



G7 Social Background document



G7 Responses to Tackle the Digital Skills Gap

In a changing world of work, marked by fast-moving digitalisation and a rise in automation, millions of workers are exposed to the risk of labour market displacement, while demand for workers with digital skills is increasing. Workers in low-skilled positions who lose their jobs due to automation may not benefit from the jobs created in the new economy. There is a mismatch between the skills requirements of employers and the qualifications of jobseekers, which is expected to grow in the future. This means that digital transformation could accelerate labour market pressures and deepen inequalities.

At the same time, digital transformations can provide important opportunities to foster inclusive and sustainable growth, if supported by appropriate public policies helping the current and future workforce gain the skills needed to participate in the evolving labour market. This is important because citizens, businesses and public services cannot take full advantage of the transformational benefits of the digital revolution if digital opportunities are not accessible to people from every part of society.

To address these challenges and develop citizens' skills, governments, in cooperation with social partners, need to adopt a comprehensive strategy involving education and training policies, supporting lifelong learning and the development of a range of skills and competencies, including digital skills, and targeting a broad cross-section of the population so that no-one is left behind.



It is important to ensure that young people currently in education and all workers and jobseekers, particularly the most vulnerable, are equipped with a variety of digital skills ranging from basic to advanced and can benefit from retraining and upskilling throughout their working life.

G7 members have already committed to encouraging the development and implementation of comprehensive mechanisms to predict and support skills development, including lifelong reskilling and upskilling.

Initiatives and policy measures are taking place at the national and regional levels to tackle the digital skills gap, some involving close collaboration between the public and private sectors. They aim to develop the full range of digital skills that individuals and companies need in an expanding digital economy.

1. Empowering young people through skills development and adapted education systems and apprenticeship programmes

As noted in the ILO's Global Commission on the Future of Work Report, the transition from school to work is a key moment where many young people are left behind. Preparing the younger generations for the future of work through modernized education and apprenticeship programmes is one of the policy strategies adopted by G7 members.

Initiatives and measures are currently being implemented to strengthen linkages between educational systems and the labour market. They are designed to improve the quality and relevance of initial training provided to young people by school and college/university courses as well as apprenticeship programmes that give young people the opportunity to alternate periods of training and periods in the workplace. As a result, these initiatives are expected to tackle the issue of youth unemployment by enabling people to make better career choices, gain the skills required to succeed in the labour market, find quality jobs and improve their life chances.

EXAMPLES

Canada introduced “the Student Work Placement (SWP)” programme in 2017 that gives thousands of post-secondary students in science, technology, engineering, mathematics (STEM) and business programmes the opportunity to gain paid work experience related to their field of study. Canada also recently committed to invest \$631.2 million CAD to support up to 20,000 new work placements per year for post-secondary students in all disciplines, and an additional \$150 million CAD to create up to 20,000 work-integrated learning opportunities per year through partnerships with innovative businesses.

The “CanCode” programme, launched in 2017, helps young people learn coding and digital skills, with training support for their teachers and a special focus on reaching young people who are traditionally underrepresented in STEM, such as girls and Indigenous youth. In its first two years, CanCode has reached over 1.3 million students and over 61,000 teachers.

The European Union is developing initiatives to work towards a “European Education Area” by 2025, with the ambition of enabling all young people to receive the best education and training. To support this longterm goal, the European Union has launched the Digital Education Action Plan, which includes 11 concrete actions to promote better use of digital technology for teaching and learning, development of digital competencies and skills, and improvement of education through data analysis and foresight.

The Youth Guarantee, adopted by the European Union in 2013, provides a framework to support the transitions of young people from school to work. It has led to apprenticeship and training reforms in several EU countries.

In addition, as regards apprenticeships, the “European Alliance for Apprenticeships” was launched in 2013 in response to the youth unemployment crisis in Europe. Since then, companies, employers and intermediaries have pledged to provide over 906,000 apprenticeships and other training or first-job opportunities to young people.

Italy launched its “National Plan for Digital schools” in 2015, involving 35 actions promoting innovation and digitalization of the Italian educational system. The Plan’s most important features include: the introduction of dedicated ‘digital catalyst’ and an innovation team of teachers responsible for implementing the plan in each school; structural investments to create new physical spaces (labs, educational environments and libraries) for technological and methodological innovation; and a training plan targeting all school staff. Its results include 70% of schools implementing didactic pathways on coding, educational robotics, computational models, STEM, digital entrepreneurship and digital citizenship.

Japan encourages the development of industry-academia collaboration programs for adults at universities and specialized training colleges. The government encourages further industry-academia partnership through these efforts as well as by building teacher training systems using trainers with real-world practical experience.

The United Kingdom announced the introduction of T-Levels in England in 2020, a new technically focused qualification. Courses have been developed in collaboration with employers and businesses so that the content meets the needs of industry.

