UNICEF Regional Digital Learning and Transformation of Education Strategy for Europe and Central Asia

SUMMARY

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1. Vision

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At UNICEF we believe in the potential of education technology to transform and accelerate learning and skills development, improve the delivery of inclusive, equitable, relevant and quality lifelong learning for all children, and build resilient education systems that can contribute to the achievement of SDG4.

This Regional Digital Learning and Transformation of Education Strategy (RDLS) for Europe and Central Asia (ECA) sets the vision, goals, focus areas and programmatic interventions for scaling up and sustaining UNICEF's work on digital learning and transformation of education systems. Achieving quality, equity and inclusion in education are UNICEF's guiding principles and are the main signposts for this Strategy.

This regional Strategy is aligned with UNICEF's global and regional Education Strategies, the Reimagine Education[1] initiative and UNICEF's global digital learning principles. This Strategy prioritizes the use of edtech for effective teaching and learning, transforming education delivery and promoting digital and broader competencies and skills, placing learning, particularly for the most marginalized children, at the center.

It is hoped that through this Strategy, country and regional initiatives and programmes can approach edtech and digital learning as a viable solution to improving learning outcomes, supporting teachers, promoting learner-centered pedagogical approaches, providing multiple and flexible learning pathways, and creating resilient and agile education systems.

That means integration of edtech in in-person, online and hybrid learning environments with intent to bring an added value, such as interactivity, accessibility and personalization. It also implies embracing strategic, needs-centric, well-planned, and sustained solutions, as well as a systems approach that leverages the potential of edtech to strengthen curricula, teaching and learning, assessment, policy, school operations and more.

Effective edtech integration requires coordination, strengthened capacity and empowerment of various key stakeholders to implement digital learning agendas, including teachers, policymakers, school leaders, communities, parents/caregivers, academia and other partners to collaborate and create quality digital learning experiences for children. For this reason, this Strategy will encourage focus on integrated, system strengthening approaches that focus on the entire digital learning ecosystem, leveraging partnerships both in and across countries, and at the regional and global levels.

Finally, this Strategy aims to ensure digital learning is not a separate agenda, but is an enabler of broader educational goals, responses and initiatives for the region, and provides guidance to countries, no matter their stage of uptake of digital learning, to make sure it is systematic, relevant and transformative.

BOX 1. TERMINOLOGY: EDTECH AND DIGITAL LEARNING.

- **EdTech (Education Technology):** includes a wide range of technologies, hardware, software, services and digital resources used to conduct, support or enhance teaching and learning, and facilitate education management and operations.[2]
- **Digital learning:** teaching and learning process that entails the use of digital technologies, including in online or offline environments, using distance, hybrid or in-person modalities.[3]

2. Situation Analysis

Digital learning context in Europe and Central Asia

While the use of edtech and digital learning had already been integrated in a number of education systems in the region prior to COVID-19 school closures, it was the response to the pandemic that gave an impetus to the accelerated digital transformation of education systems. During the pandemic, ECA countries largely took up remote modalities to ensure the continuity of learning and mitigate the effects of school closures on learning.[4] Many countries also developed and launched national digital learning platforms and repositories for teaching and learning content to reach even the most marginalized children.

Teachers' digital and pedagogical skills were prioritized in many countries through national teacher trainings and resource development. In addition, by the end of 2021, UNICEF had supported the training of approximately 449,000 teachers in the region on delivering digital, distance and blended learning.[5]

Challenges

- While providing opportunities, the pandemic also brought to light multiple and interrelated challenges, such as device, connectivity and skills divides that continue to create significant barriers towards accessing equitable and up-to-date digital learning.
- Girls in the region are increasingly connected and skilled, but they still fall behind boys in STEM and digital skills.[6]
- While a large number of governments in the region invested heavily in the creation of digital learning platforms during the COVID-19 pandemic, a recent global mapping found significant gaps in their access and usability features (see Box 2).
- There is also a lack of focus on student and teacher privacy and safety considerations in online spaces. Girls in particular are at a risk of online discrimination, sexual harassment and bullying.[7]
- High quality teacher professional development practices, including for digital skills and learning, are lacking in many countries in the region.
- Information on the quality of learning through distance and digitally supported education remains a challenge, as countries lack systems for monitoring learning outcomes.

