



United Nations
Educational, Scientific and
Cultural Organization

in partnership with



SKILLS FOR A CONNECTED WORLD

Concept Note

mobile learning week 2018

Education
2030 

The event

Mobile Learning Week is UNESCO's flagship ICT in education event. The 2018 edition, under the theme "Skills for a connected world", will examine the types of skills needed in and for a connected economy and society, with a focus on digital skills and competencies. It will also review strategies and ways in which these skills can be delivered and assessed within the context of Sustainable Development Goal 4 (SDG 4).

Mobile Learning Week 2018 is being organized in partnership with the International Telecommunication Union (ITU), the United Nations specialized agency for ICT, which jointly established the Broadband Commission with UNESCO.¹ The event will be held from 26 to 30 March 2018 at UNESCO Headquarters in Paris. Mobile Learning Week 2018 will continue its mission of providing a platform to share knowledge, innovations and good practices in mobile learning to facilitate policy debate and promote peer learning.

Living, working, and learning in a connected world

The world is becoming universally connected, with an estimated 95% of the global population living in an area covered by at least a basic 2G mobile-cellular network. Currently slightly over half the world's households have access to the Internet and this figure is expected to continue to rise as more and more families in developing countries come online.² The rapid growth in broadband access and usage, driven by mobile-broadband technologies, has fostered the development of a digital economy across the world.

In a connected economy, the value-chains of production are increasingly centered around the technology-enabled links between people, devices, and organizations. The connected economy is giving rise to the Fourth Industrial Revolution (Industry 4.0). Connected products and services are being further boosted by technology breakthroughs stemming from the internet of things (IoT), robotics, and artificial intelligence (AI) among other sources. In the most advanced economies, this movement will alter business models in most industrial sectors in the next 10 years and affect nearly two-thirds of the global gross domestic product (GDP).³ These trends accelerate the pace of job displacement and job creation. A World Economic Forum study covering 15 developed and developing countries, estimated that more than 5.1 million jobs will be lost as a result of labour market changes over the period 2015 to 2020.⁴ Meanwhile, as AI-enabled automation substitutes for labour across economies, workers who are displaced will need to develop new skill sets required by the occupations to be created in the emerging Industry 4.0. However, focusing on automation and robotics provides only a very limited view of the opportunities and challenges. Digitalisation is expected to change the whole context in which business processes are organised⁵ and could present opportunities for developing countries to 'leapfrog' some stages of economic development.

Alongside these economic shifts, the world is moving toward a connected society. Individual relationships and public life in a connected society are being re-organised at an unprecedented pace with far-reaching impacts. In most connected societies, public services are increasingly delivered and administered online in the form of 'e-government', 'e-service', 'e-health', and 'e-learning'. These connected services can empower individuals by offering wider access to socio-economic opportunities. They also interject new challenges: people without digital skills or internet access risk further social and economic exclusion as portals to essential services move on online.⁶

More than 5.1 million jobs will be lost as a result of labour market changes over the period 2015 to 2020

Digital skills are critical for jobs and social inclusion in a connected world

To realize opportunities presented by digitalization, governments need to understand how jobs—and the skill sets demanded by these jobs—are changing. Digital skills have moved from 'optional' to 'critical' and need to be complemented with transversal 'soft skills' such as the ability to communicate effectively in both online and offline mediums. The primacy of digital skills was underscored by a recent European Commission report showing that the ability to use computers and manage electronic information was required by the vast majority of jobs.⁷ In developing countries, digital skills are also in high demand and greatly improve prospects for decent employment.

- 1 Broadband Commission. ND. Transformative Solutions for 2015 and Beyond Manifesto. <http://www.broadbandcommission.org/Documents/publications/BBComm-ManifestoNames.pdf>
- 2 ITU. 2017. Measuring the Information Society Report 2017. https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2017/MISR2017_Volume1.pdf
- 3 World Economy Forum. 2017. Industrial Internet of Things: Unleashing the Potential of Connected Products and Services. http://www3.weforum.org/docs/WEFUSA_IndustrialInternet_Report2015.pdf
- 4 World Economy Forum. 2016. The Future of Jobs Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution. http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf
- 5 Institut der deutschen Wirtschaft Köln. 2016. Digitalisation: An engine for structural change – A challenge for economic policy. https://www.iwkoeln.de/fileadmin/publikationen/2016/317419/IW_policy_paper_2016_15_Digitalisation.pdf
- 6 Broadband Commission. 2017. Report of the Working Group on Education: Digital Skills for Life and Work. <http://unesdoc.unesco.org/images/0025/002590/259013e.pdf>
- 7 European Commission, 2017. ICT for Work: Digital Skills in the Workplace. <https://ec.europa.eu/digital-single-market/en/news/ict-work-digital-skills-workplace>

Digital skills are generally understood as a continuum of skills to use digital devices, communication applications, and networks to access and manage information, create and share digital content, communicate and collaborate, and solve problems for effective and creative self-fulfillment in life, learning, work, and social activities at large.

