Organisation for Economic Co-operation and Development

SKC(2024)1

Unclassified

English - Or. English

15 February 2024

OECD CENTRE FOR SKILLS

Cancels & replaces the same document of 30 January 2024

Skills Summit 2024 - Issues for discussion paper

21-22 February 2024, Brussels, Belgium

On 21-22 February 2024, Belgium will be hosting the Skills Summit 2024 in Brussels on the topic of "Skills for the future: Building bridges to new opportunities".

This "Issues for discussion" paper aims to inform and steer discussions by presenting analysis on the opportunities and challenges for skills policy, consolidating information on what countries are doing in this field, and presenting findings from OECD research and beyond, on each of the three themes of the summit: i) Establishing a vision of future skills needs; ii) Creating learning and career pathways that lead to new opportunities; iii) Enabling everyone to develop the skills for new opportunities.

El Iza Mohamedou, Head of the OECD Centre for Skills, El-Iza.MOHAMEDOU@oecd.org
Andrew Bell, Head of OECD Skills Strategies, Andrew.BELL@oecd.org
Bart Staats, Policy Analyst, OECD Skills Strategy Team, Bart.STAATS@oecd.org
Laura Reznikova, Policy Analyst, OECD Skills Strategy Team, Laura.REZNIKOVA@oecd.org

JT03537369

Table of contents

FIGURES

1 Executive summary

1. Megatrends such as the digital transformation and artificial intelligence (AI), the green transition, population ageing, and globalisation are reshaping societies and economies. To take advantage of opportunities inherent in these deep transformations and to build a better future, it is important to strengthen skills systems and develop skills that support a strategic vision for economies and societies. Lifelong learning will be essential for people to keep pace with the changing skill requirements of jobs and society and, by extension, for success in the economies and societies of the future. For individuals, higher skills levels are positively associated with greater chances of being employed, higher wages, higher levels of trust, more active participation in democratic process and in community life, and better health. For countries, a strong skills system could help to ensure that they are resilient and responsive to these and other emerging trends.

2. Since skills policy is a composite policy domain covering aspects of education (from primary to vocational, higher and adult education and training), labour market, industrial, innovation and migration policy, developing a strong skills system will require that all responsible ministries and agencies work together effectively and that governments work effectively with a wide range of stakeholders with an interest and role in the development and effective use of skills, such as employers, education and training providers, civil society organisations and others.

3. In this context Belgium will be hosting the OECD Skills Summit 2024 on 21-22 February 2024 in Brussels on "*Skills for the future: Building bridges to new opportunities*".

4. As input for discussion, this "Issues for discussion" paper presents analysis on opportunities and challenges for skills policy, consolidates information on what countries are doing in this field, and presents findings from OECD research and beyond for three themes that will be discussed in the three closed sessions on Day 2 (22 February 2024) of the Summit.

Theme 1: "Establishing a vision of future skills needs"

5. The skills needed for success in work and life are rapidly changing. For example, the demand for AI skills increased 33% in the last three years alone, and growth of green jobs that require new 'green skills' is outpacing growth of other jobs. While countries are undergoing the digital and green transitions and face other megatrends, they can also actively shape their own future. A clear vision might help countries to develop the skills that will help to meet future ambitions. Building bridges across governments, but also with stakeholders will be important for developing such a vision. To this end, countries could consider:

- **Establishing a strategic vision for the future:** Countries should aim to leverage the opportunities created by the digital and green transitions (e.g. new jobs in new green and innovative industries). To this end, it is important to develop a strategic vision for the future that could be formalised in strategies, visions and action plans, with skills at the centre of the policy agenda.
- **Identifying skills that support the strategic vision:** There is a lot of uncertainty surrounding what skills are needed, and how skills requirements will change, which reinforces the need for countries to form a perspective on what skills will be most in demand in the future. The OECD already identified various skills that are critical for future economies and societies, including

information-processing skills (e.g. literacy, numeracy and digital literacy), socio-emotional and communication skills (e.g. capacity to collaborate, manage emotions), and metacognitive skills (e.g. self-monitoring, planning). Using these skills as a starting point, countries could identify strategic skills that will support countries' long-term economic and social ambitions.

- **Applying a collaborative approach for identifying strategic skills needs:** To identify skills needs that are supportive of a more strategic vision for the future, it is important for policy makers to involve stakeholders in skills assessment and anticipation exercises (e.g. with sectoral expert panels), to build on their practical experience, contextual knowledge, and industry-specific insights.