Opportunities

- Digital learning can be the great equalizer of access to quality and relevant learning.
- There is a growing commitment towards digital learning in the region that is reflected in the plethora of national digital learning strategies, action plans and initiatives that countries have been developing and implementing.
- There are opportunities to build on digital learning policies, frameworks, initiatives and trainings that were initiated during COVID-19 to transform education systems.
- The surge of Artificial Intelligence (AI) has offered unprecedented opportunities, but also challenges in and for education.

BOX 2. STATUS OF DIGITAL LEARNING PLATFORMS IN ECA.[8]

14% of platforms no longer exist or have not been updated since 2020.

77% of platforms did not have offline functionality.

75% of platforms did not have features that support accessibility for people with disabilities (e.g., colour contrast, captions, audio content, text size adjustments, or any content for special education).

67% of platforms analysed did not contain content that users could interact with (e.g., chatbots, forums, games).

83% of platforms were accessible on a basic smartphone.

The most common types of platforms were resource hubs **(77%)** and Learning Management Systems (LMS) **(13%)**.

3. Strategy

Vision, goals and focus areas

The vision of the UNICEF Digital Learning and Transformation of Education Strategy is:

to unlock the potential of education technology to transform learning opportunities, make education systems more resilient, and ensure effective education delivery to achieve inclusive, equitable and lifelong learning for all children.

This vision is translated into **3 primary goals:**

1. **Addressing the digital divide** to enable equitable access to quality and inclusive learning opportunities for all children;
2. **Maximizing edtech to improve learning outcomes** that enable all children to thrive;
3. **Strengthening edtech governance, preparedness and system resilience** to build quality education systems.

To achieve these goals, UNICEF will prioritize **8 focus areas** in the region.

- Connectivity and devices
- Accessibility and assistive technology solutions
- Multiple and flexible learning pathways to reach and empower marginalized children and youth
- Students' digital skills and literacy
- Teachers' digital competency and pedagogy
- Digital learning content, platforms and solutions
- Personalized learning and assessment
- Edtech governance

To support the implementation of these focus areas, UNICEF in ECAR will provide **5 main types of inputs:** technical assistance, knowledge sharing, partnerships and fundraising, data and evidence generation, and innovation.

Figure 1. UNICEF's Digital Learning Strategy Framework for Europe and Central Asia

TO UNLOCK THE POTENTIAL OF EDUCATION TECHNOLOGY TO TRANSFORM LEARNING OPPORTUNITIES, MAKE EDUCATION SYSTEMS MORE RESILIENT, AND ENSURE EFFECTIVE EDUCATION DELIVERY TO ACHIEVE INCLUSIVE, EQUITABLE AND LIFELONG LEARNING FOR ALL CHILDREN

GOAL 1

ADDRESSING THE DIGITAL DIVIDE

Connectivity & devices

Accessibility & assistive technology solutions

Multiple & flexible learning pathways

GOAL 2

MAXIMIZING EDTECH TO IMPROVE LEARNING OUTCOMES

Students' digital skills

Teachers' digital competency & pedagogy

Digital learning content, platforms & solutions

Personalized learning & assessment

GOAL 3

STRENGTHENING EDTECH GOVERNANCE, PREPAREDNESS AND SYSTEM RESILIENCE

Edtech governance

Technical assistance

Knowledge sharing

Partnerships & fundraising

Data & evidence generation

Innovation

Goal 1: Addressing the digital divide

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Connectivity and devices

UNICEF will continue to support countries to ensure that all schools are connected to the Internet and children have access to affordable and quality devices. At the same time, it is important that connectivity and devices are viewed as a means to lay the foundation to enable educational opportunities. Connectivity and device procurement should be accompanied by digital skills trainings for students and teachers, digital learning content and platforms, engaging and relevant digital learning solutions, and more.

To achieve this, UNICEF in ECA, in collaboration with Giga and Information and Communication Technology Division (ICTD), will focus on the following interventions:

- Support countries in mapping digital connectivity of schools and assessing digital infrastructure.
- Explore innovative models and foster multi-stakeholder partnerships to improve school connectivity and device procurement.
- Establish standards to promote safe, secure and age-appropriate use of technologies and devices according to what will improve learning, what technologies can meet that need, and what support is required to make learning happen.