Entry-level digital skills, meaning basic functional skills required to make rudimentary use of digital devices and online applications, are widely considered to be a critical component of a new set of literacy skills in the digital era, with traditional reading, writing, and numeracy skills. At the advanced end of the digital skills continuum are the higher-level abilities that allow users to make use of digital technologies in empowering and transformative ways, including abilities that form the basis of specialist ICT occupations and professions. Major digital transformations such as AI, machine learning, the IoT, and big data analytics, change skills requirements and, in turn, impact capacity building and skills development for the 21st century digital economy.

To thrive in the connected economy and society, digital skills are not sufficient; they must function in concert with other complementary cognitive and non-cognitive skills such as strong literacy and numeracy skills as well as a host of intrapersonal and interpersonal skills, including critical and innovative thinking, complex problem solving, an ability to collaborate, and socio-emotional skills. (UNESCO often refers to these diverse yet interconnected skills as global citizenship skills.⁸)

In this context, the Mobile Learning Week 2018 will focus on the challenges and strategies to offer digital skills development opportunities for all.

Subthemes

→ Defining and mainstreaming digital skills

The international community has decided to measure the “Percentage of youth and adults who have achieved at least a minimum level of proficiency in digital literacy skills” as one of the indicators of progress towards achieving SDG 4. To reach this target, it is imperative to define digital skills that have relevance in local and global contexts, and to integrate them into curriculum and assessments in a coherent way throughout formal and non-formal education, training systems, and capacity development initiatives.

Although there appears to be a consensus on the scope of digital skills, the definition of digital skills needs to reflect a breadth of specific skills or practices required to use varied devices and across various applications. It is challenging to define a set of essential digital skills or competencies that all students or adult learners should develop, while ensuring that they are applicable to the diverse circumstances and contexts where learners need to use them. This challenge is amplified by the complex interaction between digital skills and cognitive as well as non-cognitive skills that increasingly underlie life and work in a connected world.⁹ Many countries are taking a dual-track approach to mainstreaming digital skills, integrating digital and other elements of 21st century skills into subject areas of curriculum in parallel with providing new study programmes on advanced digital skills like coding. Of special note is the trend to introduce computational thinking across curriculum in an effort to help students understand the logic that drives influential systems and applications. The effects of these strategies need to be examined to inform similar, subsequent, and complementary efforts.

- *What regional and national initiatives seek to define digital skills and integrate them in curriculum for students at different grade levels or ages? What lessons can be drawn from the implementation of these initiatives?*
- *How can digital skills be tested and certified in ways that acknowledge their complex interconnection with complementary soft skills and their relevance for jobs and social inclusion?*

→ Innovating skills provision for jobs in the digital economy

Identifying innovations and addressing challenges is key to achieving SDG target 4.4 to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for self-employment, decent jobs, and entrepreneurship by 2030. While predictions about the future of work abound, today employers seek workers with job-ready digital skills for most types of work. Digital skills are often linked to higher earning potential, and experts have predicted a growing number of jobs for people with advanced digital skills. Not only are there new jobs available, some of them are actually going unfilled, making the provision of advanced digital skills part of a solution to unemployment

Across OECD nations 56% of adults have no digital or ICT skills or have only the skills to fulfil the simplest set of tasks in technology-rich environments.¹⁰ Even a majority of young people who are often considered ‘digital natives’ do not possess job-relevant digital skills demanded by employers to fill existing job vacancies.¹¹ Many older workers never benefited from digital skills programmes, while young people face a mismatch between what education institutions are teaching and what employers are seeking.

8 UNESCO. 2016. Education 2030: Incheon Declaration and Framework for Action. <http://unesdoc.unesco.org/images/0024/002456/245656e.pdf>

9 European Commission. 2017. The Digital Competence Framework for Citizens. <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/digcomp-20-digital-competence-framework-citizens-update-phase-1-conceptual-reference-model>

10 OECD. 2016. The Survey of Adult Skills. Paris, OECD. <http://dx.doi.org/10.1787/9789264258075-en>

11 Digital Skills, Preparing Young People for the Future of work in the Digital Economy, thematic priority of the Global Initiative on Decent Jobs for Youth at www.decentjobsforyouth.org

New strategies and innovation are needed to provide job-ready digital skills. This includes revising academic curricula to combine both digital and soft skills development; improving job placements for graduates by developing training or academic curriculum in consultation with industry to ensure they better meet employers' needs; improving the capacities of teachers so that education institutions continue to be key sites in developing and certifying digital skills; leveraging the growing number of non-formal training and capacity building providers; finding effective strategies to bridge formal and non-formal provision for lifelong learning; providing incentives for employers to re- and up-skill their workers; and harnessing potentials of digital devices and resources to provide job-ready digital skills.

