

CONNECTING LEARNING SPACES: POSSIBILITIES FOR HYBRID LEARNING

Key Messages

THE SITUATION

The COVID-19 pandemic has dramatically changed education. In 2020, schools around the world were fully closed for 79 instructional days on average. The shift to distance teaching and learning has been the key immediate policy response, **bringing ed-tech from the periphery to the centre of education systems.**



Sustainable hybrid learning systems should be inclusive, generating value through contextualized and open educational resources. They should celebrate local identities and languages, while benefiting from global ecosystems, initiatives, value chains, resources and knowledge.

FIVE RECOMMENDATIONS FOR IMPROVING EDUCATIONAL ACCESS AND DELIVERY WITH DIGITAL TECHNOLOGY

Proactively anticipate the impact of emerging technologies by establishing regulatory frameworks for the ethical and human-rights-based use of frontier technologies. Particular consideration should be given to learners' data protection and security, as well as to environmental sustainability.

Establish stable, self-sustained financing solutions for connectivity to support hybrid learning.

This requires an institutional, cross-sector policy framework, participatory planning, and social dialogue.

Promote whole-of-government and public-private partnership approaches for connectivity and infrastructure to bridge the digital divide and support the local development of digital education and training systems.



Promote hybrid learning to recover from the pandemic, reimagine education, and narrow the digital divide. Hybrid learning combines face-to-face instruction with computer-mediated pedagogies. Models of hybrid learning should be developed to support inclusive education as a public, common good.

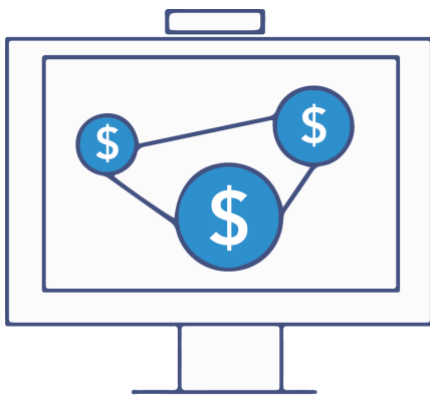
Adopt a national strategy for digital skills development for life, work and lifelong learning.

To overcome the social and economic dimensions of the digital divide, national stakeholders should define system-wide strategies to develop a skilled and digitally ready society.

ESTABLISH FUNDING MECHANISMS FOR THE 'HARD' AND 'SOFT' ELEMENTS OF DIGITAL LEARNING

Hard elements include physical infrastructure and connectivity required to implement digital learning policies and practices.

- Telecommunication costs (fibre, 4G, 5G, satellites, WISP)
- Operational costs (electricity, maintenance and repair)
- Connectivity costs (bare minimum 10 Mbps per school or 1 Mbps per 20 students)
- Device costs (learning devices and classroom equipment for students and teachers)



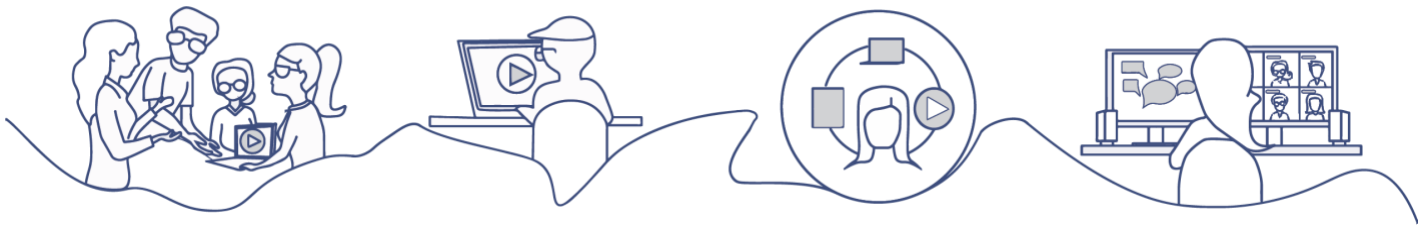
Soft elements encompass the pedagogical and human resources needed to transition from current delivery to digital models.

- Digital skills development costs (strengthening users' ICT skills—approx 11% of total digital transition cost, estimated by ITU, 2020)
- Curriculum alignment costs (align, adapt and translate content from non-digital curricula to hybrid learning curricula rather than creating separate digital and non-digital curricula)
- Digital content development costs (Open Education Resource policy development for accessible and free-of-charge online courses, digital textbooks, images, videos, student assessments, library licensed materials, and self-developed materials)
- Education workforce professional development costs (salaries and fringe benefits, technical support networks, third-party vendor costs)

EXAMPLES OF BEST PRACTICES

The report concludes with a compendium of country case studies, frameworks, tools, and frontier technologies. These aim to provide examples of best practices for the delivery of digital learning.

KEY STRANDS OF THE WORKING GROUP RESEARCH



INFRASTRUCTURE LED BY ITU

Innovation in infrastructure and connectivity operating models to ensure inclusive and sustainable digital learning (in synergy with the [Giga](#) initiative, the joint initiative between ITU and UNICEF to connect every school to the internet and every young person to information, opportunity, and choice).

HYBRID LEARNING LED BY UNESCO

Understanding the human dimensions that facilitate effective hybrid learning, including analysis of appropriate roles for teachers and other facilitators, sustainable models of curriculum-aligned resource production and dissemination, and successful home-based and blended pedagogical learning practices.

DIGITAL SKILLS LED BY ERICSSON

Competencies to use connected technology for learning and empowerment, digital skills for employability, anticipated labour market demands, and abilities to navigate shifting and disrupted labour markets.

THE IMPACTS OF FRONTIER TECHNOLOGIES LED BY HUAWEI

Scenarios for the future of digital learning, educational implications and advantages of frontier technologies including AI, Internet of Things, 5G, machine learning, data analytics, etc.

ABOUT THE WORKING GROUP

This report is published by the Broadband Commission [Working Group on Digital Learning](#), co-led by Commissioners from ITU, UNESCO, Ericsson, and Huawei. The Working Group is composed of policymakers and significant partners and actors in the technology industry, as well as intergovernmental organizations (IGOs). It offers a key cluster of experts providing guidance for the international community's dialogue on the recovery, resilience and future development of education and training, with a specific focus on digital learning. During its tenure, the Working Group has generated research and analysis, knowledge and resources, advocacy, and foresight on challenges and opportunities related to hybrid learning.



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