An additional £500 million has been announced by the UK Government to help providers meet the costs of additional teaching hours and organizing industry placements, once T Levels have been fully rolled out.

The UK Government has also announced £170 million of funding to set up twelve Institutes of Technology across England. These will be prestigious and high-quality institutions, formed from collaborations between existing further and higher education providers and employers. They will specialise in delivering higher level technical training in STEM subjects, with a clear route to high skilled, high wage employment.

In 2018, **the United States** adopted a five-year strategic plan (“Charting a Course for Success: America’s Strategy for STEM Education”) aimed at building strong foundations for STEM literacy by ensuring every American has the opportunity to master basic STEM concepts, including computational thinking, and to become digitally literate. This plan leverages insights from the federal government, educators and industry representatives, in order to help prepare individuals for jobs of the future and advance innovative job training programs.

In addition, the Department of Labor is expanding pre-apprenticeships with new companies in high demand industries. For example, the Department of Labor’s “YouthBuild” initiative is a recognized pre-apprenticeship programme helping at-risk young people complete high school or state equivalency degree programmes, earn industry-recognized certifications for in-demand occupations, and undergo on-the- job training in different industries.

2. Ensuring access to reskilling, upskilling and lifelong learning for those already in employment through improved continuous education and training systems.

A “job for life” is no longer a reality for many workers who have to navigate their way through several job transitions. Reskilling and upskilling the workforce is therefore crucial and will be even more decisive in the future. According to the OECD Employment Outlook 2019 data, an average of 14% of jobs are at high risk of automation in G7 countries and 32% will experience significant changes. Vocational training plays a major role in helping workers to adapt to the evolving labour market. It makes it possible for each person to acquire and update their knowledge and skills and to increase their level of qualification, enhancing their employability and facilitating professional mobility.

For companies, vocational training is a major lever to improve competitiveness and enable transformation, allowing them to cope effectively with economic changes: a company that trains its employees is a company that adapts and evolves.

The OECD Employment Outlook 2019 shows that low-skilled adults participate less in training programs than high-skilled adults by 40 percentage points. The same observation applies to workers whose jobs are most at risk of automation as they are 30 percentage points less likely to undertake adult learning than workers at lower risk.

To address these challenges, G7 members have recently adopted policy measures to strengthen and adapt their adult learning systems, including by creating new advanced training opportunities, improving the quality of existing programmes to align them with current and future labour market needs, making vocational training more affordable for workers through financial support, and offering training options compatible with full-time employment schedules. Several initiatives specifically target those whose jobs are most at risk of destruction or displacement, but are not limited to them.

EXAMPLES

Canada is investing \$225 million CAD initially and \$75 million CAD per year, starting in 2022, in Future Skills to help Canadians better understand the skills needed for the future and be better prepared for the workplace.

With a strong focus on inclusion of underrepresented and disadvantaged groups, Future Skills includes an advisory Council to the Minister of Employment, Workforce Development and Labour that provides advice on emerging skills, workforce trends and national and regional priorities for skills development, as well as an arms-length to government research Centre to develop, test and rigorously measure new approaches to skills assessment and development.

Additionally, Canada (with the cooperation of provinces and territories) recently announced the creation of the “Canada Training Benefit”, which will include a tax credit to give workers money to help pay for training, income support during training, and job protection so that they can take the time they need to keep their skills relevant and in-demand. To deliver this new programme, Canada has announced the investment of \$1.7 billion CAD over five years, and \$586.5 million CAD per year ongoing.

In 2016, **the European Union** adopted the new Skills Agenda for Europe, made up of 10 actions to make the right to training, skills and support available to people in the EU. Among other things, it aims to make lifelong learning a reality for the most vulnerable, including by opening upskilling pathways for those adults who need to improve or update basic skills, including digital skills (Recommendation on Upskilling Pathways). The Skills Agenda also prioritizes digital skills at all levels and aims to ensure that the labour force is equipped with adequate digital skills.

Modernizing and improving vocational education and training systems is also a main objective of the Skills Agenda. The latter also promotes better skills intelligence – to provide a better understanding of skills bottlenecks and anticipate needs.

France has created the personal training account, giving access to lifelong vocational training: credited in cash, it can be directly used by the person, with a view to engaging in a course of their choosing (€500 / year or €800 / year for less qualified people, cumulative for 10 years). Moreover, a mobile application will soon help estimate your rights and benefits, find training and evaluate the performance of training organizations, choose one, find additional funding, and then register.

This reform was made possible by the Act on the “freedom to choose one’s professional future”, following broad consultations including with social partners, which are fully part of the renewed quadripartite governance model of vocational training (government, employers and workers organizations, and regions).

