Digital skills, education, and competencies:

Compendium for Europe and Central Asia

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Introduction

Driving Digital Transformation: The United Nations Group on Digital Transformation for Europe and Central Asia (UNDTG4ECA)

In today's digital-driven world Information and Communication Technologies (ICTs) play a significant role in achieving the Sustainable Development Goals (SDGs) globally, ensuring that every segment of society benefits. Cutting-edge technologies such as 5G, Big Data, the Internet of Things, and Artificial Intelligence, combined with fast broadband connections, are crucial in tackling challenges across numerous sectors, including education, health, employment, agriculture, addressing inequalities, managing climate change, and ensuring good governance.

To fully realize the potential of digital transformation and ICT advancement, it's essential to encourage collaboration among different stakeholders and to ensure coordinated efforts among various agencies. Engaging with key players in the digital realm and sharing effective strategies within the UN framework are vital. Efforts related to ICTs aimed at achieving the SDGs should be tailored to specific regional demands, ensuring that diverse UN agencies' interventions are cohesive and effective. The ongoing changes in the regional UN Development System present a golden chance for the UN agencies in Europe and Central Asia to bolster their collaborative efforts in the digital domain.

Such a visionary objective paved the way for the establishment of the United Nations Group on Digital Transformation for Europe and Central Asia (UN-DTG4ECA). The group's mission is to enhance collaboration among various UN entities in the arena of digital transformation. It seeks to ensure coordinated UN assistance to Member States as they work towards the 2030 Agenda using ICTs. Moreover, it bolsters the sharing of data on the UN's initiatives in Europe and Central Asia, supporting the endeavors of the Issue-Based Coalitions and the Regional Knowledge Hub spanning Europe and Asia.

Co-chairs:	ITU, UNECE
Members:	FAO, ILO, IOM, UNDP, UNESCO, UNFPA, UN Habitat, UNICEF, UNIDO, UNOPS, UN Tourism, UN Women, WHO, WIPO, WMO

The Crucial Role of Digital Skills in Advancing Sustainable Development Goals (SDGs) in Europe and Central Asia

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet. Central to the realization of this agenda in Europe and Central Asia is the harnessing of the digital revolution to promote sustainable development.

The regions of Europe and Central Asia, characterized by their specific development and socio-economic specificities, are at the crossroads of technological progress and sustainable growth. In this complex structure, digital competencies are not just supporting tools, but fundamental preconditions. Utilizing and strengthening these competencies is key to mitigating socio-economic inequalities,

fostering systemic innovation and developing robust cross-sectoral collaboration. Such collaborative efforts will be paramount to ensuring the effectiveness and equity of the Sustainable Development Goals in the region.

1 NO POVERTY	Digital wellbeing skills open opportunities to benefit from digital goods, services and assets such as digital books, music, videos, fast money transfers and online shopping, investing in tokenized assets.
3 GOOD HEALTH AND WELL-BEING	Advancements in telemedicine offer innovative solutions for Europe and Central Asia, contingent upon the digital proficiency of health professionals and patients.
4 QUALITY EDUCATION	The integration of e-learning platforms, virtual pedagogy, and interactive content underlines the transformative potential of digitalization in democratizing education.
8 DECENT WORK AND ECONOMIC GROWTH	As digital trends make their way into various industries, it becomes imperative to ensure that employees are fluent in digital tools and platforms.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	The maturation of digital skills can engender a conducive environment for startups, innovation, and robust digital ecosystems.
10 REDUCED INEQUALITIES	Equitable access to digital training can offer pathways to inclusive growth, ensuring no one is left behind.
11 SUSTAINABLE CITIES AND COMMUNITIES	Smart city solutions, undergirded by technology, necessitate a digitally skilled populace for effective design and implementation.
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	Strengthening skills and institutional capacities to maintain digital security, digital hygiene and digital ethics can reduce threats to the individual in the digital world and make cyberspace a protected area for the exercise of labor, trade, electoral and other human rights.
17 PARTNERSHIPS FOR THE GOALS	Strengthening digital capacities can foster synergistic partnerships, bolstering the integrated approach that the 2030 Agenda espouses.

Figure 1: The Intersection of Digital Skills and SDGs

Despite the strong potential for digitalization in Europe and Central Asia, the region faces significant challenges, including a marked digital divide between urban and rural areas, changing demographic factors such as aging populations in some parts of Europe, and pressing infrastructure needs, especially in the area of broadband development. Addressing these challenges requires strategic investment from governments, international organizations and the private sector. Comprehensive digital literacy initiatives require the collaborative work of different organizations, states, civil society, academia and industry. Policies designed to be inclusive, addressing the needs of marginalized populations, will be paramount to achieving equitable progress. In conclusion, as Europe and Central Asia navigate the complexities of the fourth industrial revolution, combining digital prowess with sustainable development is becoming a fundamental necessity for the collective prosperity of the region.

Dimensions of Digital Skills: Inclusion, Sector, and Technical Perspectives

In 2018, **the Commission on Science and Technology for Development** (CSTD) defined digital skills as "the knowledge and skills a person needs to use ICT to achieve identified goals in personal and professional life."[1]

Generally, digital skills involve the knowledge and abilities one needs to employ ICT in achieving objectives in personal or professional spheres. Digital skills shouldn't be seen merely as technical capabilities but should place more emphasis on the cognitive, social, and emotional dimensions of functioning within a digital realm. This concept goes beyond mere digital literacy. It embodies understanding media, critically sourcing information, and effectively communicating through various digital platforms and tools. As technology advances, the definition of digital skills remains dynamic and ever-changing.

Inclusion related definitions

Broadband Commission (ITU/UNESCO): The Broadband Commission (2017) has identified several cognitive and non-cognitive skills (such as interpersonal and communication skills) as part of the digital skills spectrum.[2] Such concepts take a more holistic view and look at key skills required in the digital economy and society more generally rather than just technical competencies.

Digital skills encompass a diverse range of abilities, reflecting a wide spectrum of concepts that evolve over time. Breaking down this multifaceted topic, we can recognize several key insights:

Domains of digital skills	Digital skills aren't limited to just technical abilities. They span behavioral, cognitive, social, ethical, and technical realms. These categorizations stem from multiple authoritative sources, including the World Bank and the European Commission.
Skills versus competencies	The term "skills" might be somewhat misleading. While many elements tagged as "21st-century skills" comprise a mix of skills, knowledge, work habits, character traits, and dispositions, they might be more aptly termed "competencies" as argued by Neelen and Kirschner.

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[1] https://unctad.org/system/files/official-document/ecn162018d3_en.pdf
[2] https://www.broadbandcommission.org/wp-content/uploads/2021/02/WG-Education-Report2017.pdf

Direct and indirect digital interactions	Digital competencies aren't always about hands-on use of technology. While many relate to direct personal tech usage, it's increasingly crucial to be aware of and critically respond to digital tech that indirectly impacts individuals. Recognizing the distinction between tech that one uses versus tech that affects them is vital, especially concerning critical understanding, digital citizenship, and digital safety.
Interrelation and progression of skills	These skills are intricately linked and broadly reinforced. They can be visualized as a spectrum from basic foundational skills to specialized, advanced skills. Ideally, a person would have a blend of these skills, changing and adapting throughout their life. For instance, during their most active employment years, someone in a digital-centric role might need both specialized ICT skills and general digital skills, combined with soft skills like communication and problem-solving.
Versatility and T-shaped concept	It's unrealistic to expect someone to master every digital skill or competency. Recent perspectives on digital competency suggest a "T-shaped" approach: individuals might specialize deeply in one area but also have a broad understanding across multiple domains. This emphasizes adaptability in our rapidly evolving digital world. Such adaptability, often termed digital "disposition" or "mindset", aligns with concepts like "digital building" and "digital competence" in Nordic European traditions. As elucidated by Voogt and colleagues, this sees a blend of basic ICT skills and advanced abilities, including creative and critical applications of digital tools and media.

Economic Commission for Europe (UNECE): UNECE's understanding of digital skills is based on the premise of digital inclusion through the attainment of digital literacy. Furthermore, enhancing digital literacy by providing training to navigate digital environments safely and securely (internet security training), including intergenerational and peer learning, and encouraging digital engagement among the elderly. Instances of digital skills in the areas of information, communication, problem-solving and software skills include using email applications, using e-government, e-banking, or e-commerce services, and creating and using a social media profile.

In the digital landscape envisioned by UNECE, digital inclusion stands paramount, emphasizing the necessity for widespread access to digital connectivity, especially for marginalized groups. UNECE highlights a concerning "digital divide," where segments of the population remain bereft of internet access, digital devices, and crucially, digital skills and literacy.[3] This disparity threatens to accentuate existing societal inequalities. For UNECE, addressing this digital skills gap is not just a matter of technological progression but a fundamental step toward creating an inclusive digital future for all.

Technical-related definitions

International Telecommunication Union (ITU): In September 2023, a new ITU framework for measuring digital/ICT skills was created and agreed by the ITU Expert Group on ICT Household

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[3] https://unece.org/media/press/377757

Indicators (EGH). UN Stats has included ITU indicators on skills into the official list of ICT indicators, hence the ITU methodology is the one of reference.

This framework includes 5 levels of competencies and measures activities carried out online by individuals. Self-reporting of ICT skills is subjective. However, ICT skills are measured based on whether an individual has recently performed certain activities that require different types of skill. The assumption is that performing these activities implies that one has a certain level of the required skills. Activities are grouped into five areas of digital skills: communication/collaboration; problem solving; safety; content creation; and information/data literacy.

Digital skills required due to Digital Transformation as of 2023				
Information / data literacy	**Communication / collaboration**	**Digital content creation**	**Safety**	**Problem solving**
1. Verifying the reliability of information 2. Getting information about goods or services 3. Reading or downloading newspapers, etc 4. Seeking health-related information	1. Sending messages (e.g. email, messaging service, SMS) with attached files 2. Making calls (telephoning over the Internet) 3. Participating in social networks 4. Taking part in consultation or voting via Internet	1. Using copy and paste tools 2. Creating electronic presentations 3. Using basic arithmetic formula in a spreadsheet 4. Writing a computer program 5. Using software over the Internet for editing text, spreadsheet, presentations 6. Uploading self/user-created content	1. Changing privacy settings 2. Setting up effective security measures	1. Finding, downloading, installing and configuring software 2. Connecting and installing new devices 3. Transferring files or applications between devices 4. Electronic financial transactions 5. Doing an online course 6. Purchasing or ordering goods or services

Foundational literacy and numeracy proficiency

Sectorial definitions

Food and Agriculture Organization of the United Nations (FAO): Digital inclusion refers to the capability of people and communities to utilize information and communication tools effectively. This concept goes beyond mere internet access; it also involves having the necessary equipment and software, pertinent content and services, as well as the education to develop the skills needed for proficient use of these technologies.[4]

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[4] https://cgspace.cgiar.org/bitstream/handle/10568/126398/SocialInclusionSmallholders_%20Brief.pdf

International Labour Organization (ILO): Digital transformation is defined as changes affecting individuals, businesses and societies brought about on the one hand, by digitization and, on the other, by internet-enabled interconnections that allow these processes to operate globally.[5]

International Organization for Migration (IOM): Digital skills are essential for effective communication, data collection and analysis related to migration, accessing information, and efficient project management and reporting of results and achievements. These skills include proficiency in data analysis and management software, online collaboration and knowledge management platforms, online project information and management applications, digital security measures, and adaptability to new technologies. Ultimately, enhancing digital skills can improve the efficiency and effectiveness of IOM's operations, while also reinforcing transparency and accountability.

United Nations Development Programme (UNDP): Rapid advances in digital and data create a significant global upskilling/ reskilling need spanning the public sector, local business ecosystems, and citizens particularly within marginalized communities. Recognizing the wide-ranging need, UNDP adopts an inclusive, whole-of-society approach to building digital skills by drawing on the comparative advantages of government, economy, and people, three pillars of UNDP's Digital Transformation Framework[7]:

1. **Digital institutions** are ideally positioned to steer digital skills development by formulating targeted policies and efficiently allocating resources, aligning other relevant stakeholders with a unified vision. They must become dynamic and future-proofed institutions that are able to leverage the current and emerging benefits of digital for sustainable development.

2. **Digital economies** possess the ability to identify emerging trends in digital skills and enhance workforce competencies. They also supply new digital tools that facilitate the achievement of skill development strategies. Businesses, innovators, and entrepreneurs must be provided with the skills and opportunities to leverage digital tools and technologies to shape their livelihoods.

3. **Digital societies** lay the groundwork of cultivating a competitive population by building essential skills, promoting lifelong learning, and aligning education with industry requirements. They ensure the representation of marginalized groups in digital skill development and training methods and programs are relevant to local contexts, ensuring no one is left behind by the potential of digital.

Lastly, capacity development hinges on partnerships with government, private sector, civil society, and international development partners, leveraging their respective constituencies, engagement mechanisms, and channels.

United Nations Educational, Scientific and Cultural Organization (UNESCO): Digital skills encompass a broad array of abilities that allow individuals to effectively use digital devices, applications, and networks for information access and management. They empower individuals to create and disseminate digital content, foster communication and collaboration, and address challenges, enriching personal, academic, professional, and social pursuits.

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[5] https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_831372.pdf

At an entry level, digital skills refer to the foundational competencies needed for basic utilization of digital devices and online platforms. These skills, in today's digital age, are viewed as integral as traditional literacy competencies like reading, writing, and arithmetic.

Advanced digital skills, on the other hand, delve into profound capabilities that enable users to leverage digital technologies in transformative manners, such as pursuing careers in ICT. The evolution of digital domains like Artificial Intelligence (AI), machine learning, and big data analytics is reshaping skill prerequisites, consequently influencing how we approach skill development for the modern digital economy. To flourish in today's interconnected world, it's imperative for digital skills to be complemented by robust literacy, numeracy, critical thinking, innovation, intricate problem-solving, collaborative capacities, and socio-emotional intelligence.

Based on the UNESCO/ISIS framework, digital literacy is defined as the ability to use digital technologies safely and competently for a variety of purposes, including employment and entrepreneurship. This includes a range of competencies often referred to as computer literacy, ICT literacy, information literacy and media literacy.