Accessibility and assistive technology solutions

As part of the regional priority to support inclusive education for children with disabilities, UNICEF will continue supporting accessibility of digital learning content and platforms, and use of assistive technologies and solutions so that children with disabilities can access and participate in learning. UNICEF is strongly committed to ensuring edtech is accessible to children with disabilities, highlighted through its Disability Inclusion Policy and Strategy (2022-2030).[9]

To implement this commitment, UNICEF will focus on the following interventions:

- Promote and support a comprehensive approach to accessibility as well as provision and use of assistive technology for learning at national, school and community levels.
- Advocate for and evaluate accessibility of digital learning solutions and content.
- Promote Augmentative and Alternative Communication (AAC) tools and programmes.

Multiple and flexible learning pathways to reach and empower marginalized children and youth

UNICEF will continue to leverage innovative approaches and edtech solutions in providing inclusive and equitable access to quality, accredited and certified learning opportunities for vulnerable children and young people.

UNICEF seeks to do this in the following ways:

- Explore the use of low- or high- tech to facilitate context-driven multiple and flexible learning pathways as part of formal and non-formal education.
- Set up monitoring systems for hybrid learning and multiple and flexible learning pathways.

Goal 2: Maximizing edtech to improve learning outcomes

Students' digital skills and literacy

Digital skills and literacy are a growing part of any approach to skills development. These are featured in UNICEF's global framework on transferable skills,[10] which seeks to prepare children and adolescents for school, work and life. UNICEF promotes a holistic approach to digital literacy that emphasizes the linkages between traditional and digital literacies. Interventions to support this focus area are multifaceted and interconnected. Key actions include:

- Develop tools and frameworks to guide development and assessment of digital literacy and skills.
- Introduce and integrate digital literacy and skills into national pre-primary to upper-secondary curricula and education programmes.
- Leverage digital solutions and develop targeted initiatives to provide skills building opportunities and employability support to girls, refugee children and youth, adolescents and youth not in employment, education or training.
- Cultivate awareness of online safety and privacy, cyberbullying and violence.

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Teachers' digital competency and pedagogy

UNICEF recognizes the centrality of teachers and the importance of teacher professional development. UNICEF will continue to prioritize teachers' digital and pedagogical competencies, from pre-primary to upper-secondary education levels. Key interventions include, but are not limited to, the following:

- Support governments in reforming teacher training systems and policies from pre-primary to upper-secondary education levels to integrate digital competencies.
- Support teacher preparation and training to strengthen quality, inclusive, gender-sensitive, and personalized pedagogy through the use of edtech tools and innovative approaches.
- Promote a blended/hybrid teaching approach where teachers can incorporate various edtech tools and solutions in various learning environments.
- Empower school leaders to create a favorable and enabling school environment for teachers and learners to harness the potential of edtech.

Digital learning content, platforms and solutions

UNICEF will support governments in ensuring quality, relevant and curriculum-aligned digital learning content, platforms and solutions. This aligns with the global flagship initiative led by UNICEF and UNESCO, Gateways to Public Digital Learning,[11] that aims to ensure that every learner, teacher, and family can easily access, find, and use high-quality and curriculum-aligned digital education content. For this, UNICEF will prioritize the following interventions:

- Promote age-appropriate, learner-centered, interactive, engaging and accessible government-endorsed digital learning platforms and solutions, and assess their quality.
- Help ensure digital learning content is age-appropriate, gender-sensitive, engaging, inclusively designed, and relevant to learners' needs.

Personalized learning and assessment

UNICEF strongly believes in harnessing edtech's potential to provide personalized and adaptive learning approaches that will allow teaching and learning at the right level. A key component of digital personalized learning is the continuous collection of data on learning outcomes and skills. Technological advancements have also opened avenues for a new generation of approaches to assessments. However, equity and data privacy must be ensured so that all learners can benefit from quality educational opportunities. As such, UNICEF will:

- Promote equitable access to effective digital personalized learning opportunities and pedagogy, and engage with other stakeholders in this field.
- Explore innovative digital tools and approaches to reimagine and embed assessment throughout the teaching and learning process, and support countries in planning and testing assessment strategies and tools.
- Continue to explore the potential of AI for digital personalized learning and assessment, while advocating for data protection and privacy policies.
- Advocate for development of national technology-enabled assessments that provide regular and systematic data on students' and teachers' learning outcomes and digital skills.