Theme 2: "Creating learning and career pathways that lead to new opportunities"

6. Learning across the life course will allow people to develop the skills for the future and adapt skills sets to changing jobs and more diverse career pathways. At present, still large shares of people lack even the basic skills needed to participate in economies and societies – e.g. 20% of adults have weak literacy skills and 24% have weak numeracy skills. To this end, countries might provide youth and adults with the required up- and re-skilling opportunities to strengthen skills sets and support career transitions throughout life. Building bridges between education and work, and between governments and social partners, will be key to ensure that skills are developed in line with strategic skills needs. Overall, countries could consider:

- **Preparing youth in initial education for future economies and societies:** Initial education, from primary to higher education, through vocational training, plays an crucial role in preparing young people for future economies and societies, including by providing them with the skills, attitudes and dispositions that will help them to learn throughout life. However, recent PISA results show that countries could do more to provide youth with the foundational skills that will help them succeed in future economies and societies. Moreover, it is important to equip youth with a range of transversal skills (e.g. skills for collaboration, problem-solving and creativity) that will prepare them for more diverse learning and career pathways, as well as STEAM (science, technology, engineering, arts, and mathematics) skills that are becoming increasingly important.
- **Encouraging adults to adapt their skill sets to changing jobs and careers:** While participation in adult learning has increased over the past decade (from 13% in 2012 to 16% in 2022 across OECD-EU countries), a challenge remains to engage those who would benefit the most (e.g. adults with low levels of skills, older adults, and more). A concerted effort could help to address the multiple and interrelated barriers to participation by considering a range of policy measures, including i) information and guidance; ii) the flexibility of learning provision; iii) financial incentives; iv) the quality of the learning provision. Attention might be paid in particular to the validation of skills, which consists of officially recognising skills developed in a wide range of contexts, including schools, workplaces and through independent learning. Moreover, policy makers could help to ensure that the skills of individuals are certified and recognised, which can be facilitated by such means as the expansion of access to micro-credentials.
- **Improving the responsiveness of skills systems:** it is important for policy makers to engage with non-governmental stakeholders (i.e. employers, trade unions, community service organisations, etc.) to ensure that learning and career pathways are responsive to new opportunities. Continuous and structured engagement between governments and stakeholders could be stimulated by establishing dedicated bodies (e.g. Skills Councils, Committees or similar). Equally, countries can use engagement bodies to foster engagement between stakeholders themselves (e.g. between employers and education and training providers) in support of more responsive skills provision.

Theme 3: "Enabling everyone to develop the skills for new opportunities"

7. To ensure that everyone can thrive in a rapidly changing world, it is important for countries to identify and facilitate the development of skills that support human development, from both an individual and societal perspective. Moreover, countries should aim to develop inclusive skills systems that support the people most vulnerable (e.g. youth from disadvantaged backgrounds, jobseekers, workers in jobs at risk of disappearing, etc.), to adapt to changes in the world of work. To reach these people and to provide them with the required support, it is important to build bridges between governments and the actors who work most directly with them. Overall, countries could consider:

- **Supporting the most disadvantaged groups in initial education:** Progress has been made in improving equity and inclusion in initial education in recent years, but significant challenges remain with access to and participation in education for different groups. The OECD identified six key steps for strengthening equity and inclusion in education, ranging from developing a policy framework for an equitable and inclusive education system (step 1); to identifying students' needs, supporting them and monitoring progress (step 6).
- **Promoting lifelong learning among underrepresented groups of adults:** To address adult learning participation gaps between different groups (e.g. there is a 16%-point difference between adults with high and low education levels), countries could target support to the groups least likely to participate and who would benefit the most from learning, including adults with low levels of skills, low wages, living in rural areas, those working in SMEs, and jobseekers. To this end, it is important to a lack of motivation, time and financial resources, with a targeted and tailored mix of policies. Vocational programmes have great potential to engage those at risk of being left behind.
- **Engaging with stakeholders to reach the most underrepresented groups:** Non-governmental stakeholders, including community service organisations and professional sectors, have a key role to play in reaching the most underrepresented groups, as they are often in direct contact with potential learners. For instance, adults with low levels of skills could be effectively engaged within their workplace, with trade unions facilitating communication between employers and employees. Education and training providers in pre-primary and initial education, as well as community leaders, can also facilitate effective, targeted outreach to specific groups (e.g. socio-economically disadvantaged individuals).