United Nations Office for Project services (UNOPS): Enhancing digital skills and increasing access to digital technology can significantly elevate the quality of life, especially for the most vulnerable. Broadened technology accessibility in both urban centers and remote regions is crucial for developing sustainable and inclusive infrastructure, advancing the implementation of the SDGs. Moreover, digitized procurement systems and processes pave the way for greater national budget efficiencies. Effective project management is paramount to seamlessly integrate technology, bolster knowledge exchange, and realize the SDGs' impact.

Considering this, digital transformation hinges on the provision of high-quality hardware and software, underpinned by rigorous risk management, security measures, and efficient digital storage management, like data centers. It's vital to foster skill development, emphasizing continuous process enhancement, technology risk assessments, and data security through ongoing capacity building.

In essence, fortified digital competencies will not only uplift the quality of life for vulnerable populations but also streamline governmental operations, resulting in significant budgetary savings. This bolsters a resilient public management structure at the governmental level, benefiting nations from social, economic, and environmental standpoints.

United Nations International Children's Fund (UNICEF): Digital literacy empowers the youth to adeptly navigate and harness technology. It involves their ability to search, manage, create, and share content while fostering collaboration, communication, knowledge-building, and problem-solving critically and ethically. Moreover, it signifies a comprehensive understanding and skill set that ensures their safety while maximizing their potential in the digital realm. This encompasses their interactions, engagements, social connections, explorations, and learning experiences via digital platforms.

United Nations Industrial Development Organization (UNIDO): In the context of UNIDO, while there isn't an explicit definition of digital skills, their involvement in numerous digital transformation projects has highlighted a set of recurrent skills and competencies that are integral to digital literacy. These include digital marketing and the navigation of online sales and marketplaces. A significant emphasis is placed on digital design skills, notably computer-assisted design (CAD). Furthermore, effective communication and collaboration are essential, alongside the use of Enterprise Resource Planning

(ERP) systems in production. Proficiency in using computers, understanding tools for production monitoring, and the ability to establish and utilize Key Performance Indicator (KPI) dashboards are also critical. Additionally, live monitoring of production data and engaging in innovation processes are seen as vital skills. While some of these skills intersect with traditional competencies, this overlap is to be expected given the evolving nature of digital technology in the industrial domain.

UN Women: UN Women adheres to the framework and definitions of digital skills established by the International Telecommunication Union (ITU). In addition, their understanding of digital skills, especially as they relate to adolescents, is based on the standards and messages of UNESCO and UNICEF. This integrated approach ensures a comprehensive and globally recognized interpretation of digital skills.

World Health Organization (WHO): The WHO characterizes digital skills as competencies that empower individuals to harness digital technologies for sourcing, evaluating, creating, and communicating, facilitating collaboration, problem-solving, and navigating life in a digital-centric society.[6] This definition spans a spectrum of proficiencies, from foundational abilities like using email and browsers to advanced skills such as programming and data analytics. The WHO underscores the pivotal role of these digital competencies in ensuring holistic participation in today's world, spanning sectors like healthcare, education, and the job market.

Besides, the WHO introduces the concept of "Digital Health Literacy," describing it as the capacity to efficiently source, discern, and utilize health information from electronic mediums to address health concerns.[7] This notion accentuates not just the act of accessing online health data but critically evaluating its authenticity and relevance. In a digitally connected era, such literacy is essential for making well-informed health decisions, advocating for personal health, and being an active contributor to healthcare deliberations.

World Meteorological Organization (WMO): Digital skills associated with the WMO pertain to both hydrology and meteorology. They encompass the analysis and interpretation of hydrometeorological data, expertise in meteorological modeling, and the application of diverse remote-sensing techniques. Beyond these foundational skills, there are advanced research competencies, including numerical weather prediction and the development and implementation of cutting-edge hydrometeorological models. Such proficiencies are vital for predicting hydrometeorological events and guiding public policy decisions.

Status of digital Skills in Europe and Central Asia

General overview

In the dynamic context of today's global economy, the acquisition of digital skills is paramount for individuals, industries, and nations. Europe and Central Asia, situated at the crossroads of various cultures and economies, are witnessing a transformative journey in the realm of digital skills. This

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[6] World Health Organization. (2020). Digital health literacy: A call to action for public health experts.
[7] World Health Organization. (2019). Digital health literacy: A scan of the education and training landscape.

document provides an overview of the current status, key initiatives, and emerging trends in the development of digital skills in the region.

Digital Transformation Initiatives

Governments across Europe and Central Asia have embarked on ambitious digital transformation initiatives, recognizing the imperative of fostering digital competencies for economic competitiveness. These initiatives are multifaceted, spanning educational reforms, workforce training programs, and collaborative efforts with the private sector to align skill development with industry needs.

As a result of a comprehensive assessment conducted by the UNESCO Almaty Office, it was found that a large majority of professionals in Central Asia's creative industries utilize a wide range of digital skills in their daily work.[8] However, a notable gap remains in the regional educational infrastructure: 80% of these professionals have not received formal higher education in this field. It should be noted that these professionals mostly resort to non-traditional forms of learning, including workshops, trainings, and specialized courses, highlighting the urgent need to systematically integrate digital skills into the curriculum.

Educational Reforms and Training Programs

Educational institutions are adapting their curricula to integrate digital skills at various levels of education. Coding, data analytics, and other relevant skills are becoming integral components of the education system. The emphasis is not only on academic institutions but also on specialized training programs to address the specific needs of the workforce.

Public-Private Collaboration

Effective collaboration between governments, educational institutions, and private industry is a hallmark of successful digital skills development. Public-private partnerships facilitate the creation of tailored training programs, ensuring that the skills imparted align with the evolving demands of the job market. These collaborations are instrumental in bridging the gap between academic knowledge and practical industry requirements.

Inclusive Digital Skills Initiatives

Recognizing the importance of inclusivity, efforts are underway to ensure that digital skills initiatives reach all segments of the population. Special attention is given to addressing gender disparities, empowering minorities, and extending opportunities to disadvantaged communities. Inclusive digital skills programs are seen as essential for mitigating societal inequalities and fostering equal access to opportunities.

Lifelong Learning and Digital Literacy

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[8] https://www.unesco.org/en/articles/digital-skills-central-asias-creative-industries-survey-core-insights?TSPD_101_R0=080713870fab20004de32fc4fb8688bec640c8b4951d31c6dc09edea1a8738c6b0db64bf1f8d520208a7fc9cd5143000ecc33566f742d62bbd6de8ea14ca6b47f22ecc521b4bdfd03855db15ad0eed654dc875999dfc0b1d53b92d6394cb5026

In response to the rapidly changing technological landscape, there is a growing emphasis on lifelong learning. Digital literacy programs, catering to individuals of all ages, are gaining prominence. These initiatives aim to equip the current workforce with the skills needed to navigate the digital age while preparing future generations for the challenges and opportunities that lie ahead.

Impact of COVID-19

The COVID-19 pandemic has acted as a catalyst, accelerating the urgency for digital skills. Remote work, online education, and digital communication became essential components of daily life, highlighting the critical need for digital literacy. In response, governments and institutions in Europe and Central Asia intensified their efforts to bridge the digital divide and enhance overall digital literacy.

As Europe and Central Asia navigate the complexities of the digital era, the development of digital skills emerges as a central pillar for sustainable growth and competitiveness. The ongoing initiatives, partnerships, and inclusivity measures underscore a collective commitment to shaping a digitally empowered future. By fostering a culture of continuous learning and innovation, the region is poised to navigate the challenges and harness the opportunities presented by the evolving digital landscape.

Level of basic, intermediate, and advanced ICT skills in Europe in 2019

The levels reached in basic, standard, and advanced ICT skills over the last three year vary significantly across Europe, with Denmark, Iceland, Sweden, and Luxembourg leading in advanced skills with levels between 10% and 15%. Levels of standard and basic skills are well above 50%. Thirteen countries have attained levels of basic skills above 60%, including Denmark, Iceland, Luxembourg, Switzerland, Finland, Austria, the Netherlands, Andorra, Germany, Slovenia, Belgium, Montenegro, and Slovakia. In relation to standard skills, ten countries have achieved levels above 50%, including Denmark, Iceland, Sweden, Luxembourg, Switzerland, the United Kingdom, Finland, Austria, and the Netherlands, and seven countries including Croatia, Estonia, Spain, Andorra, Ireland, Germany and Belgium, have achieved levels of between 40% and 50%. Only five countries, namely Bosnia and Herzegovina, Bulgaria, Georgia, Romania, and Albania have standard skill levels below 20% (Figure 1).[9]

Updated measurements: Level of ICT skills, by type of skill 2019-2022

As per recommendations of the Expert Group on ICT Household surveys (EGH), the subgroup felt unanimous about moving away from the previous grouping by levels which were coded as basic, intermediate and advanced. From a methodological point of view, recently designed instruments to measure individuals' digital skills have moved to different methods (e.g. criteria based such as the European Commission's Digital Skills Indicator (DSI), calculating averages across various areas of activities such as ySkills). This approach allows you to gain better knowledge about the domains in which digital activities take place rather than putting the focus on a level that a set of activities might represent. Also, digital activities that once required higher level of skills have often become easier due to new software and apps. Therefore, keeping levels relevant would require a constant revision of what is considered a basic level activity.

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[9] https://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-DIG_TRENDS_EUR.01-2021-PDF-E.pdf

Despite the importance of digital skills in leveraging ICTs for economic prosperity and social well-being, data remain very scant. Only 83 countries submit data, and rarely for all skill areas. Based on this limited dataset, skills linked to *information/data literacy* are the most prevalent, with a median of 56 per cent and an average that lies between 33 and 69 per cent for most countries. *Communication/collaboration* is the second most prevalent (median of 51). *Problem solving* (36), *safety* (34), and *content creation* (25) follow with much lower medians.

Another way to analyse these data is through the scope of skills reported in different countries. Among the 70 countries that provided data in at least three skills areas, 58 reported averages of at least 25 per cent in multiple areas, 32 reported averages of over 50 per cent in multiple areas and only two reported averages of over 75 per cent in multiple areas.

The relatively low level of skills in countries providing data contrasts with their high median share of overall Internet use, 87 per cent. This gap between individuals using the Internet and those with digital skills demonstrates that many may be using the Internet without being able to fully benefit from it or avoid its dangers.

Percentage of individuals with ICT skills, by type of skill, based on most recent data in 2019-2022 period
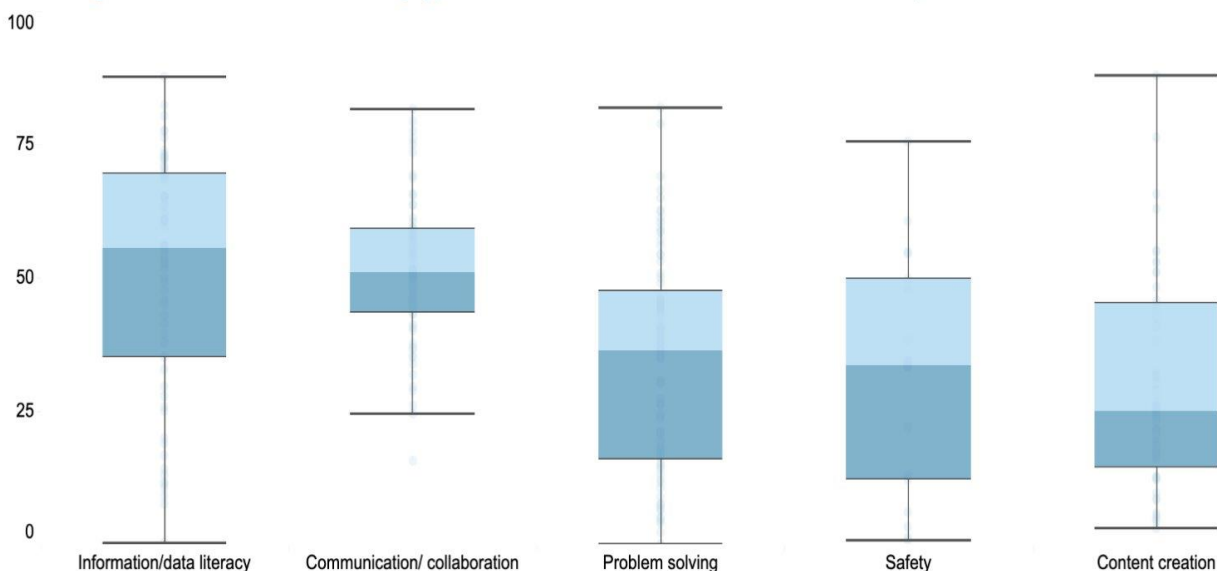
Note: Bars indicate the 25th, median and 75th percentile of all country values. Bottom and top lines indicate minimum and maximum values. *Communication/collaboration* is the average of sending messages (e.g. e-mail, messaging service, SMS) with attached files; making calls over the Internet; participating in social networks; and taking part in consultation or voting via Internet. *Problem solving* is the average of finding, downloading, installing and configuring software; connecting and installing new devices; transferring files or applications between devices; electronic financial transactions; doing an online course; and purchasing or ordering goods or services. *Safety* is the average of changing privacy settings; and setting up effective security measures. *Digital content creation* is the average of using copy and paste tools; creating electronic presentations; using basic arithmetic formula in a spreadsheet; editing online text, spreadsheets, presentations; and uploading self/user-created content. *Information/data literacy* is the average of verifying the reliability of information; getting information about goods or services; reading or downloading newspapers, etc.; and seeking health-related information. Data availability: 64 countries for *communication/collaboration*, 80 countries for *problem solving*, 18 countries for *safety*, 47 countries for *content creation*, and 65 countries for *information/data literacy*. In-scope ages may vary between countries.

Level of basic, intermediate, and advanced ICT skills in CIS in 2019

Only limited data were available for basic and standard ICT skill levels across the CIS region with almost no data available for advanced ICT skill levels. Data available for selected countries show that the levels reached in basic, standard, and advanced ICT skills vary across the different skill categories as well as countries, with Azerbaijan and Belarus leading in basic skills with levels above 40%. Levels of standard skills are highest in Kazakhstan at 22.8%, followed by Belarus with 18.8% and the Russian Federation with 14%. Uzbekistan has the lowest skill penetration for both basic (13.6%) and standard (6.8%) skills.

The most homogeneous ICT skill levels can be found in Kazakhstan, with a basic skills level of 28.4 per cent and a standard skills level of 22.8%. The data suggests there is still significant potential for skill development, particularly regarding standard and advanced skills (Figure 2).