Innovations need to focus efforts on access, inclusion, and sustainability in provision, such as (i) ensuring that digital skills training is accessible and affordable to all people, especially disadvantaged groups, (ii) developing curriculum and providing relevant digital skills programmes, (iii) finding qualified instructors, and (iv) developing sustainable business models.

- *What are the good practices, policies, and programmes in providing job-ready skills for the digital economy, both in formal and non-formal settings?*
- *What mechanisms can be established to ensure affordability, availability, and scaling up of job-ready digital skills provision?*
- *What are the best practices in bridging formal and non-formal provision to support the progression of digital skills development?*
- *How can mobile learning foster more innovative approaches to the provision of digital skills programmes and facilitate the teaching and learning of digital skills?*

→ Closing inequalities and gender divides

In an increasingly connected world, ensuring that everyone has relevant digital skills helps promote inclusive and equitable education and lifelong learning for all. However, pronounced inequalities in digital skills have been documented in both developing and developed countries.

A growing body of evidence indicates that people's ability to engage with digital technology is differentiated along a number of lines, notably socio-economic status, race, gender, geography, age and educational background. IEA's International Computer and Literacy Study (2013) of Grade 8 students in 21 countries showed that higher socioeconomic status was associated with higher proficiency both within and across countries. Limited access to digital devices and broadband technologies is a source of digital skills inequality. To-date, 52% of the world's population is still not using the Internet and the digital divide is huge: while 81% of individuals in developed countries are using Internet, the comparable figure in least developed countries is only 17.5%.¹²

Globally, gender divides in digital skills are severe: women are 1.6 times more likely than men to report lack of skills as a factor impeding their use of the internet.¹³ The proportion of women using the Internet is 12% lower than the proportion of men using the Internet, and the gender gap in Internet usage has widened between 2013 and 2017, in particular in least developed countries.¹⁴

Without policy interventions, ongoing technological developments threaten to exacerbate the inequalities between those with and without digital skills. Integrated and comprehensive responses are required. Government and state actors need to play a pivotal role in setting up the fundamental principles for inclusive and equitable digital skills development, providing programmes and capacity development initiatives for disadvantaged groups, and re-skilling adults at risk for job displacement.

- *What are the best practices in promoting affordable and accessible digital skills provision for disadvantaged groups to close digital skills inequalities and ensure inclusive digital societies?*
- *How can equity and gender equality in digital skills be monitored?*
- *What are the good practices for promoting digital skills development for women and girls?*

→ Mapping and anticipating changing skill needs

Major technology breakthroughs in next ten years will impact forms of work and the structure of labour markets as well as other aspects of life such as education, health, and agriculture. From a skills development perspective, the implications of technological change are expected profound, both for the re- and up-skilling of adults and for the education of youth and children.

In this context, developing capacities for anticipating the changing needs for digital skills for work and life is crucial for all countries.¹⁵ Policy-makers and other actors need to forecast future developments in order to orient and prioritise policy actions. For some countries, tools are already in place to assess digital skill gaps, but for most countries, particularly those in the developing world, the data to map needs for digital skills remain scarce.¹⁶

12 ITU. 2017. Key ICT indicators for developed and developing countries and the world. http://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2017/ITU_Key_2005-2017_ICT_data.xls

13 Worldwide Web Foundation. 2016. Women's Rights Online Digital Gender Gap Audit. <https://webfoundation.org/research/digital-gender-gap-audit/org/research/digital-gender-gap-audit/>

14 ITU 2017. ICT Facts and Figures 2017. <http://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx>

15 OECD. 2016. Skills for a Digital World. <https://www.oecd.org/els/emp/Skills-for-a-Digital-World.pdf>

16 UNESCO Global Education Monitoring Report. 2016. A global measure of digital and ICT literacy skills. <http://unesdoc.unesco.org/images/0024/002455/245577E.pdf>

Digitalisation offers new opportunities for introducing innovative ways to collect labour market information and identify skills needs in real time. Strategic investments in efforts to better understand the contours of digital skills needs are required to realise this potential and should be deployed in developing as well as developed countries.