Germany recently adopted the “Qualification Opportunity Act” that extends access to advanced training to workers who perform tasks that may be replaced by technology or through other structural changes, or to anyone if the training measure concerns an occupation with labour shortages, regardless of qualification, age or company size. The support provided by the Public Employment Service includes covering a share of the costs of workers’ training measures as well as granting wage subsidies for employers to help cover workers’ salaries whilst they are on training.

Moreover, the government, together with the social partners and other stakeholders, are currently developing the “National Skills Strategy”. A panel has been created and tasked with developing a strategy drawing together disparate federal and regional continuing education programmes. The aim is to meet the needs of employees and companies more effectively, and to establish a new training culture in Germany.

Italy has adopted a comprehensive action plan (“Digital Agenda”) which sets quantifiable objectives to achieve by 2020 in digital skills development for workers and employers. Its implementation requires a whole-of-government approach and strict coordination and cooperation with local authorities and stakeholders. Progress in the implementation of enabling factors and horizontal actions is publicly available on a dedicated website (<https://avanzamentodigitale.italia.it/it>).

Japan’s government provides workers with training opportunities to learn advanced IT skills through the Professional and Practical Education and Training Benefits System. Training programmes are also available at night and the weekend.

The United Kingdom has announced that, from 2020, adults with no or low digital skills will be fully funded to undertake new qualifications to help them gain the digital skills they need for life and work. To further these reforms, new national standards setting out the digital skills adults need for life and work have been published recently, as have plans to introduce new ‘essential digital skills’ qualifications.

The United States announced in 2017, (through the “Pledge to America’s Workers”), the creation of 6 million training opportunities in the private sector. Over 200 companies and associations have agreed to create over 6.5 million training opportunities during the next five years. The Administration has also set a goal of creating 1 million new apprenticeships by the end of 2020. The Administration has achieved its goal of almost 500,000 new apprenticeships over the past two years.

3. Developing and evaluating training and retraining programs for vulnerable groups, especially low-skilled workers and those impacted by automation, including as part of labour market activation policies.

It is harder for some individuals, including young people who are not in education, employment or training (NEET), as well as jobseekers and the long-term unemployed, to (re)-enter the labour market if they lack adequate basic and foundational skills and qualification, in general, and digital skills, in particular.

At the same time, businesses have job vacancies requiring skills that do not match the skills of current jobseekers. Some of the policy measures introduced by G7 members specifically target groups excluded from the labour market, giving them access to reskilling and apprenticeships to help them acquire or update their skills and transition into new and emerging jobs.

EXAMPLES

Canada's Digital Skills for Youth (DS4Y) programme connects underemployed recent post-secondary graduates with small businesses and not-for-profit organizations where they can gain meaningful work experience to help them transition to career-oriented employment.

Canada also offers the Computers for Schools Intern (CFSI) programme, under which eligible youth are given valuable work experience through internships aimed at developing and enhancing advanced digital skills.

The European Union's 2016 Council Recommendation on integration of the long-term unemployed into the labour market has led to targeted training measures for vulnerable groups facing multiple obstacles to employment. Implementation at the level of each Member State is ongoing and regularly monitored.

The Digital Skills and Jobs Coalition, which is one of the 10 actions of the Skills Agenda for Europe brings together Member States, companies, social partners, non-profit organizations and education providers, who take action to tackle the digital skills gap in Europe. Pledged actions can range from training unemployed people, producing MOOCs for teachers, offering coding classes for children, or providing cutting-edge training for ICT specialists.

France has put in place a skills investment plan aimed at meeting the needs of the most vulnerable and combating skills shortages, mismatches and the rapid obsolescence of skills. It represents an unprecedented investment in the training of jobseekers, unskilled young people and employees, especially in micro-enterprises and SMEs. France will invest € 15bn over 5 years to train 1 million young people without qualifications (esp. NEETs) and 1 million long-term jobseekers.

Germany's "Qualification Opportunity Act" (see above), offers older workers in small and medium-sized companies and seriously disabled persons 100% coverage of their training costs.

Italy introduced a system for adult learning based on territorial networks of schools, training agencies and relevant stakeholders in 2012. Registered unemployed persons have access to reskilling and upskilling programmes within the Italian system of activation policies.

Japan has introduced new long-term training programmes to help the unemployed to acquire advanced IT qualifications.

The United Kingdom's Government launched a £1 million Digital Skills Innovation fund in 2018 for Local Enterprise Partnerships (LEPs) and Combined Authorities for initiatives that support underrepresented and/or disadvantaged groups and help them take up digital roles.

The United States' Department of Labor launched a nearly \$110-million investment in Trade and Economic Transition Dislocated Worker Grants to 21 state, tribal, and non-profit entities that are working collaboratively with community partners and local workforce development boards to prepare Americans for professions in high-growth employment sectors to respond to increased automation in the workforce.