Azerbaijan: basic 42.2 – standard 12.9 – advanced N/A

Belarus: basic 40.1 – standard 18.8 – advanced 2

Russian Federation: basic 38.6 – standard 14 – advanced 1.3

Kazakhstan: basic 28.4 – standard 22.8 – advanced N/A

Uzbekistan: basic 13.6 – standard 6.8 – advanced N/A

Basic, standard and advanced ICT skills for selected CIS countries as a percentage of population (%), 2019
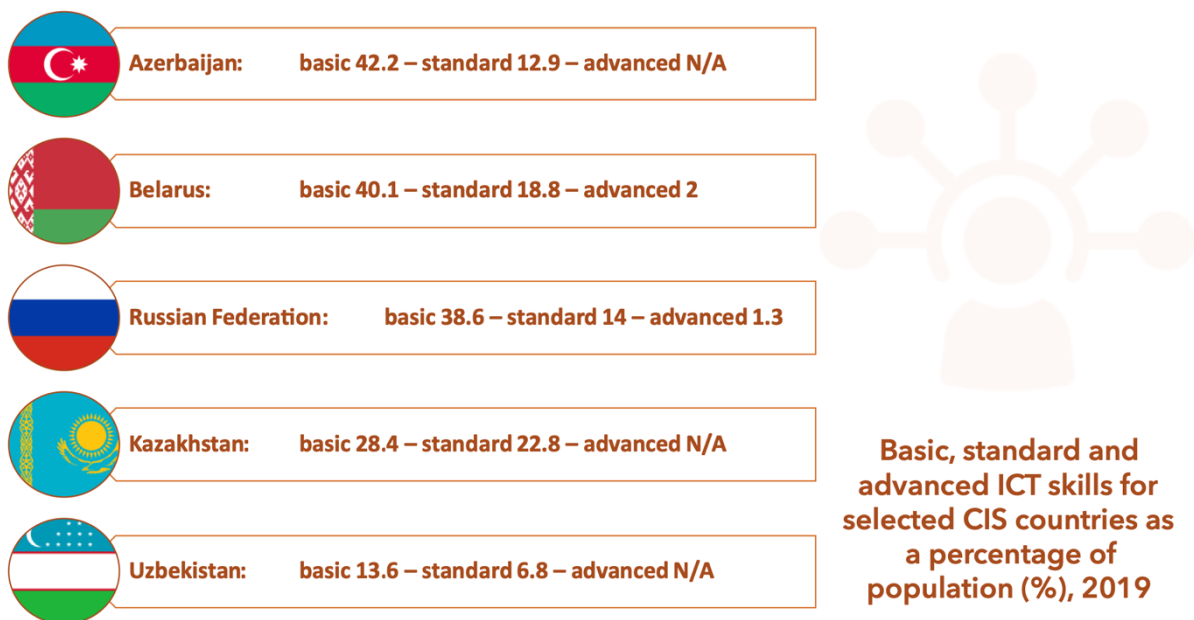
Source: Based on ITU WTI Database, figures for Uzbekistan are from 2018.

Figure 3: Penetration of basic, standard and advanced ICT skills as a percentage of population for selected CIS countries (%), 2019

Digital skills divide across generations

The swift evolution of digital technology is reshaping our societies and daily lives. People of all ages, including seniors, are increasingly required to integrate these technologies into their daily routines and environments. Digital advancements offer remarkable opportunities and are particularly beneficial in promoting active and healthy aging. They help combat social isolation, enhance social participation in later years, encourage physical activity, and aid in maintaining independence and health in old age.
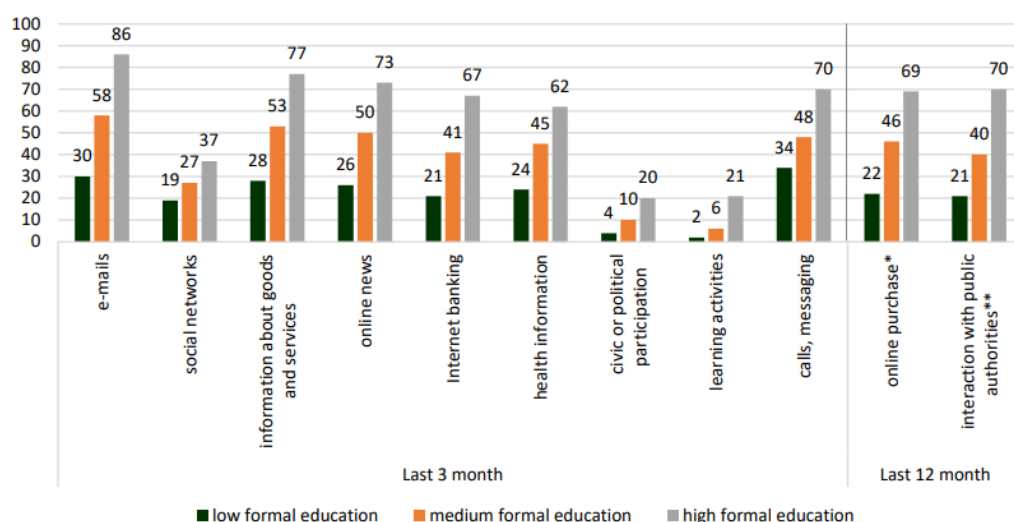
Figure 4: Internet activities by educational groups among individuals aged 55-74, EU-27, 2019 (% of the respective group)

However, this rapid digitalization also presents challenges. It can amplify existing inequalities, potentially leading to social and economic exclusion, power imbalances, and risks to privacy and security. The "digital divide" – the disparity in access to and use of digital technology – is a pressing issue. This divide impacts aging populations on both personal and societal levels, emphasizing the need for inclusive digital strategies.

The lack of digital skills is a key barrier to digital technology adoption and use. Basic and above digital skills as a precondition for inclusion and participation in the labour market and society in a digitally transformed Europe and sets the goal for at least 80 percent of the population aged 16-74 to have at least basic digital skills by 2030.

Accordingly, as depicted above in EU-27, 2019, this was already the case among youth (aged 16 to 24) in the EU countries, whereas among people aged 45-54 only 55% had basic or above basic overall digital skills, 40% in the age group 55-64 and 24% among those aged 65-74 (Figure 4). Across many other UNECE countries, the age gap in digital skills is even more pronounced. There is also significant cross-country variation in digital skills among older people. While more than half of older persons (65-74) in Norway (51%) and Switzerland (57%) have basic or above digital skills, this is the case for only 3% percent of North Macedonia and 2% in Turkey.[10]

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[10] https://unece.org/sites/default/files/2021-07/PB26-ECE-WG.1-38_0.pdf
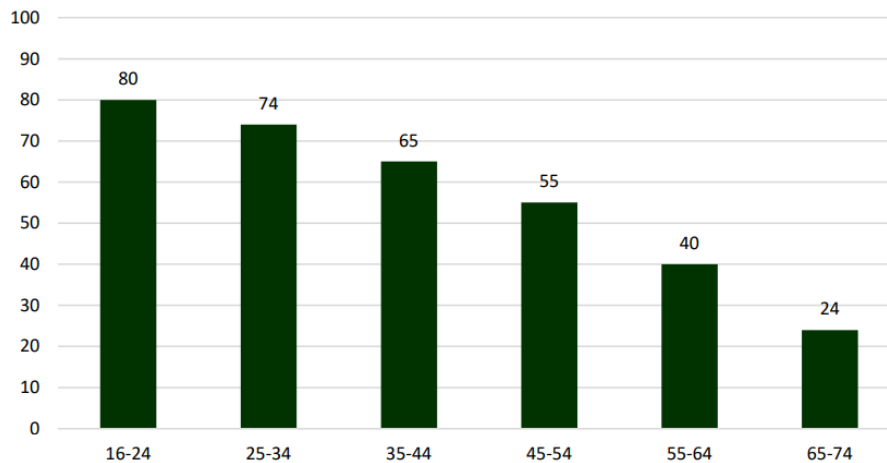
Source: Eurostat, isoc_sk_dskl_i, 2019, % of population

Figure 5: Share of individuals who have basic or above basic digital skills by age groups, EU-27, 2019 (% of respective age group)

Enhancing digital literacy through digital skills training is a critical policy priority, particularly for older individuals, as societies progress in digitalization. Such training empowers older adults to use digital technologies and the Internet effectively, safely, and securely, enabling them to reap the benefits these technologies offer. In line with this objective, the European Commission's recent Action Plan to implement the European Pillar of Social Rights sets an ambitious target: ensuring that at least 80% of people aged 16-74 possess basic digital skills.[11] This is seen as essential for inclusion and participation in both the labor market and society within a digitally evolving Europe.

Review of approaches of the UN System

Broadband Commission for Sustainable Development (ITU/UNESCO)

Artificial Intelligence and Digital Transformation Competencies for Civil Servants (Broadband Commission)

Link: https://broadbandcommission.org/publication/artificial-intelligence-and-digital-transformation/
Type: Guidelines
Related SDG(s): 9
Target audience: Policy makers, civil servants
Short description:

The report focuses on the digital transformation's impact on public sectors, particularly addressing the need for digital competency in government officials. It emphasizes the importance of governments adapting to technological advancements, including artificial intelligence (AI), to meet public expectations and improve services. The report identifies a significant gap in digital competencies within the public sector and underscores the urgency of addressing these gaps.

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[11] https://commission.europa.eu/publications/european-pillar-social-rights-action-plan_en

The target audience for this report includes civil servants, international organizations, and national actors involved in public sector digital transformation. The aim is to guide these stakeholders in developing digital competencies that are crucial for successful digital transformation in government operations and services.

The report introduces the AI and Digital Transformation Competency Framework, comprising three major domains: Digital Planning and Design, Data Use and Governance, and Digital Management and Execution. It also highlights five key attitudes – Trust, Creativity, Adaptability, Curiosity, and Experimentation – that are essential for civil servants in this digital era. Each domain is divided into three proficiency levels, with an additional AI-specific level.

Recommendations are provided for various stakeholders, including raising awareness of necessary competencies, supporting governments in adapting these competencies, enabling capacity building, fostering international cooperation, and encouraging the private sector and academia to contribute to this transformation. This framework aligns with specific Sustainable Development Goals (SDGs) by promoting inclusive and equitable digital transformation, enhancing democratic societies, and strengthening economies.

Recommendations of the Broadband Commission on SDG4: Quality Education (Broadband Commission)

Link: https://broadbandcommission.org/publication/recommendations-sdg4/
Type: Guidelines
Related SDG(s): SDG 4
Target audience: Policy makers, private sector, academia
Short description:

The Broadband Commission on SDG4: Quality Education provides a set of guidelines aimed at enhancing educational outcomes through digital means. This document, serves as a valuable resource for policymakers, the private sector, and academia, offering insights and recommendations specifically tailored to improve the quality of education (SDG 4). While not exhaustive, it offers a comprehensive overview of key areas including:
- Development of Digital Skills: Focusing on strategies to enhance digital literacy and competencies.
- Transforming Education through Policies and Best Practices: Highlighting effective approaches and policy frameworks for integrating digital tools in education.
- Financing Connectivity and Infrastructure: Discussing ways to fund and develop the necessary digital infrastructure for educational purposes.
- Planning for Future Technology: Preparing for the integration of emerging technologies in educational settings.

- COVID-19 Response for Education: Addressing the challenges and opportunities presented by the pandemic in the context of digital education.

These guidelines from the Broadband Commission provide a roadmap for leveraging digital technologies to achieve SDG 4, ensuring quality education for all.

Food and Agriculture Organization of the United Nations (FAO)

e-Agriculture Community of Practice

<u>Link</u>**:** https://www.fao.org/e-agriculture/home
<u>Type</u>: Capacity-building tools
<u>Related SDG(s)</u>: 2, 3, 8, 9, 13
<u>Target audience</u>: Farmers, researchers, policymakers, ICT practitioners, and development practitioners
<u>Short description</u>:

The FAO e-Agriculture Community of Practice is an online platform that brings together a global network of stakeholders in the agriculture sector to share knowledge and best practices related to the use of information and communication technologies (ICT) in agriculture. The community aims to promote the development of digital agriculture policies, strategies, and initiatives that can help improve the livelihoods of smallholder farmers and contribute to the achievement of the Sustainable Development Goals (SDGs).

The community is open to anyone with an interest in e-agriculture, including farmers, researchers, policymakers, ICT practitioners, and development practitioners. Through the e-Agriculture Community of Practice, members can access a range of resources, including e-learning courses, webinars, discussion forums, and knowledge-sharing events. Members can also connect with each other, share experiences, and collaborate on projects related to e-agriculture. The community is moderated by a team of experts who help facilitate discussions and ensure that the content is relevant and up to date.

By providing a platform for knowledge-sharing and collaboration, the community is helping to build a more sustainable and equitable food system that benefits smallholder farmers and rural communities.

International Labour Organization (ILO)

Digital Skills for Jobs Campaign (ILO-ITU)

<u>Link</u>:https://www.decentjobsforyouth.org/campaign/digital-skills
<u>Type</u>: Guidelines
<u>Related SDG(s)</u>: 9, 4, 5, 8
<u>Target audience</u>: General public, academia
<u>Short description</u>:

The Digital Skills for Jobs Campaign, an initiative led by the ITU and the ILO under the Global Initiative on Decent Jobs for Youth, provides comprehensive guidelines on enhancing digital skills for the workforce. These guidelines are particularly relevant for the general public and academia, emphasizing the increasing necessity of digital competencies in today's job market.

As key growth sectors worldwide generate demand for millions of jobs, a skills shortage often leaves many of these positions unfilled. This campaign underscores the importance of investing in the digital education of youth as a dual-benefit strategy. By equipping young people with essential digital skills, it not only bridges the skills gap but also boosts their employability. This approach leads to the creation

of quality jobs and fosters innovation across various sectors in the digital economy, aligning with the Sustainable Development Goals (SDGs) related to decent work and economic growth.

International Organization for Migration (IOM)

Measurement tools

IOM employs a comprehensive approach to assess digital skills, which includes a variety of assessment methods. Self-assessment allows individuals to evaluate their own digital competencies, providing a personal insight into their skill levels. Expert assessment involves professionals in the field of digital skills who evaluate an individual's abilities. Performance-based assessment is another critical method, where individuals are required to complete specific tasks or projects that necessitate digital skills, and their performance is judged against predetermined criteria. Lastly, observation plays a role, wherein an observer evaluates an individual's digital skill proficiency while they perform digital tasks, again based on set criteria. This multi-faceted approach ensures a thorough and nuanced understanding of digital skills within the organization.