For all countries, a core challenge is understanding how to effectively collect and analyse information about the demand for digital skills and then use findings to develop appropriate policy actions, programmes and governance arrangements to ensure good coordination across key stakeholder groups.

- *What are the successful exercises in anticipating and measuring digital skill needs?*
- *How can big data and real time data be harnessed to anticipate the changing needs for digital skills?*
- *How can international and national agencies collaborate in collecting data on demand for digital skills and share results and recommendations?*
- *How can governments involve multiple stakeholders, including private sector partners, in the process of anticipating demands for digital skills and translating forecasting into actions?*

Objectives

Mobile Learning Week 2018 has been designed to expand the international knowledge base about digital skills education and facilitate actions to achieve the following objectives:

- **Define and mainstream digital skills** to promote an integrated approach to digital skill development that is relevant for self-fulfilment, jobs, and social inclusion.
- **Innovate skills provision for jobs in the digital economy** through strengthening institutional capacities and teachers' digital competencies, bridging formal and non-formal provision, reinforcing capacity development initiatives, establishing ties with employers, ensuring affordability and availability, and leveraging mobile technology.
- **Close inequalities and gender divides** to ensure inclusion and equity in digital skills development programmes.
- **Map and anticipate changing skill needs** to measure and anticipate the changing needs for digital skills and to inform the continued adjustment of strategies and provision.



Conference plan

Mobile Learning Week 2018 will have the following structure

Workshops – Monday, 26 March

The WORKSHOPS will facilitate demonstrations of innovative policies, research, projects, and mobile learning solutions. Workshop presenters will be selected from wide range of international organisations, NGOs, governmental agencies, and academic institutions that are implementing digital skills development programmes. Sixteen workshops will be conducted.

Symposium – Tuesday and Wednesday, 27 and 28 March

The two-day SYMPOSIUM is the core of Mobile Learning Week. The Symposium will feature plenary panel discussions with experts in the field of digital skills education, and keynote addresses from thought leaders working at the intersection of learning, technology, and skills development. The programme will also include at least 60 breakout presentations, each lasting approximately 20 minutes. The presentations will align with the four Mobile Learning Week subthemes: defining and mainstreaming digital skills; innovating skills provision for jobs in the digital economy; closing inequalities and gender divides; mapping and anticipating changing skill needs. At the event government representatives, education specialists, mobile learning experts, project managers, researchers, and industry partners will share strategies to improve expand access to inclusive digital skills training, both formal and non-formal.

Policy Forum – Thursday, 29 March

The POLICY FORUM will offer a platform to discuss the different pathways that governments are using to support the development of the digital skills required in the digital economy. Digital transformation is sweeping across sectors and impacting various aspects of modern societies. New jobs are emerging requiring new skill sets; other jobs are disappearing, calling for a rethinking of educational and lifelong learning approaches. These trends also demand improved and deeper cross-sectoral collaboration, especially between education and technology stakeholders. Digital technologies hold promise to enable greater access to e-education and innovative e-learning platforms, provided the requisite training, skills, and ICT infrastructure are in place. Particular attention will be given to the critical components of national strategies, and the role that different sectors and actors, and notably the private sector, are playing in the formulation and implementation of training and capacity development programmes. This will include a discussion around digital skills for decent jobs for youth and related discussions about the importance of cooperation, innovation, and partnerships in acquiring digital skills to ensure social and economic inclusion. In addition, the need for an international framework of digital skills will be debated in relation to its potential to inform national policies, facilitate international comparisons, and strengthen cross-border recognition.

As in the previous years, the Forum will bring together ministers of education, ministers of technology, telecom regulators, and leaders from private sector companies to engage, share experiences, and discuss how coordinated action and affordable mobile devices can help countries address digital skills gaps and expand learning opportunities using ICTs.

Strategy Labs – Friday, 30 March

STRATEGY LABS will be hosted by UNESCO and ITU partner organizations to help guide the conceptualisation and refinement of projects that seek to define digital skills frameworks, assess digital skills across groups and across time, and anticipate the changing needs for digital skills.

Side events

UNESCO and ITU will host a series of side events to complement the main Mobile Learning Week programme. The following side events have been planned:

- A thematic meeting on the international framework for digital skills.
- The launch of the Global Digital Library initiative of NORAD.
- An information meeting on the Ljubljana OER Action Plan 2017.
- An information meeting on UNESCO King Hamad Bin Isa Al-Khalifa Prize for the Use of ICTs in Education.

Exhibition

Organisations supporting Mobile Learning Week will showcase new educational technology, content, and research. UNESCO and ITU will also exhibit information about their respective mobile learning programmes. The full exhibition will run from Monday to Wednesday, with some exhibitions lasting until Friday.