropriate uses of technology in education in low-resource environments. There is still no definitive understanding of how technology can have the most significant impact on education outcomes, but there is an emerging consensus regarding the principles that can maximise the chances of success.

Education has an increasingly important position within the dialogue of SDC, and a new education strategy was approved in 2017. SDC is committed to making effective use of technology to enhance outcomes within its education portfolio and the organisation will begin to incorporate technology into programmes in a range of forms. This summary report provides an entry point for this area of work.

How technology can be used effectively in education

In order to be most effective, education technology should not be understood as a discrete area of education policy within the education sector, but rather as a cross-cutting theme that can enhance many areas of education when used appropriately. When viewed as its own sector, education technology is likely to be technology-driven and increasingly detached from the wider strategic objectives of the education sector as defined in the Sustainable Development Goals.

All those engaging in education technology should seek to embed efforts within the mainstream education sector whenever possible. Many education technology programmes launch in parallel to government priorities and without paying sufficient attention to the requirements of the curriculum within the country in question. If the programme is successful then the lack of integration leads to significant challenges once it is operating at scale. Therefore, it is important for any programme that is using technology to ensure it is in full alignment with the national curriculum and national priorities from the outset.

Similarly, many programmes can be characterised as having been 'technology led' rather than 'education led'. This means they have often tended to focus on how a specific predetermined new technology-based solution can be used to solve anticipated or imagined problems, rather than driven by a genuine analysis of what tools will best address an actual problem and demand. Thus the use of technology should, perhaps counter-intuitively, focus more on problems that need to be solved rather than solutions that need to be promoted.

SDC education strategy and technology

The framework below provides a structured approach to considering good practice and examples reviewed from within and beyond SDC. It is based on the six strategic orientations which have a significant role in informing programming decisions within SDC.

Six strategic orientations	Illustrative considerations	Examples of programmes in this area
Global and regional agenda *Enhance international policy-dialogue for effective, efficient and resilient national education systems.*	Can be achieved by building evidence, sharing good practice, and engaging in innovative partnerships.	This orientation does not link to a specific programme but examples of institutions include DFID and World Bank, and initiatives include mEducation Alliance and eLearning Africa.
Education system governance *Contribute to effective, inclusive and equitable education systems through strengthened governance and institutional capacities at national and decentralised levels, increasing community responsibility and locally adapted solutions.*	Education Management Information System (EMIS) and other digital tools for education system governance. Transparency of governance and privacy of data maintained through digital systems. Mobile-based messaging systems used to communicate with parents.	VISHWAS: Mobile-based app to enhance the academic attainment of the school's students and performance of school staff through its reporting system. http://softsystems.org
Quality and relevance *Enable relevant quality learning that provides competencies for life and work and has a transformative impact on human development.*	Access to learning resources through global online networks. Connectivity to build connections to other relevant communities. Technology for teacher pre-service and in-service training.	Open Learning Exchange (OLE): low-cost, locally relevant teaching and learning content in local languages. https://www.ole.org/#section-3725 Mindspark: Adaptive learning programme. https://mindspark.in

Inclusion and equity *Enhance equitable access to quality basic education for all and to expand vocational skills development options, with special attention to the disadvantaged and marginalised, including crisis-affected societies.*	Technologies to expand access to otherwise marginalised communities. The flexibility of digital resources to provide particular benefits for SEN learners.	inABLE: innovative uses of tech to support the education of students with visual impairments. https://www.inable.org iMlango: Ed tech programme in Kenya. https://www.imlango.com
Sustainability, cohesion, resilience *Make use of the transformative role of education for sustainable development, civic participation, social cohesion and resilience.*	Social cohesion through online platforms and social media.	Project Humanity: Curriculum for the humanitarian principles. Habari RDC: Online platform for encouraging civic debate. https://habarirdc.net
Transition to work *Enhance labour market outcomes through informed choices, improved matching, entrepreneurship support and facilitated access to gainful employment.*	Links between educational institutions and employment opportunities. Labour-market information systems to provide valuable data on supply and demand.	OLE FELS: offers a repository of free instructional resources and career pathways to help Syrian refugees. https://www.ole.org/free-education-library-syrians/ University of the People: Tuition-free online university that offers accredited degrees. https://www.uopeople.edu

Operational considerations and recommendations

Below are nine good practice recommendations relating to decision making across the SDC portfolio. They engage with building appropriate partnerships, programme design and implementation considerations, and contributing to the wider sector. The following recommendations cover a wide range of possible options – their primary purpose is to catalyse further dialogue and inform initial decision making.

Decision making across the SDC portfolio

- Decide the type of education technology engagement that is best aligned with SDC's overall strategic engagement.
- Integrate the framework for effective decision making into programme selection and development.
- Invest in detailed country-level understanding of the technology landscape

and particular application for how technology can be used to enhance education in that context.

Building appropriate partnerships

- Establish working partnerships which will effectively advance SDC engagement in the sector.
- Build several initial partnerships with suppliers but avoid aligning with one 'solution'.
- Work in full partnership with government from the outset.

Programme design and implementation considerations

- Start with an understanding of the problem that needs to be solved, and build a Theory of Change for how this will happen.
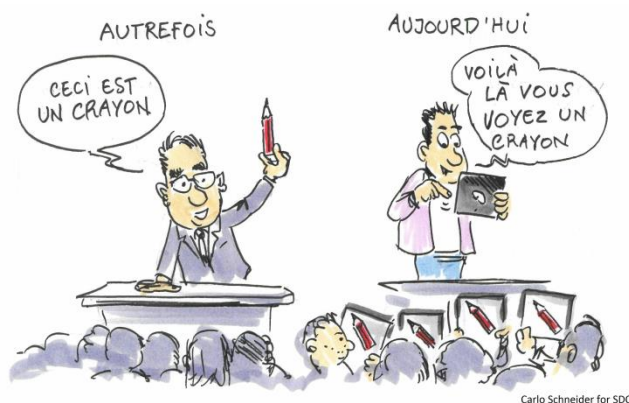- Build on successful technology use in refugee education.

Contributing to the wider sector

- Make a specific contribution to the knowledge of the education technology sector to establish SDC as a source of thought leadership and good practice.

Further resources on ICT and education are available on the SDC Education Network shareweb: https://www.shareweb.ch/site/Education

This is a summary of a full report titled *Information Communication Technologies (ICT) and Education.* The full report is availabe on shareweb. The summary and full report were prepared by Jigsaw Consult and the authors are Joel Mitchell and David Hollow. The full report should be cited as: Jigsaw Consult (2018). *Information Communication Technologies (ICT) and education*.

Translation of cover page cartoon:

BEFORE	TODAY
This is a pen	So here you see a pen

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