International Telecommunication Union (ITU)

Digital Skills Toolkit (ITU)

Link:https://www.itu.int/en/ITU-D/Digital-Inclusion/Youth-and-Children/Pages/Digital-Skills-Toolkit.aspx
Type: Toolkit
Related SDG(s): 9, 4, 5, 8
Target audience: Policy makers, private sector, academia
Short description:

The Digital Skills Toolkit is a comprehensive resource designed to assist policymakers, the private sector, and academia in developing national digital skills strategies. This toolkit is tailored to provide practical guidance, illustrative examples, and a step-by-step approach for crafting effective digital skills policies.

Key topics covered in the toolkit include engaging relevant stakeholders, assessing existing policies, and formulating strategies that cater to different proficiency levels. Special emphasis is placed on creating inclusive strategies that address the needs of underrepresented groups, such as women and persons with disabilities. The toolkit also guides on organizing campaigns, participating in regional or international initiatives, and the continuous monitoring and updating of the strategy.

By breaking down complex processes into manageable tasks, the toolkit offers valuable examples of successful programs and frameworks from various global contexts. These serve as models and inspiration for those aiming to enhance digital skills and literacy, aligning with relevant Sustainable Development Goals (SDGs) related to quality education and inclusive societies.

Digital Skills Assessment Guidebook (ITU)

Link:https://academy.itu.int/itu-d/projects-activities/research-publications/digital-skills-insights/digital-skills-assessment-guidebook

Type: Guidelines
Related SDG(s): 9, 4, 5
Target audience: Policy makers, private sector, academia
Short description:

ITU's Digital Skills Assessment Guidebook has been designed to serve as a comprehensive, practical step-by-step tool for national digital skills assessments. The guidebook can be used to determine the existing supply of a digitally skilled cohort at a national level, to assess skills demand from industry and other sectors, to identify skills gaps, and to develop policies to address future digital skills requirements.

Measurement tools: Digital Skills Assessment Guidebook (see details in previous section).

Digital Skills Insights (ITU)

Link: https://academy.itu.int/itu-d/projects-activities/research-publications/digital-skills-insights
Type: Publication
Related SDG(s): 9, 4, 5
Target audience: Policy makers, regulators, private sector, academia
Short description:

"Digital Skills Insights" (previously called "Capacity Building in a Changing ICT Environment") is an online publication which puts together scholarly articles with a focus on the impact of digital transformation on capacity and skills development. It covers a wide range of topics that may affect people and their skills development, such as artificial intelligence (AI), the Internet of Things (IoT), big data, telecommunication regulatory issues, smart cities/societies, digital competencies, open source learning and intellectual property rights, etc.

The publication seeks to provide a body of knowledge that will facilitate academic research and innovation, exploring the linkages between emerging technologies and capacity development. It features current and new thinking that will contribute to informed policy debates and decisions among policymakers and regulators, as well as help the private sector to anticipate and plan for human capital requirements and skills development in order to remain competitive in a rapidly changing ICT environment.

United Nations Development Programme (UNDP)

Digital Training for Civil Servants (UNDP)

Link: https://academy.itu.int/training-courses/full-catalogue/inclusive-digital-transformation-achievement-sdgs-and-samoa-pathway-sids-1
Type: Training
Related SDG(s): 9,17
Target audience: Civil Servants, Governments
Short description:

This course offers an online introduction to support civil servants and other stakeholders in the digital ecosystem in shaping an inclusive, whole-of-government approach to digital transformation in Small Island Developing States (SIDS). The course provides an introduction to digital transformation in SIDS

around five pillars of digital transformation: government, infrastructure, regulation, business, and people. The course offers the latest available data on digital transformation in SIDS; and highlights examples, challenges and opportunities and case studies of innovation across SIDS. It features analytical tools, such as the UNDP Digital Readiness Assessment and UNCDF Inclusive Digital Economy Scorecard and offers links to resources and extensive lists of additional readings from UNCDF, UNDP, ITU, World Bank, GSMA and others.

Capacity Development for Digital Transformation: trainings for government officials

Link: N/A but coming soon
Type: Training
Related SDG(s): 17
Target audience: civil servants, policymakers
Short description:

UNDP, in collaboration with ITU and EC launched and began implementing the project "Capacity Development for Digital Transformation", aiming to enhance the capacity of government officials who are engaged in digital transformation efforts worldwide. The project will train at least 5000 government officials and policymakers by 2027, equipping them with the necessary skills for developing and implementing national digital transformation policies and programmes effectively. As part of the project, UNDP will develop and deliver 17 courses around data governance, digital public goods & digital public infrastructure, digital transformation, and digital services. The courses will be available in formats including face-to-face, online instructor-led, and online self-paced.

AI Empowerment Programme for Civil Servants (UNDP)

Link: https://www.undp.org/digital
Type: Capacity Building
Related SDG(s): 4,8,9,11,17
Target audience: Civil Servants, policymakers
Short description:

Guided by the capacity-building framework that the Broadband Commission Working Group has developed, UNDP is implementing an AI capacity-building program that is being implemented for civil servants in some selected countries. These programs are customized as per each country's needs.

Digital Leadership Training Modules (UNDP)

Link: https://undp.sharepoint.com/:f:/r/teams/RBAP/KnowledgeHub/Shared Documents/UNDP RIC
Digital Leadership Training Modules?csf=1&web=1&e=qpDi3Y
Type: Training
Related SDG(s): 9,17
Target audience: Civil Servants, Governments
Short description:

This course offers an online introduction to support civil servants and other stakeholders in the digital ecosystem in shaping an inclusive, whole-of-government approach to digital transformation in Small Island Developing States (SIDS). The course provides an introduction to digital transformation in SIDS around five pillars of digital transformation: government, infrastructure, regulation, business, and

people. The course offers the latest available data on digital transformation in SIDS; and highlights examples, challenges and opportunities and case studies of innovation across SIDS. It features analytical tools, such as the UNDP Digital Readiness Assessment and UNCDF Inclusive Digital Economy Scorecard and offers links to resources and extensive lists of additional readings from UNCDF, UNDP, ITU, World Bank, GSMA and others.

Digital Guides (UNDP)

Link: digitalguides.undp.org
Type: Knowledge resource
Related SDG(s): All
Target audience: Programme People in the UN system and beyond
Short description:

The Global Policy Network and Chief Digital Office have collaborated on UNDP has produced digital guides that explore the impact of digital technologies on development contexts within UNDP's thematic areas. These resources cover all six Signature Solutions, offering practical guidance and insights to empower programme officers to include digital into their work.

Data to Policy Navigator & Network
Link: https://www.datatopolicy.org/ , https://www.southsouth-galaxy.org/data-to-policy-network/
Type: Knowledge resource & Capacity Building
Related SDG(s): All
Target audience: Policymakers & people working in related fields
Short description:

The Data to Policy Navigator and Network, a collaboration between UNDP, GIZ on behalf of BMZ, and UNOSSC, equip policymakers worldwide with essential resources and opportunities for peer exchange to enhance their data-informed policymaking skills. The Navigator offers a step-by-step guide, success stories, and an open data repository. The Network provides a global platform for curated capacity-building content, interactive learning sessions, and connections with peers and the broader data community.

Data to Policy Trainings
Link: NA
Type: Training
Related SDG(s): All
Target audience: Policymakers
Short description:

The Data to Policy Training, building upon the framework of Data to Policy Navigator and effective learning methodologies, offers highly interactive 3 days' workshops for government officials with decision-making responsibilities, ideally from different departments in a government. The training is tailored to address policymakers' current challenges, ensuring knowledge gained translates into immediate, tangible impact.

United Nations Economic Council for Europe (UNECE)

Ageing in the Digital Era (UNECE)

Link: https://unece.org/sites/default/files/2021-07/PB26-ECE-WG.1-38.pdf
Type: Framework
Related SDG(s): 3, 4, 5, 10, and 11
Target audience: General public, academia
Short description:

Ageing in the digital era – UNECE highlights key actions to ensure digital inclusion of older persons. Digital skills are a precondition for digital inclusion. Many older people today will have spent their working and personal lives without exposure to digital technologies or routine computer use and without the need to acquire digital skills. Only one in four older Europeans have basic or above basic digital skills, compared to two in three in the age group 35 to 44, three in four among 25-34 year olds and four in five among youth (16-24).

Measurement tools:

UNECE provides several databases and measurement tools to track the level of digital skills and progress made. Here are some examples:

- Digital Skills Indicators Database: This database provides information on the availability and use of digital technologies, the level of digital skills and competence, and the level of e-literacy in UNECE member countries.

- ICT Access and Usage by Households and Individuals Database: This database provides information on the availability and use of ICT by households and individuals in UNECE member countries, including access to broadband internet, mobile phones, and other digital devices.

- Digital Literacy Assessment Tool (Survey): This tool is designed to assess the level of digital literacy and competence of individuals and organizations. It includes a set of questions and tasks that measure the ability to use digital technologies effectively.

- ICT Skills for Teachers Assessment Tool: This tool is designed to assess the level of ICT skills and competence of teachers. It includes a set of questions and tasks that measure the ability to use digital technologies in the classroom.

The UNECE has been actively involved in promoting digital skills and literacy in its member countries through various initiatives and activities. UNECE's work on digital skills includes the development of databases and measurement tools to track the level of digital skills and progress made, as well as the organization of surveys to gather data and insights on digital skills in different areas. UNECE has also been working on the development of frameworks and guidelines for digital literacy and competence, particularly for teachers and educators. Additionally, UNECE has been promoting capacity-building activities and training programs to improve digital skills and literacy among different groups, including youth, women, and vulnerable populations. UNECE's efforts to promote digital skills and literacy are essential in supporting sustainable economic growth and ensuring that its member countries are equipped with the necessary digital competencies to thrive in the digital age.

United Nation Environment Programme (UNEP)

Digital4Sustainability online course (UNEP-UNSSC)

<u>Link</u>: https://www.unssc.org/courses/digital4sustainability-learning-path
<u>Type</u>: Guidelines
<u>Related SDG(s)</u>: 4, 9, 12, 13, 15
<u>Target audience</u>: UN agencies, governments, private sector, civil society, academia
<u>Short description</u>:

The Digital4Sustainability Learning Path is a comprehensive program designed to explore the role of digital technologies in enhancing environmental and social sustainability. Developed through a collaboration between UNEP, UNSSC, GIZ, the EU, CODES, and the Office of the UN Technology Envoy, the program delves into the potential of digital transformation in addressing critical issues like climate change, nature loss, and pollution. It comprises four self-paced modules, each requiring 3-4 hours of engagement, and covers topics from sustainable development and climate action to future modules on nature protection and pollution prevention. Open to all interested individuals, this free learning path aims to equip participants with an understanding of digital sustainability, the challenges and opportunities it presents, and the practical application of digital innovations in promoting a sustainable future.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

ICT Competency Framework for Teachers

<u>Link</u>: https://unesdoc.unesco.org/ark:/48223/pf0000265721
<u>Type</u>: Capacity-building tools
<u>Related SDG(s)</u>: SDG 4
<u>Target audience</u>: Policymakers
<u>Short description</u>:

The ICT Competency Framework for Teachers (ICT CFT) Version 3, developed by UNESCO, is a vital tool for training pre- and in-service teachers in the use of digital technologies across all education levels, including K-12 and tertiary. Designed to be adaptable to various national and institutional goals, it serves as a modern framework for policy development and educator capacity building in ICT for education. The framework details 18 key ICT competencies, split into 64 specific objectives, covering areas like curriculum integration, pedagogy, administration, and professional development. Its successful implementation relies on strong leadership and support from government, educational institutions, and school management, aiming to enhance educators' ability to effectively use technology in their teaching practices.

Designing inclusive digital solutions and developing digital skills: Guidelines

<u>Link</u>:https://unesdoc.unesco.org/ark:/48223/pf0000265537?posInSet=1&queryId=f12b8ef2-6f13-4ffa-9252-954cf015774c
<u>Type</u>: Guidelines
<u>Related SDG(s)</u>: SDG 4

Target audience: Policymakers
Short description:

UNESCO's guidelines, developed in collaboration with Pearson's Project Literacy, address the challenges faced by the 10% of the global population who are illiterate. These guidelines aim to create digital solutions that help those with low literacy levels access essential services and information, fostering their literacy development. They provide a framework for technology companies, NGOs, and governments to develop engaging and accessible digital content and interfaces for this demographic. The guidelines, shaped by extensive research and expert input, emphasize creating inclusive digital environments and continually refining solutions to ensure they meet the needs of individuals with limited literacy and digital skills, thus bridging the digital divide for underprivileged communities.

Ensuring effective distance learning during COVID-19 disruption: Guidance for teachers

Link: https://unesdoc.unesco.org/ark:/48223/pf0000375116
Type: Guidelines
Related SDG(s): SDG 4
Target audience: Teachers, educators
Short description:

It offers comprehensive guidelines aimed at aiding teachers and educators in navigating the challenges of home-based distance learning during COVID-19 school closures. These guidelines are designed to enhance the understanding of key issues in distance learning and assist educators in creating and conducting effective learning activities for students from pre-primary to upper-secondary levels. The guidance is enriched with a variety of resources, examples, and practical tips, making it a valuable tool for educators worldwide. Additionally, it is accessible in multiple languages, including Arabic, Bangla, Chinese, English, Farsi, French, Portuguese, Russian, and Spanish, aligning with SDG 4's goal of ensuring inclusive and quality education for all.

Guidelines for ICT in education policies and masterplans

Link:https://unesdoc.unesco.org/ark:/48223/pf0000380926?posInSet=1&queryId=10c1f1b9-a9e3-4596-bc9a-4968ab746d8a
Type: Guidelines
Related SDG(s): SDG 4
Target audience: Policymakers and decision-makers in the education sector
Short description:

The publication aims to guide policymakers to ensure that when adopting technology, human rights should be defended; inclusion, equity and gender equality should be at the heart of solutions; and innovations should be considered as a common good. The document proposes policy planning frameworks and an iterative roadmap to examine the digital readiness of local education systems, assess the needs of learners and teachers, and plan well-resourced national ICT in education programmes.