Goal 3: Strengthening edtech governance, preparedness and system resilience

Edtech governance

Resilient education systems are governed by strong institutions, policies and cross-sectoral collaboration and coordination. UNICEF will prioritize the following interventions within this focus area:

- Provide technical guidance and assistance in development, planning and implementation of national digital learning strategies that include plans for sustainable financing.
- Support countries to strengthen national education data management, particularly Education Management Information Systems (EMIS).
- Monitor and gather data on children's digital literacy levels and needs.
- Provide guidance on policies and procedures to evaluate the quality and safety of edtech solutions, and data use and protection.
- Foster mechanisms for cross-sectoral collaboration and decision-making at national and school levels.
- Advocate for equitable and flexible systems and models of education financing, and support governments in planning the capital and recurrent costs of digital learning.
- Facilitate public-private partnerships to mobilize resources that support digital learning.
- Support governments in documenting and scaling innovations developed through pilots.
- Advocate for equity, inclusion and ethical use of frontier technologies in education, including AI.

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Enabling inputs

Technical assistance

UNICEF Country Offices lead on digital learning and transformation of education, working closely with national governments and stakeholders. UNICEF Regional Office will collaborate with, provide and mobilize technical support to Country Offices, governments and other key stakeholders for digital learning planning, implementation, deployment, evidence generation, etc. This will be achieved through remote and in-country technical support.

Based on needs identified at country level, UNICEF Regional Office will continue to develop relevant regional resources and toolkits, and support countries' adaptation and uptake of these resources in their work on digital transformation of education.

Knowledge sharing

UNICEF will continue to facilitate cross-country sharing and knowledge exchange opportunities. This will be achieved through development of case studies, webinars, communities of practices and regional events on various themes related to digital learning and transformation of education systems. Country study visits will also be facilitated to connect countries, promote cross-country sharing of best practices and lessons learned. In collaboration with Giga, knowledge and capacity building opportunities will be offered to strengthen national capacities on policy, regulatory frameworks and procurement for school connectivity.

Partnerships and fundraising

UNICEF will continue building strong and effective partnerships at the regional and country levels to increase scope and impact of our work on digital learning and transformation of education.

UNICEF will collaborate closely with other UN organizations (such as UNESCO and ITU), and participate in high-level events for education ministers, stakeholder forums on digital education, and others to raise the profile of inclusive digital learning and education digitalization in the region, and to ensure that equity features prominently in regional discussions. UNICEF will engage key partners, such as the European Union, International Financial Institutions (IFIs), governments, private sector, civil society, academia and others through regional multilateral and bi-lateral meetings where the Regional Office will continue to advocate for digital technology to be leveraged to support quality, inclusive learning for the most marginalized children and for equity-based funding.

Internal collaboration and coordination within UNICEF are also important to ensure alignment, management of resources and a whole system approach. This includes HQ-Programme Group, Public Partnerships Division (PPD), Learning Innovation Hub, UNICEF Innocenti, Information and Communication Technology Division (ICTD), as well as different sectors of UNICEF engaged in digital transformation.

Data and evidence generation

The Regional Office will continue to generate evidence on the effect of digital learning solutions on learning outcomes, and document good practices in the implementation of digital learning strategies and programmes across the region and globally. Setting up and increasing capacity of monitoring and evaluation systems to improve digital learning access, quality and inclusion will be a priority. This will facilitate transparency, accountability and flexibility in designing and implementing digital learning at the regional, national and local levels.

Innovation

Technological innovation requires pedagogical innovation. This mandates prioritizing teachers and their digital and pedagogical competencies, but also overall school environments that can enable them to adopt new and learner-centered approaches, and innovate within and outside of classrooms. UNICEF will continue to prioritize teachers' digital skills, innovation and pedagogical leadership.

UNICEF will continue to explore and support countries in planning for, implementing and considering various innovative and context-driven approaches and models to teaching and learning through the use of edtech, including "edutainment" and adaptive and personalized learning strategies, to meet children where they are on their learning journeys.

Innovation requires cooperation, shared leadership and a whole system approach in order to truly integrate and promote creativity, innovation-driven cultures and ecosystems within classrooms, schools, districts and government agencies. It will be increasingly important to cultivate relationships with different partners within and outside of education systems to build shared and formative learning leadership, and ensure their contributions. UNICEF will continue to build such relationships and promote this approach, particularly with the aim of building resilient education systems.

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ENDNOTES

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