United Nations Industrial Development Organization (UNIDO)

Online training course "Digital Business Innovations for Women Entrepreneurs and Managers"

Link: https://learning.unido.org/course/view.php?id=80
https://learning.unido.org/course/view.php?id=34
Type: Capacity-building tools
Related SDG(s): 4, 5, 8, 9
Target audience: General public
Short description:

To help women capitalize on the benefits stemming from Industry 4.0, UNIDO developed an online training course "Digital Business Innovations for Women Entrepreneurs and Managers". The course consists of the following one-hour training modules delivered in the form of video lectures by reputable experts with accompanying presentations:

- Basics of digital technologies;
- Digital marketing;
- Digital project management;
- E-commerce;
- Social media marketing (SMM);
- Customer relationship management (CRM).

The course is accessible after registration and login free of charge in English and Russian on the UNIDO e-learning platform learning.unido.org.

United Nations Children's Fund (UNICEF)

UNICEF'S Scoping Paper on Digital literacy for children: exploring definitions and frameworks

Link:https://www.unicef.org/globalinsight/media/1271/file/%20UNICEF-Global-Insight-digital-literacy-scoping-paper-2020.pdf
Related SDG(s): SDG 4
Target audience: policymakers, educators, and researchers in the field of education and child development
Short description:

This paper delves into the realm of children's digital literacy, presenting the outcomes of a comprehensive scoping exercise. It primarily aims to explore and understand the current landscape of digital literacy policies and practices. It focuses on evaluating existing competence frameworks and how they can be tailored to meet UNICEF's specific requirements. Additionally, the paper analyzes the needs and ongoing efforts of various UNICEF country offices. A significant aspect of this document is its reflection on policy and program recommendations, which includes proposing a definition of digital literacy that aligns with UNICEF's objectives.

Educators' digital competency framework in Europe and Central Asia

Link:https://www.unicef.org/eca/media/24526/file/Educators'%20Digital%20Competence%20Framework.pdf
Related SDG(s): SDG 4

Target audience: Teachers, educators
Short description:

This report presents the educators' digital competence framework (EDC) and aims to assist the UNICEF Europe and Central Asia Regional Office (ECARO) with their efforts to empower teachers, improve online teaching and boost innovation in education. The framework is intended to support national, regional, and local efforts to foster educators' digital competence by offering a common frame of reference that can be adapted in response to different needs.

UN Tourism

UNWTO Digital Futures Program for Small and Medium-Sized Enterprise (SMES)

Link: https://www.unwto.org/digitalfutures
Related SDG(s): 8, 9, 11, 12, 17
Target audience: Entrepreneurs
Short description:

UN Tourism is dedicated to advancing the digitalization of tourism to foster an Innovation and Entrepreneurship Ecosystem, aiming to maximize the sector's economic growth, job creation, and sustainable development. Recognizing that innovation and digital technologies can enhance inclusiveness, community empowerment, and resource management, UN Tourism established the UN Tourism Digital Futures Program. This initiative is particularly focused on post-COVID-19 economic recovery, aiming to scale up innovative Small and Medium-sized Enterprises (SMEs) and Travel Tech, thereby enhancing job creation and resilience in the tourism value chain.

The SMEs Digital Futures program is structured around three core objectives:

1. Bridging the technology skill gap in tourism SMEs through partnerships and digital transformation.
2. Providing digital training programs to enhance the competitiveness of SMEs in tourism.
3. Promoting technology-driven growth, innovation, and sustainable entrepreneurship in the sector.

The program has impacted over 130 countries, with around 1,500 SMEs benefiting from its digital diagnostic tools. Additionally, the 117th Session of the Executive Council of the UN Tourism in Marrakesh, Morocco, endorsed the Marrakesh Call to Action on SMEs Digitalization. This declaration urges member states to intensify efforts to digitally transform tourism SMEs, focusing on people, prosperity, and the planet.

In its role as a knowledge partner during India's G20 Presidency, UN Tourism, in collaboration with the G20 Tourism Working Group, developed the "G20 Goa Roadmap for Tourism as a Vehicle for Achieving the Sustainable Development Goals" (June 2023). This roadmap positions digitalization as a central element in advancing Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 10 (Reduced Inequalities).

This emphasis on digitalization as a key driver for achieving the SDGs was also reflected in the "G20 Bali Guidelines for Strengthening Communities and MSMEs as Tourism Transformative Agents" (September

2022, Indonesia G20 Presidency). Drafted by UN Tourism in coordination with the G20 Tourism Working Group, this document particularly highlights innovation, digitalization, and the creative economy as critical components (Pillar 2) for transforming the tourism sector. Both initiatives underscore the growing recognition of digitalization's role in the sustainable development of the tourism industry at a global level.

World Meteorological Organization (WMO)

Type: Capacity development resource portals
Related SDG(s): Cross-cutting various SDGs
Target audience: Experts and managerial-level professionals
Short description:

The World Meteorological Organization (WMO) employs a holistic strategy for enhancing digital skills and capacity development, aligning with its broader strategic goals. This strategy, outlined in the WMO Strategy and Implementation Plan, focuses on cultivating digital competencies essential for weather, climate, and water services. Emphasizing the development of human, technical, and institutional digital capacities, the WMO is dedicated to leveraging and creating digital solutions in these critical areas.

As part of this commitment, the WMO offers various capacity development resources accessible through multiple e-learning portals. These include:

1. **WMO Education and Training Programme**: A central resource for comprehensive training in meteorological, climatological, and hydrological sciences. Link: https://etrp.wmo.int/

2. **Leadership and Management Programme**: Focused on developing leadership and managerial skills among meteorological professionals.
   Link:https://etrp.wmo.int/course/index.php?categoryid=16

3. **Trainer Resource Portal**: A hub for resources and materials for trainers in the meteorological field. Link: https://etrp.wmo.int/course/view.php?id=30

4. **Virtual Laboratory Training Portal**: Offering specialized training in satellite data, products, and applications. Link: https://etrp.wmo.int/course/view.php?id=279

5. **FFGS Portal**: Dedicated to the Flash Flood Guidance System for improved flood prediction and management. Link: https://etrp.wmo.int/course/index.php?categoryid=56

6. **Common Alerting Protocol Portal**: A resource for understanding and implementing the Common Alerting Protocol in public warning systems.
   Link: https://etrp.wmo.int/course/view.php?id=147

Measurement tools

The World Meteorological Organization (WMO) utilizes a diverse set of methods to assess the digital competencies of its expert community. This assessment strategy includes conducting surveys, interviews, focus groups, workshops, and competency assessments. The organization also leverages its Country Profile Database and Experts Database for a more detailed analysis of digital literacy levels,

technology access, digital skills, and other pertinent metrics among its members. The findings from these evaluations are openly shared and can be accessed through an open-source monitoring and evaluation platform available on Microsoft Power BI. This comprehensive approach enables the WMO to effectively understand and improve digital proficiency within its global network of experts.

Addressing digital skills with projects

Addressing Digital Skills in Europe and Central Asia

Food Agriculture Organization (FAO)

FAO recognizes that digital skills are essential for farmers to fully utilize the potential of modern technologies to improve their agricultural practices, enhance access to markets and financial opportunities, and to strengthen food supply chains.

FAO conducted several surveys on digital skills in the agriculture sector across Europe and Central Asia, which aimed to assess the current state of digital skills among farmers and identify the gaps that need to be addressed. Surveys were conducted in Albania, Azerbaijan, Georgia, Kosovo*, Moldova, Turkey, and Uzbekistan and showed that despite the growing interest in digital technologies, that there are still significant gaps in digital skills and access to digital infrastructure. Many respondents reported that they do not have access to reliable internet connectivity, digital devices, or the training needed to use digital tools effectively. The survey highlighted the need for training and capacity-building to help farmers and other stakeholders develop the digital skills they need to fully utilize digital tools and technologies. A range of training needs is identified, including basic digital literacy, specific software applications, digital marketing, digital finance, and data management and analysis. The survey underscored the importance of public-private partnerships in promoting digital skills development in the agriculture sector. Government support, private sector investment, and collaboration between different stakeholders are key factors that could help bridge the digital divide and promote the adoption of digital technologies in agriculture.

Based on the findings, FAO has been working to promote digital skills development in the agriculture sector through various initiatives. In 2022, FAO and the Federation of Agricultural Producers from the Republic of Moldova (FARM) delivered training sessions to increase digital literacy among rural women. The training covered a range of topics, from advanced technology solutions that can be applied in agriculture to online selling, digital payments, digital marketing and social media promotion. In the same year a similar undertaking was carried forward in Georgia, where FAO supported trainings for farmers on how to promote their businesses on Google maps and how to procure products and services online.

In addition, FAO has been working with governments and other organizations to improve the uptake of digital technologies by farmers and people living in rural areas. This includes policy work to support countries developing digital agriculture strategies, as well as local level action through its Digital Villages Initiative (DVI).

Digital Villages Initiative in Europe and Central Asia

Link: https://www.fao.org/digital-villages-initiative/europe/

The Digital Villages Initiative (DVI) in Europe and Central Asia focuses on empowering rural communities and villages to harness digital technologies for enhancing agricultural productivity and improving rural livelihoods, drawing on local strengths. Adopting an inclusive and participatory approach, DVI collaborates with rural communities to co-create interventions aimed at building capacity, resilience, and ensuring sustainability. Several countries in the region, including Albania, Azerbaijan, Bosnia and Herzegovina, Georgia, Kyrgyzstan, Tajikistan, Türkiye, and Uzbekistan, are either implementing or establishing their first Digital Villages under this initiative.

Digital Village Camp

Link: https://www.fao.org/countryprofiles/news-archive/detail-news/en/c/1652865

The "Digital Villages Camp," FAO and IT-Park, is a youth-oriented skill development program in Uzbekistan's Fergana Valley. Targeting individuals between 16 and 30 years old, the program focuses on using Internet of Things (IoT) technology for smart farming. Over five weeks, 25 selected participants from 90 applicants gain hands-on experience in programming IoT devices and applying these skills in field settings. They work on developing smart sensors that provide real-time agricultural data to farmers. This initiative is a key component of the broader Digital Villages Initiative (DVI) by FAO in Uzbekistan, aimed at digitally transforming rural communities to enhance agriculture and livelihoods.

International Fund for Agricultural Development (IFAD)

Learning Management System (LMS)

The International Fund for Agricultural Development (IFAD) offers a comprehensive training program on digital skills through its Learning Management System (LMS). This program provides courses focused on technology, transformation, and agriculture, aiming to integrate digital solutions effectively into IFAD's agricultural initiatives.

UN Innovation Toolkit Webinar

Link: https://www.unssc.org/un-innovation-toolkit

This webinar serves as an interactive platform introducing the UN Innovation Toolkit. It includes a practical exercise on identifying factors and barriers to innovation, a detailed walkthrough of the Innovation Diagnostic tool, and a Q&A session. The webinar is a part of the "Innovation for Impact" e-Learning Path, which consists of two modules:

- Module 1: Introduction to Innovation (3 hours)

- Module 2: The UN Innovation Toolkit (4 hours)

These modules are designed to foster innovation within the UN at all levels, emphasizing the use of digital tools and innovative approaches.

Operations Academy - Pillar III: Technology, Transformation, and Agriculture

Link: https://www.ifad.org/e-learning/OPAC/technology-transformation-and-agriculture-fundamentals-of-ict4d-in-agriculture/

The "Fundamentals of ICT4D in Agriculture" course, offered by the Operations Academy, introduces learners to the integration of Information and Communication Technologies for Development (ICT4D) in agriculture. Key areas of focus include:

- The impact of ICTs on rural agriculture.

- Best practices for utilizing ICTs to benefit small-scale producers.

- Essential technologies to support these producers.

- Core principles and methods of ICT4D.

- Challenges in applying ICTs effectively in rural agriculture.

Omnidata - Learning Paths

Link: https://www.ifad.org/en/web/latest/-/innovation-matters-especially-for-small-scale-farmers?p_l_back_url=%2Fen%2Fsearch%3Fq%3DOmnidata

The Omnidata Learning Paths offer a series of interactive courses designed to enhance skills in various digital domains:

- Power BI Desktop and Power BI Service, focusing on visualization and data analysis principles.

- Data extraction, transformation, and modeling in Power BI, including data modelling fundamentals and the DAX language.

- Utilization of IFAD project areas and official country boundaries in Omnidata, covering geospatial data from various sources like remote sensing imagery and spatial analytics.

- Introduction to artificial intelligence and machine learning, including data preparation for machine learning workflows and building predictive analytics systems in Azure ML, complemented by visualization and analysis in Power BI.

These courses cover a range of topics, including data analytics, visualization, geographic information systems, geospatial data, artificial intelligence, and machine learning. They are tailored to equip participants with advanced skills in digital technologies and data management, crucial for today's data-driven agricultural development.

IFAD Innovation Labs

Link: https://www.ifad.org/en/innovation

The IFAD Innovation Labs, launched by the Change, Delivery and Innovation Unit (CDI) and the Talent Management Unit, HRD, are specialized clinics designed to instill a culture of innovation within IFAD's teams. Utilizing design thinking and UN Innovation Toolkit tools, these Labs aim to equip participants with lean innovation skills, such as using the Lean Canvas, and foster an environment conducive to innovative thinking. The interactive sessions, available in English, French, and Spanish, incorporate methodologies like Lean Startup and Design Thinking, emphasizing practical exercises based on real-

life problems. Open to all IFAD workforce, including staff and interns, the Labs offer a dynamic platform for developing and implementing creative problem-solving strategies in a variety of formats, including hybrid, virtual, or in-person.

Online Course - Fundamentals of ICT4D in Agriculture

Link: https://ifad.dgroups.io/g/ICT4D

IFAD offers an online course focusing on the integration of digital solutions into its work. The course covers the potential impact of ICTs in rural agriculture, best practices for small-scale producers, key technologies supporting them, and principles and approaches of ICT4D.

UN Innovation Toolkit Webinar

Link: https://www.unssc.org/un-innovation-toolkit

IFAD participates in the UN Innovation Toolkit webinar, involving tools introduction, practical exercises on innovation factors, an innovation diagnostic run-through, and a Q&A section.

External Content - "Innovation for Impact" Learning Path

Link: https://www.ifad.org/e-learning/ifad-impact-assessment/

IFAD engages in the "Innovation for Impact" e-Learning Path, supporting innovation efforts in the UN through online learning using digital tools and innovation frameworks.

In conclusion, IFAD's comprehensive approach to digital skills includes structured online courses, participation in external webinars, development of learning paths, and the launch of Innovation Labs, reflecting a commitment to equipping its workforce with the necessary skills for a digitally evolving landscape.

International Organization for Migration (IOM)

Smart Camp Project

Link:https://dtm.iom.int/sites/g/files/tmzbdl1461/files/reports/DTM_BiH_14%20Round_Report_21_07_2022_ENG.pdf

IOM has developed a cost-effective and user-friendly digital solution for managing migrant camps, aimed at expediting daily activities, improving digital management, and providing instant reports and statistics. This solution is versatile and can be utilized by IOM, governments, and other relevant entities involved in managing migrant camps.

Key Objectives:

1. Achieving Strategic Results Framework Outcomes: The project aligns with the Strategic Result Framework, particularly in the areas of humanitarian assistance, protection, resilience, and empowerment. It aims to enhance services for migrants to meet strategic goals.

2. Supporting Digitalization: The initiative contributes to the ongoing digitalization of processes, fostering efficiency and accuracy in the management of migrant camps.

3. Enhancing Migration Policy and Partnerships: By facilitating better services for migrants and improving the overall management of camps, the project supports the development of migration policies and strengthens partnerships in the field.

4. Facilitating Orderly, Safe, and Regular Migration: The digital solution is designed to streamline camp activities, ensuring a more organized and secure environment for migrants, contributing to the broader goal of orderly, safe, and regular migration.
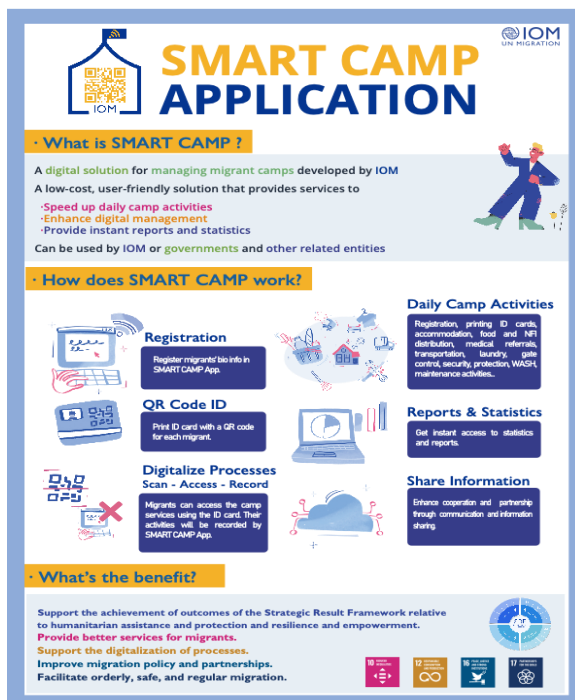
Functionality:

• Registration: Individuals are registered using a digital system.

• QR Code ID: Each migrant receives a unique QR Code ID for streamlined identification.

• Digitalized Processes: Migrants can access camp services using their ID cards, and their activities are recorded through the SMART CAMP App.

• Daily Camp Activities: The solution covers a range of activities, including registration, ID card printing, accommodation, food and non-food item distribution, medical referrals, transportation, laundry, gate control, security, protection, water, sanitation, and hygiene (WASH), and maintenance activities.

• Reports and Statistics: The system provides instant access to statistics and reports, allowing for real-time monitoring and decision-making.

• Information Sharing: The solution enhances cooperation and partnership by facilitating communication and information sharing among relevant stakeholders.

Overall, this digital solution not only addresses immediate camp management needs but also aligns with broader objectives related to strategic frameworks, digitalization, policy improvement, and the facilitation of safe and orderly migration.

International Telecommunication Union (ITU)

Digital Skills Assessments

Link: https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Publications/Publications.aspx

The ITU Office for Europe is actively engaged in assessing digital skills across various countries, with a focus on tailoring strategies to meet the specific needs of each region and demographic.

In **North Macedonia**, in collaboration with the Ministry of Information Society and Administration, the ITU Office conducted an assessment to evaluate basic digital skills in the private sector, startups, and the education sector. This initiative analyzed the current supply and demand of digital skills and developed a strategy to enhance citizens' digital capabilities and stimulate the growth of the digital economy.

In **Ukraine**, the ITU Office worked with the Ministry of Digital Transformation to undertake a comprehensive case study on digital skills development. This study emphasized national policy development and implementation efforts, aiming to equip citizens and professionals with essential digital skills. It provides a detailed overview of Ukraine's digital skills landscape and positions the country as a model of best practices in this field.

In **Albania**, the ITU Office collaborated with the Ministry of Infrastructure and Energy and the National Agency of Information Society to develop a Digital Skills Assessment for individuals aged 18-59. This assessment includes extensive background research, a detailed evaluation of various components and methodologies, a survey, and the presentation of best practices. The focus was on the elderly population in Albania, specifically targeting individuals aged 55 and above. The main goal was to gather data nationwide to provide recommendations on development of a tailored training program that addresses the unique needs of the elderly demographic in Albania, enhancing their digital skills and inclusion.

Child Online Protection Trainings

Link: https://www.itu.int/en/ITU-D/Cybersecurity/Pages/COP/Trainings.aspx

The ITU, in collaboration with Saudi Arabia's National Cybersecurity Authority, has launched a series of online trainings on Child Online Protection (COP), targeting a wide audience including parents and educators, social workers, academic and non-academic staff, policymakers, industry and children aged 9-18. Available on the ITU Academy, these courses cover key topics like privacy, misinformation, harassment, and online safety.

Children's courses are age-specific, focusing on rights, risks, and safe online behavior. For policymakers, the training emphasizes developing child online protection policies. Parents and carers have access to courses about understanding and mitigating online risks for children. Educators' courses focus on creating a safe online environment in educational settings and preventing online child exploitation. Training for industry describes the core frameworks underpinning child rights and responsible business conduct and identified actions that businesses can take to better integrate child rights across digital policies and practices.

These trainings aim to enhance awareness and skills in safeguarding children in the digital world, promoting a safer online experience for young users.

Girls in ICT

Link: https://www.itu.int/women-and-girls/girls-in-ict/

ITU is dedicated to empowering girls worldwide through ICTs, focusing on providing them with essential digital skills for formal employment and entrepreneurship. The organization emphasizes encouraging girls to pursue tech studies and careers, connecting them with role models and mentors.

Key initiatives include:

1. **EQUALS Partners**: In collaboration with EQUALS partners, ITU offers free digital skills training and certification programs to young women and girls. This includes online training and STEM workshops.

2. **CISCO EQUALS Learning Space**: A joint initiative with CISCO Networking Academy, this platform provides specific training in cybersecurity, entrepreneurship, and the Internet of Things (IoT), targeting girls and young women.

3. **Girls Can Code**: This program focuses on equipping young girls with digital literacy and coding skills, along with personal development through mentorship. It aims to expand the local and regional talent pool and break down barriers in employment and entrepreneurship for girls.

4. **Girls in ICT**: Addressing the underrepresentation of girls in science and mathematics, this initiative supports education and skills training for adolescent girls. The goal is to empower future generations of female scientists and technologists, celebrating Girls in ICT.

ITU's efforts have inspired thousands of girls to become programmers and ICT creators, encouraging further education and careers in technology. The organization invites more support to celebrate and empower Girls in ICT.

Digital Inclusion and Skills Development

Link: https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Regional%20Initiatives/2022/ITU-Europe-Region-Initiatives-2023-2025.aspx

ITU has organized various forums and events, including "Accessible Europe: ICT 4 All Forum" and "Girls in ICT 2023 Event for Europe," focusing on digital skills for life. There was also a specific focus on youth through the "Generation Connect – Europe Youth Group."

Digital Transformation for Resilience

Link: https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Regional%20Initiatives/2022/ITU-Europe-Region-Initiatives-2023-2025.aspx

ITU has been involved in launching the ITU-FAO Digital Excellence in Agriculture Report, and guidelines for digitalization of agriculture for EU pre-accession countries. Other activities include the implementation of an e-waste monitor for the Western Balkans, support for the GovStack initiative for digitizing government services, and workshops focused on public service digital transformation strategies.

ITU-UNICEF Connectivity in Education: Status and recent development in nine non-European Union Countries

Link: https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Activities/2021/ITU-UNICEF-Connectivity-in-Education-Status-and-recent-development-in-non-EU-Countries.aspx

The ITU Office for Europe and UNICEF Regional Office for Europe and Central Asia jointly published the report "Connectivity in Education: Status and Recent Developments in Nine Non-European Union Countries," focusing on the role of ICTs in driving digital skills development. This report, part of the ITU's initiatives on broadband development and digital skills and supporting UNICEF's LearnIn initiative, provides a comprehensive analysis of connectivity in education across nine countries: Albania, Bosnia and Herzegovina, Georgia, Moldova, Montenegro, North Macedonia, Serbia, Turkey, and Ukraine. It examines the status of ICTs in these countries, their impact on e-governance in education systems, and the delivery of flexible education. The report also discusses government strategies, multi-stakeholder partnerships, and responses to COVID-19 for education continuity via ICTs. Presented at a Regional Briefing in November 2021, the report aims to identify key gaps and actions for enhancing ICT-driven education. Additionally, ITU and UNICEF are organizing national workshops to further explore country-specific needs and partnerships.

United Nations Development Programme (UNDP)

Civil Registry Reform Initiative in Tajikistan

In line with SDG 16.9, the overarching goals of the two projects funded by EU and SDC [14] are to make "visible the invisible" and to offer to Tajik citizens simpler access to public services through online, offline and mobile Civil Registration (CR) solutions.
Working in close collaboration with the Ministry of Justice (MoJ), the project has seven areas of intervention: Data integration, Digitalization of CR archives, Business processes, Legal support, Capacity Building and Public awareness.

Under the data integration area, the project is developing and implementing a new CR Portal for the MoJ. After the successful deployment of the portal, the project envisages the training of 300 CR staff nationwide on the new IT solution. As the technical support of the future CR Portal is the primary and sole responsibility of IT experts from SUE Qonuniyat (the de facto IT Department of MoJ), continuous improvement of the knowledge and skills of the IT department is crucial to ensure the sustainability of the current and future IT solutions of the Ministry of Justice. Thus, the project purchased 22 online ICT courses to improve the knowledge and skills of four IT experts from the MOJ IT Department.

Under the digitalization of archives area, the project is planning to digitalize 1,350,000 CR archive records and to train 300 CR staff on carrying out all the phases of the digitalization process of these records.

Learn Management system
All the offline trainings will be recorded and uploaded in the educational platform named "Learning Management System/LMS" to provide all the CR staff access to different modules of online courses including basic computer skills and the provision of civil registration services.

United Nations Population Fund (UNFPA)

Digital Academy

Design an interactive online learning program for internal and external audiences about sexual and reproductive health (SRH) topics. This would include a series of lectures, knowledge quizzes, discussion forums, and ultimately a certificate of completion.

Objectives:

1. Empower professionals in the field to implement programs to improve SRH outcomes.

2. Use evidence-based policies and practices to support programmatic efforts.

3. Use technical expertise to guide practitioners in the field.

Project Specifications:

The learning management system (LMS) platform is to be discussed with UN HQ to see what modalities are available. It needs to be easy to navigate and designed with the user in mind. There needs to be various types of learning modules for people of different learning styles – including video, audio, interactive, and text-based portions.

Some potential topics include:

1. Basics of sexual & Reproductive health

2. Overview of contraceptive options & Patient choice

3. History of bias & Coercion

4. Abortion care

5. Youth & Adolescent care

6. People with disabilities care

7. Maternal & Infant health

8. Menopause awareness & care

9. Cervical cancer screening

Information: The creation and regular updating of a "library of resources" for participants to access is a crucial aspect of this academy for continuing education. There will also be a contact page for experts in the field.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

Workshop to enhance the digital skills in education – Croatia & Uzbekistan

UNESCO has actively supported the enhancement of digital skills in education, conducting workshops in both Croatia and Uzbekistan, each addressing unique national contexts.

Croatia:

- UNESCO's efforts in Croatia leveraged the country's National Strategic Framework for Digital Maturation of Schools and the School System.

- A 2018 workshop employed the methodology from UNESCO's Guidelines to support the development of national ICT in education policies and a comprehensive master plan.

Uzbekistan:

- Similarly, in Uzbekistan, a workshop utilized the Guidelines' methodology.
- This workshop was particularly significant given the major governmental restructuring in Uzbekistan about 6-7 years ago, aiding in aligning digital skills initiatives with the new government framework and contributing to digital skills advancement in the country.

In both Croatia and Uzbekistan, UNESCO's initiatives were instrumental in promoting digital skills within the educational sector. These workshops not only provided a platform for collaboration and knowledge sharing but also reinforced the importance of creating national frameworks and master plans for integrating ICT into educational policies.

Additionally, UNESCO has released a publication for policymakers on adopting technology in education. This report underscores the need to uphold human rights, and prioritize inclusion, equity, and gender equality in technological integrations. It offers policy planning frameworks and a roadmap for assessing digital readiness in education systems, tailoring to the needs of learners and teachers, and devising well-supported national ICT programs. The overarching aim is to align technology use in education with principles of human rights and equitable access. The full report is available here: UNESCO Report on Technology in Education.

United Nations Children's Fund (UNICEF)

UNICEF's commitment to digital skills spans across various initiatives, focusing on gender inclusion, innovative projects, teacher training, and evidence generation to ensure children are equipped to navigate the digital world safely and effectively.

Skills4Girls

Skills4Girls, a global initiative led by UNICEF, focuses on enhancing and strengthening girls' competencies in STEM, digital technologies, and social entrepreneurship. This partnership is dedicated to inspiring and enabling girls to overcome gender obstacles, positioning them as leaders and influential decision-makers in both their personal journeys and the broader global landscape.

Bosnia and Herzegovina: IT Girls Initiative

The IT Girls initiative, led by UNDP, UNICEF, and UN Women in Bosnia and Herzegovina, encourages girls and women to pursue ICT careers. It operates through three pillars: education, engagement with the ICT sector, and advocacy for greater female participation in ICT. Between 2020-2021, over 10,000 women benefited from free webinars and schools received Arduino robot kits for skill development. The program also includes digital training in 10 schools and supports 5 IT companies in aligning with Women's Empowerment Principles. Since its inception in 2015, IT Girls has been dedicated to increasing female inclusion in the country's ICT sector.

Kazakhstan: UniSat girls' nanosatellite programme

UNICEF Kazakhstan, in collaboration with Al-Farabi Kazakh National University, has developed the UniSat Nanosatellite programme to empower girls in STEM, addressing gender stereotypes and fostering skills for employment and self-efficacy. Following the first nanosatellite's launch in October 2020, the program is expanding nationally and regionally, including in Uzbekistan and Kyrgyzstan. In January 2022, 2,650 girls from these countries, including remote areas, began an online nanosatellite course. At least 200 participants will attend a 10-day workshop in Kazakhstan in April 2022 to assemble a nanosatellite, with plans to launch at least five nanosatellites into the stratosphere by girls in 2022. This initiative aims to encourage more girls and young women to pursue STEM careers.

Kyrgyzstan: STEM4Girls

The STEM4Girls programme in Kyrgyzstan focuses on empowering 15-18-year-old girls from remote and under-resourced areas, reaching up to 30,000 participants. Its objective is to enhance their STEM skills, support career choices, and create job opportunities. In 2021, the initiative reached over 10,000 girls, connected 1,200 with female mentors, and trained 700 as peer trainers in STEM, child rights, and gender equality. A significant 81% of participants recognized its help in identifying STEM career options.

Serbia: Building skills for better futures Youth Internship programme

UNICEF Serbia aims to improve employability for up to 2,000 young people from marginalized groups, including NEET girls, by offering paid internships and skills training. In 2021, the program established its strategy and connected with key stakeholders, focusing on skills like communication, IT, and digital competencies. An online platform with a tailored algorithm helps match participants with internship opportunities. In 2022, supported by the Gender Thematic Fund and partners like Pandora, UNICEF intensified efforts to link NEET youth with internships and advance a national platform for youth employment opportunities.

Tajikistan: Innovation labs and job sourcing for the 21st century workforce

In Tajikistan, UNICEF's 15 Innovation Labs are empowering over 9,000 adolescents with 21st-century, digital, and social entrepreneurship skills. Key initiatives in 2021 included UPSHIFT, Tech4Girls, and the Adolescent Kit for Innovation and Expression. Tech4Girls, particularly focused on rural girls, enhances their ICT capabilities. UNICEF also developed a national Digital Literacy Framework and ICT curricula. With partners like Chloé, the program advocates for gender equality in tech and empowers girls to positively impact their communities.

Bulgaria – Cyber Survivor Initiative

Link: https://www.unicef.org/bulgaria/en/unicef-launches-digital-literacy-campaign-new-generation-critical-thinking

The initiative, "Cyber Survivor," is a digital literacy application designed to help youth navigate the internet safely. It serves as an interactive learning platform, integrating quizzes, real-life scenarios, videos, animation stories, and practical tasks using digital tools. This app aims to empower teens with digital skills through engaging, game-like experiences.

Ukraine – Media literacy in time of pandemic course

Link: https://www.unicef.org/ukraine/en/press-releases/unicef-and-ministry-digital-transformation-launch-edutainment-videos-media-literacy

UNICEF, in partnership with the Ministry of Digital Transformation and support from USAID, has launched educational videos titled "Media literacy in a time of pandemic" for young people. These videos, featuring Ukrainian celebrities and hosted by Nikita Dobrynin, aim to equip youth with skills to identify misinformation, particularly regarding COVID-19. A U-Report poll revealed that less than 14% of youth verify information seen on social media and news, highlighting the need for such education. The six-episode course addresses common COVID-19 misinformation and provides general tips on analyzing news authenticity. Developed with input from Ukrainian fact-checking experts, the course covers topics like fake news origins, conspiracy theories, and verifying photos and videos.

Türkiye – Digital Ecosystem for Teacher Training

Link: https://www.unicef.org/turkiye/en/press-releases/new-initiative-help-ensure-children-learn-digital-skills-modern-workforce

An estimated 18 million students in Türkiye are currently benefiting from a €3.75 million Digital Ecosystem for Teacher Training initiative, funded by the European Union and implemented by UNICEF in collaboration with the Ministry of National Education. The initiative, currently underway, is training an initial cohort of 200,000 teachers, school administrators, and education personnel across eight provinces in digital skills. This training aims to eventually reach one million teachers across the country. Running until 2026, the project is designed to better align school education with the evolving job market and employer needs, particularly in the context of a digital economy projected to create 3.1 million new jobs in Türkiye over the next decade. Participants are accessing an online training platform offering 120 hours of interactive digital skills modules, with teachers actively involved in content development and collaboration in eight training labs. The initiative also includes participation from public officials, academics, and NGO employees, contributing to enhancing the long-term quality of education systems.

United Nations Organization for Project Services (UNOPS)

Georgia – Telemedicine

Link: https://www.unops.org/news-and-stories/news/covid-19-stay-up-to-date-with-the-latest-on-unops-support-to-response-efforts

Within the "Minimizing the impact of the COVID-19 outbreak in Georgia through telemedicine and digital health solutions" project, UNOPS is participating along with WHO, UNICEF and UNFPA on the implementation of the Action, which is aimed at supporting Georgia's Primary Health Care (PHC) system in rural areas to: (I) mitigate disruption of services due to the COVID-19 outbreak and (II) deliver high quality PHC services, especially in hard to reach areas. The focus is on introducing new service delivery approaches into the rural PHC system such as telemedicine and telecare and improving the capacity of rural doctors to provide quality PHC services through tele-education. This requires community engagement to increase demand for telehealth services from both the health care providers and patients, as well as creating a supportive environment in which strategies, structure(s), funding mechanisms, equipment and monitoring systems are in place. In addition, support has been provided to public health services to improve surveillance, data management and contact tracing by implementing modern, easy to handle digital technologies. As a result, Georgia will be well equipped/positioned to not only address current emergency health challenges but also future needs while moving towards Universal Health Coverage. The action has been funded by the European Union (EU) and UNOPS has been leading on the main procurement activities of the action such as procurement of basic equipment and furniture for 200 village ambulatories and Telemedicine equipment for 50 remote sites.

Albania - EU4Culture

Link: https://www.unops.org/news-and-stories/stories/preserving-the-past-embracing-the-future

In the context of the EU4Culture, UNOPS is working on the development of digital based activities in a number of sites in Albania. Digital based activities are developed utilising digital content development and equipment purchase and installation. The digital content developed includes 3D reconstructions of historical sites for virtual reality and remote viewing; video mapping on artifacts; holograms showcasing artisans in production processes; dome projection videos including 360 degree viewing enhanced with sound effects; augmented and virtual reality applications including 360 degree viewing of historical interiors, and interactive experience of historical costumes, augmented experience of historical features of the city enhanced with sounds; autonomous sensory meridian response technology for immersive experiences including sounds of functions of rooms; web based and physical audio guides in number of languages allowing for individual/group explorations of historical sites; educational games aimed at learning about historical costumes and clothing. The equipment includes a range of devices, from highly professional video projectors for projecting on spherical surfaces; VR goggles; tablets; large multi-touch screens; etc.

Uzbekistan – Enhancing Oncological Healthcare Services in Uzbekistan

Link: https://uzbekistan.un.org/en/245548-driving-sustainable-development-forward-uzbekistan-unops'-commitment-under-sdgs-spotlight

This partnership will result in delivering efficient prevention, treatment, and management of oncological cases through the procurement of vital medical, laboratory, radiological, and ICT equipment. The project is funded by the Ministry of Public Health of the Republic of Uzbekistan through Islamic Development Bank loan funds.

Modernizing Laboratories and Treatment Facilities in Uzbekistan

Link: https://unece.org/sites/default/files/2021-05/Uzbekistan-UNSDCF-2021-2025.pdf

Together with the Sanitary and Epidemiological Welfare and Public Health Service of Uzbekistan (SES), UNOPS has also initiated a comprehensive upgrade for more than 50 laboratories and treatment facilities in Uzbekistan. This includes assessments of existing infrastructure, procurement of crucial diagnostic equipment and supplies, and the establishment of an advanced ICT-based national surveillance and monitoring system. The project is funded by the Ministry of Health of Uzbekistan through loan funds from the Asian Development Bank and Asian Infrastructure Investment Bank.

UN Tourism

High-Level Dialogue on Digital Skills in Tourism

Link: https://www.unwto.org/global/press-release/2019-03-07/google-partners-unwto-digital-skills-development#:~:text=A%20High,priority%20for%20destinations%20around%20Europe

This dialogue, organized by UN Tourism with the support of Google during the ITB Berlin travel trade fair, emphasized the importance of digital skills development for destinations around Europe. It set the backdrop for announcing the agreement between UN Tourism and Google, highlighting the priority given to digital skills in the tourism industry.

UN Women

Study on gender digital divide in Western Balkans and Eastern Partnership Countries

Link: https://eca.unwomen.org/en/digital-library/publications/2021/3/digitally-empowered-generation-equality-women-girls-and-ict-in-the-context-of-covid-19

In collaboration with ITU, UN Women conducted a study focusing on women and girls in the ICT sector in Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia, Ukraine, Georgia, and Moldova. This study analyzed their participation in the digital world, especially in the wake of COVID-19, leading to country-specific recommendations to foster their participation in the ICT sector.

Partnership with Women in Tech

Link: https://eca.unwomen.org/en/stories/news/2023/05/press-release-un-women-and-women-in-tech-partner-to-empower-women-and-girls-in-ict-across-europe-and-central-asia

UN Women's Regional Office for Europe and Central Asia partnered with the non-profit organization Women in Tech to promote joint initiatives. These efforts focus on increasing awareness, building capacity in ICT-related fields, and advocating for enabling legislative and policy frameworks to engage more women and girls in technology in Europe and Central Asia.

World Health Organization (WHO)

WHO has been actively involved in various initiatives related to digital skills, especially in the context of digital health. Digital skills are crucial in the healthcare sector for effective data management, technology adoption, and ensuring that health professionals and the public are well-equipped to navigate the digital landscape. Here are some aspects of WHO's work in digital skills.

Digital Health Literacy

Link: https://www.who.int/europe/news/item/18-09-2023-digital-health-literacy-key-to-overcoming-barriers-for-health-workers--who-study-says

WHO recognizes the importance of digital health literacy for both healthcare providers and the general public. Digital health literacy involves the ability to access, understand, and utilize health information and services through digital means.

Regional Digital Health Action Plan

Link: https://www.who.int/europe/publications/i/item/EUR-RC72-5

The Regional Digital Health Action Plan outlines strategic objectives to advance digital health in the European Region. Specific attention may be given to Strategic Objective 2, which could be related to digital health literacy initiatives.

Reports on Digital Health

Link: https://www.who.int/europe/publications/m/item/digital-health-in-the-who-european-region-the-ongoing-journey-to-commitment-and-transformation

Reports such as the one found here may provide insights into WHO's ongoing efforts and progress in integrating digital technologies into healthcare practices. It's essential to examine specific sections of the report, such as those between pages 25-30, for detailed information.

Research Publications

Scientific publications, like those available on PubMed (e.g., Report 1 and Report 2), can offer valuable insights into WHO's research and contributions to the field of digital health, including aspects related to digital skills.

Useful links

1. Barriers and facilitators to utilizing digital health technologies by healthcare professionals

2. The global effect of digital health technologies on health workers' competencies and health workplace: an umbrella review of systematic reviews and lexical-based and sentence-based meta-analysis

3. Regional digital health action plan for the WHO European Region 2023–2030 (RC72)

4. Digital Health in the WHO European Region: the ongoing journey to commitment and transformation

Addressing Digital Skills globally

International Labour Organization (ILO)

Changing Demand for Skills in Digital Economies and Societies

Link:https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_emp/@ifp_skills/documents/publication/wcms_831372.pdf

ILO recognizes the significant impact of digital transformation on the economy and job market. The COVID-19 pandemic has accelerated this shift, underscoring the importance of digital skills in the workforce. However, a digital divide persists, especially in the Global South, due to differences in infrastructure, connectivity, and skills. To address these challenges, the ILO emphasizes the need for comprehensive data to assess digital skills demand and supply.

The ILO's approach includes developing education and training systems that respond timely to digital transformation, ensuring a balanced mix of basic, technical, and core work skills for lifelong learning. It advocates for integrating digital skills in early learning, reorienting teaching methods, adapting technical and vocational education and training (TVET), and enhancing tertiary education. The organization also supports industry-level skill responses, effective lifelong learning strategies, and integration of skills policies with broader labor market and national policies. This holistic approach aims to bridge the skills gap and align education systems with evolving digital economies.

Generative AI and Jobs: A Global Analysis of Potential Effects on Job Quantity and Quality

Link:https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@inst/documents/publication/wcms_890761.pdf

ILO provides a global analysis of the potential effects of Generative AI on job quantity and quality. The report examines how the advent of Generative AI may shape the workforce, including potential impacts on job creation and the nature of work.

Global Employment Trends for Youth

Link:https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_853321.pdf

ILO's report on Global Employment Trends for Youth in 2022 offers insights into the employment landscape for young people globally, with a likely focus on how digital skills play a role in youth employment trends.

WEF's The Future of Jobs Report

Link: https://www3.weforum.org/docs/WEF_Future_of_Jobs_2023.pdf

The World Economic Forum's Future of Jobs Report, collaborated with ILO, provides a comprehensive overview of the anticipated changes in the job market, including the impact of digitalization and emerging technologies.

LinkedIn's Future of Work Report

Link:https://economicgraph.linkedin.com/content/dam/me/economicgraph/en-us/PDF/future-of-work-report-ai-august-2023.pdf

LinkedIn's Future of Work Report, in collaboration with ILO, may offer insights into the evolving nature of work, the skills in demand, and the influence of Artificial Intelligence. The report is likely to provide a perspective from the professional networking platform.

These reports collectively contribute to understanding the dynamic intersection of digitalization, skills, and employment trends, reflecting ILO's commitment to providing valuable insights for policymakers, businesses, and workers in an increasingly digital world.

International Telecommunication Union (ITU)

ITU Academy

Link: https://academy.itu.int/training-courses/full-catalogue

Training activities can be delivered: Online through the ITU Academy platform; Face-to-face through ATCs, ITCs, academic and other partner institutions; Blended training, which combines classroom studies with online activities and self-studies.

Under the umbrella of the Academy, ITU also designs and develops standardized training programmes and resources corresponding to ITU main areas of activity. Materials are developed and peer reviewed by experts from ITU, academic scholars and other experts, to ensure they meet the highest levels of quality and conform to ITU standards. In addition, materials are designed in such a way that training providers other than ITU can be involved in the delivery.

Training programmes developed under the ITU Academy include the Spectrum Management Training Programme, Quality of Service Training Programme and ICT and Climate Change Training Programme.

ITU Academy Training Centers (ATCs)

Link: https://academy.itu.int/itu-d/projects-activities/itu-academy-training-centres

The ITU Academy Training Centres (ATCs) program, launched in 2023, is ITU's new flagship initiative designed to enhance the capabilities of ICT professionals globally. This program, which evolved from the Centres of Excellence program, was established following the outcomes of the World Telecommunication Development Conference (WTDC) 2022 and the adoption of the revised Resolution 73 by the ITU membership.

Focused on advancing knowledge and skills in the ICT sector, the ATCs are key to driving digital transformation. These internationally recognized institutions offer high-quality training, particularly catering to the needs of professionals from developing countries. The ATCs cover a wide range of

critical training topics identified by ITU's membership, including policy and regulation, network infrastructure, spectrum management, cybersecurity, digital inclusion, and digital services.

Training courses are primarily conducted online via the ITU Academy's e-learning platform, with hybrid and face-to-face courses also available. Interested individuals can register for these courses online through the ITU Academy platform.

In its inaugural year, the program selected 14 centers to commence operations. Each of these centers contributes significantly to building the global capacity of ICT professionals, aligning with ITU's commitment to fostering a skilled workforce equipped for the challenges of the digital era.

Digital Transformation Centers Initiative (DTC)

Link: https://academy.itu.int/itu-d/projects-activities/digital-transformation-centres-initiative

The Digital Transformation Centres (DTC) Initiative was launched in September 2019 by ITU in partnership with Cisco, with the objective of supporting countries to strengthen digital capacities of citizens at basic and intermediate levels. The Initiative delivers training through a network of institutions operating nationally, and with the infrastructure, expertise, and experience to run digital skills training. The Initiative targets beneficiaries predominantly from rural and underserved communities with low or no digital skills. The selected DTCs become part of a global network of institutions to accelerate the uptake of digital technologies among citizens and boost the capacity of young entrepreneurs and SMEs to succeed in the digital economy. Since the launch of the Initiative until September 2023, over 250,000 course participants from rural and underserved communities, of which 54 per cent are women, have been trained on basic and intermediate digital skills.

AI Capacity Development Track

Link: https://aiforgood.itu.int/eventcat/webinar/

As part of its efforts to build capacity in new emerging technologies, the ITU, under the framework of the AI for Good Summit, hosts a series of webinars on the topic of AI. The webinars provide a platform for global debates and discourse on AI solutions and critical issues. While the webinars raise awareness on the topic, they also interrogate the topic of AI and its implications for other sectors. These webinars are open to anyone who is interested in learning about AI.

GIGA UNICEF-ITU Initiative

Link: https://www.itu.int/en/ITU-D/Initiatives/GIGA/Pages/default.aspx

With the goal of making school connectivity universal and meaningful, ITU and UNICEF launched Giga in 2019: an initiative to connect all the schools in the world to the internet and every young person to information, opportunity and choice. The Giga initiative consists of three pillars: Map, Model, and Contract. Map the location of schools and monitor school connectivity status in real-time; model the infrastructure, policies, regulations, and investments needed to deliver school connectivity; help governments to contract connectivity for schools.

ITU Digital Skills Forum 2024

Link: https://www.itu.int/itu-d/meetings/digital-skills-forum/

The ITU Digital Skills Forum is the main global event for digital capacity development. The Forum brings together stakeholders from across the world to discuss the most pressing needs that have to be addressed in order to ensure that universal digital skills can be achieved and the global digital skills gap linked to digital transformation can be closed. The Forum directly contributes towards enhanced awareness of policy makers concerning the importance of implementing national digital skills policies and programmes and improved knowledge and understanding of the core issues related to the digital skills gap, digital skills needs related to digital transformation and opportunities for digital skills improvement. The Forum also aims to identify a set of guidelines and common proposals on how to strengthen digital skills at national and global level and launch new partnerships on digital skills.

United Nations Children's Fund (UNICEF)

Global Kids Online Project

Link: https://www.unicef-irc.org/research/global-kids-online/

The Global Kids Online project, established in 2015 and partnered with the London School of Economics and Political Science and the EU Kids Online network, aims to generate evidence on children's online experiences, especially in the Global South. It offers a toolkit of standardized methodologies for researchers to collect robust data on children's digital experiences. As of 2019, the project, involving UNICEF country offices and academic partners, has gathered data from around 25,000 children and 12,000 parents in 18 countries across four continents. This network allows for cross-national comparisons of children's internet use, understanding various country and regional contexts. The research toolkit is freely available on the Global Kids Online website, and the network is continually expanding with additional projects.

UN Tourism

Digital Futures Programme for SMEs

Link: https://www.unwto.org/news/unwto-launches-digital-futures-programme-for-smes

UN Tourism launched the Digital Futures Programme to accelerate the adoption of new technology among tourism enterprises, especially focusing on small and medium-sized enterprises (SMEs), which constitute 80% of all tourism businesses. The program aims to reach at least 1 million tourism SMEs, providing them with foundational skills and knowledge to harness new and emerging technologies. The program includes a Digital Readiness Diagnostic Tool to benchmark SMEs across key digital dimensions like connectivity, e-commerce, and big data analytics.

Partnership with GSMA

Link: https://news.fundsforngos.org/tourism-and-development/only-4-days-left-motorola-solutions-foundations-2022-annual-grant-cycle-opening-this-november-30/

UN Tourism and GSMA, a global association unifying the mobile ecosystem, have partnered to promote the upskilling of people in underserved communities engaged in tourism. This partnership focuses on helping marginalized groups, including women and indigenous peoples, by providing new tourism services and improving their livelihoods. The partnership includes training sessions on digital marketing, like those delivered in Chiapas and Veracruz in Mexico, helping local women promote their artisan textiles online. This initiative is part of the UN Tourism Weaving the Recovery project, which aims to train millions of indigenous women globally to harness online channels for business development and cultural exchange.

UN Women

Together Digital Program with Ant Foundation

Link: https://asiapacific.unwomen.org/en/stories/press-release/2022/07/together-digital-to-empower-women-led-msmes

This five-year program aims to support women-led micro, small, and medium-sized enterprises (MSMEs) and empower them to participate and thrive in the digital economy. The program focuses on training, access to markets, funding, and knowledge exchange opportunities, helping women entrepreneurs establish, maintain, and expand their businesses in the digital era.

Digital Skills Pilots by the World Bank and EQUALS

Link: https://blogs.worldbank.org/digital-development/world-bank-partnership-equals-launches-new-program-support-digital-skills

In partnership with the World Bank, EQUALS Global Partnership's Access Coalition, and the GSMA, UN Women is involved in launching three digital literacy pilot programs focusing on women and girls. These pilots aim to test different models of delivering digital skills training, including online and in-person training, mentorship support, access to digital technologies, and soft skills training. The outcomes of these pilots will inform future digital skills interventions.

These initiatives by UN Women demonstrate a comprehensive approach to enhancing digital skills and empowering women and girls globally, ensuring their participation in the rapidly evolving digital world.

World Intellectual Property Organization (WIPO)

WIPO Academy

Link: https://www.wipo.int/wipo_magazine_digital/en/2023/article_0030.html

WIPO Academy, a leading provider of intellectual property (IP) training and education, has initiated various projects focusing on digital skills, particularly in the realm of IP. These initiatives include:

1. People-First Approach: The Academy emphasizes making IP training accessible to a broad range of individuals, including entrepreneurs, innovators, women, local and Indigenous communities, academics, and young people.

2. Online Courses During COVID-19 Pandemic: Tailored online courses were delivered for entrepreneurs to support the use of IP in business development and growth.

3. Targeting New Groups: WIPO Academy focuses on providing practical IP skills training, catering to creators, innovators, and entrepreneurs, enabling them to transform ideas into competitive businesses.

4. Supporting SMEs: Training programs are designed to meet the needs of small and medium-sized enterprises (SMEs), particularly in the creative and innovative sectors, empowering them to leverage the IP system for business advancement.

5. Programs for Local Entrepreneurs: The Academy offers tailored programs for local entrepreneurs in industries like gastronomy, handicrafts, tourism, and agriculture, providing guidance and assistance in IP asset protection.

6. Skills Building Focus: The Academy has shifted its focus to skills building, offering practical training through real-world case studies, simulation exercises, and work placements to apply learning in real-world IP challenges.

7. Digital and Hybrid Training Expansion: The Academy enhanced its e-Learning platform to offer courses in over 10 languages, including distance learning components for greater accessibility and flexibility.

8. Increased Digital Participation: The shift to digital formats has significantly boosted participation, leading to a growing demand for virtual textbooks and digital IP libraries.

9. Partnership-Driven Programs: The Academy emphasizes partnerships to deliver IP education, enabling countries from different regions to collaborate on key IP topics and learn from each other.

These projects showcase WIPO Academy's commitment to integrating digital skills within the framework of intellectual property education and training, addressing the needs of a diverse range of participants worldwide.

Conclusion: Navigating Digital Skills Development for Sustainable Growth and Inclusivity

Synthesis of global and regional efforts

The global and regional initiatives led by United Nations agencies and other international organizations highlight a concerted effort to address the digital skills gap, critical for sustainable development and economic prosperity. This multifaceted approach spans Europe, Central Asia, and beyond, emphasizing the importance of digital literacy in various sectors, from agriculture and healthcare to education and tourism.

Key Challenges and Opportunities

- Digital Divide: A prevalent challenge across regions is the digital divide, particularly in the rural areas of Europe and Central Asia. This gap stems from disparities in infrastructure, connectivity, and access to digital education.

- Inclusive Digital Transformation: Efforts like the UN-DTG4ECA in Europe and Central Asia, and global initiatives by ITU and UNICEF, focus on inclusive digital transformation. These initiatives aim to integrate digital skills across sectors and communities, ensuring no one is left behind.

- Evolving Job Market: ILO's reports and collaborations with entities like the World Economic Forum and LinkedIn provide insights into the changing demands of the digital economies. They underscore the need for a workforce equipped with a mix of basic, technical, and core work skills for lifelong learning.

- Adapting Education Systems: Adapting education systems to meet the challenges of digital transformation is crucial. This involves integrating digital skills in early learning, reorienting teaching methods, and enhancing technical and vocational education and training (TVET).

- Lifelong Learning and Skills Development: Initiatives like the ITU Academy Training Centers and UNWTO's Digital Futures Programme emphasize the importance of lifelong learning and continuous skills development to keep pace with technological advancements.

Collaborative and Inclusive Approach

The collective efforts of UN agencies and their partners are grounded in collaboration and inclusivity. This approach is vital in shaping a sustainable and inclusive digital future, ensuring that technology serves as a tool for empowerment and progress towards the SDGs.

Moving Forward

As we progress towards a digitally empowered future, the need for a comprehensive understanding of digital skills, strategic investment, and policy development becomes increasingly apparent. The ambitious targets set by organizations like the European Commission and the collective commitment to digital empowerment necessitate a focus on innovation, inclusivity, and collaboration.

In conclusion, the journey towards enhancing digital skills globally and in regions like Europe and Central Asia is marked by a recognition of the pivotal role digital literacy plays in personal and professional development.

Recommendations for Enhanced Collaboration and Efficiency among Agencies in Digital Skills Development

Establishing Clear Communication Channels and Shared Platforms

- Unified Digital Skills Framework: Develop a unified framework for digital skills that can be adapted and used by different agencies. This shared framework would ensure a consistent understanding of digital skills across various sectors and initiatives.

- Regular Inter-Agency Meetings: Establish regular meetings or forums where agencies can discuss ongoing projects, share insights, and coordinate efforts. This would foster transparency and prevent duplication of efforts.

- Centralized Information Repository: Create a centralized platform or repository where agencies can access information about ongoing and planned projects in digital skills development. This repository could include data, best practices, research findings, and resources.

Collaborative Planning and Strategy Development

- Joint Needs Assessment and Strategy Development: Conduct joint needs assessments to identify gaps in digital skills across different regions and sectors. Collaborative strategy development can then ensure that initiatives are targeted and complementary.

- Pooling Resources and Expertise: Encourage agencies to pool resources and expertise where possible. This could involve shared funding for large-scale projects, joint research initiatives, or combined training programs.

- Cross-Agency Project Teams: Form cross-agency teams for specific projects to leverage diverse expertise and resources. These teams would work on specific aspects of digital skills development, such as curriculum development, training delivery, or policy advocacy.

Focusing on Specialization and Targeted Interventions

- Specialization in Niche Areas: Encourage agencies to specialize in niche areas within digital skills development. For instance, one agency might focus on digital literacy for rural communities, while another concentrates on advanced ICT training for urban youth.

- Targeted Interventions Based on Agency Strengths: Each agency should undertake interventions that play to its strengths and mandate. This approach would ensure that each aspect of digital skills development is handled by the most capable and best-equipped agency.

Monitoring, Evaluation, and Learning

- Shared Monitoring and Evaluation Framework: Develop a shared monitoring and evaluation framework to assess the impact of digital skills initiatives. This would enable agencies to measure progress consistently and make data-driven adjustments to their strategies.

- Learning and Knowledge Exchange: Facilitate regular knowledge exchange sessions where agencies can share lessons learned, challenges faced, and successful strategies. This could be in the form of workshops, webinars, or joint publications.

Policy Advocacy and Stakeholder Engagement

- Unified Voice in Policy Advocacy: Agencies should collaborate on policy advocacy to ensure that digital skills development is prioritized in national and international agendas. A unified voice would be more influential in shaping policies and securing funding.

- Engaging with Local Stakeholders: Collaborate in engaging with local stakeholders, including governments, private sector, and civil societies, to ensure that digital skills initiatives are aligned with local needs and supported by local entities.

Technology and Innovation

- Leveraging Emerging Technologies Collectively: Agencies should collectively explore and leverage emerging technologies like AI and blockchain for enhancing digital skills training and monitoring.

- Innovation Labs and Pilot Projects: Establish joint innovation labs or pilot projects to experiment with new approaches in digital skills development. Successful pilots can then be scaled up and replicated by other agencies.

In conclusion, by working together effectively and avoiding overlap, UN agencies can amplify their impact, optimize resource utilization, and significantly advance the global agenda of digital skills development for sustainable and inclusive growth.