2 Skills Summit 2024: "Skills for the future: Building bridges to new opportunities"

Context

8. The digital transformation and artificial intelligence (AI), the green transition, and other megatrends are rapidly reshaping societies and economies. To take advantage of opportunities inherent in these deep transformations and to build a better future, it is important to adapt skills systems and develop skills that support a strategic vision for economies and societies. To this end, countries could assess what skills will be needed for their future and develop a skills system responsive to this vision. For people to thrive in the world of tomorrow, it is important to raise investments in lifelong learning. Providing all people with opportunities to upskill and reskill will be key to enable individuals to move to more viable jobs or to progress in their current jobs, and to ensure that no-one is left behind. Fostering a strong culture of lifelong learning can also help countries to avoid skills shortages that could constrain their growth and at the same time position them to take advantage of future opportunities as they arise. Developing stronger skills sets will not only benefit the economy by driving productivity and innovation, but also social outcomes. People with stronger skills sets enjoy higher levels of trust, better health outcomes, a higher quality of life, and enhanced civic engagement. In this context, Belgium will be hosting the Skills Summit 2024 on 21-22 February 2024 in Brussels on the topic of *"Skills for the future: Building bridges to new opportunities".*

9. The OECD Skills Summit 2024 provides ministers and senior officials with responsibilities for diverse skills-relevant portfolios – from employment, training and education to economic development and innovation – with a unique opportunity to engage in frank and open discussions about their experience in designing and implementing policies to address the challenge of developing skills for the future. The Summit will be conducted as a ministerial "retreat", with informal receptions, interactive discussions with keynote speakers, a tour de table, and bilateral meetings.

10. The Skills Summit 2024 will build on findings from previous Skills Summits in Norway (2016), Portugal (2018), Slovenia (2020), and Colombia (2022). These summits already highlighted the importance of developing skills for future economies and societies (e.g. with discussions on "*Skills for a digital world*" in 2018), lifelong learning (e.g. with "*Skills Strategies for a world in recovery*" in 2020) and inclusiveness of skills systems (e.g. with "*Strengthening skills for equity and sustainability*" in 2022).

Issues for discussion

11. This "Issues for discussion" paper aims to inform and steer discussions by presenting analysis on skills across the OECD and other sources, consolidating information on what countries are doing in this field, and presenting findings from original research by the OECD. This paper is structured around three themes that underpin the topic of Skills Summit 2024 – *"Skills for the future: Building bridges to new opportunities*" – and which will be discussed in the three closed sessions on Day 2 of the Summit:

1. Theme 1: "Establishing a vision of future skills needs".
2. Theme 2: "Creating learning and career pathways that lead to new opportunities".
3. Theme 3: "Enabling everyone to develop the skills for new opportunities".

3 Theme 1: "Establishing a vision of future skills needs"

12. While countries are undergoing the digital and green transitions – often referred to as the twin transition – and face other megatrends, they can actively shape their own future. A clear vision might help to develop the skills that will be strategically important for countries to develop to meet these future ambitions. Building bridges across government, but also between government and stakeholders will be critical for developing such a vision.

13. Overall, countries could consider i) establishing a strategic vision for the future; ii) identifying skills that support the strategic vision; and, iii) applying a collaborative approach for identifying strategic skills needs.

Theme 1: "Establishing a vision of future skills needs"

Key messages

- The digital and green transitions – often referred to as the twin transition – have been receiving a lot of attention by policy makers because of their impact on the skills that are needed for a successful transition towards a better, more competitive economy that works for everyone.
- Countries should aim to leverage the opportunities created by these deep transformations. Technological change has the potential to improve job quality and drive productivity growth, and the green transition can support the creation of new jobs in new green and innovative industries.
- To benefit from this changing landscape, countries could develop a strategic vision for their future that might be formalised in strategies, visions and action plans, with skills policies at the centre of the policy agenda.
- While it is difficult to predict precisely what skills will be needed in the future, the Skills Outlook 2023 identified the following skills as important for the digital and green transition: i) information-processing skills (e.g. literacy, numeracy and digital literacy), which allow individuals to effectively process and work with information; ii) socio-emotional and communication skills (e.g. perseverance, the capacity to collaborate, and manage emotions), which enable individuals to navigate social environments and make responsible decisions; and iii) metacognitive skills (e.g. the ability to reflect on one's own thinking processes and plan to meet goals), which allow individuals to regulate their behaviour.
- It is important to form a perspective on what skills will be most in demand in the future to ensure that the skills policies are aligned with the countries' strategic vision for the future and the countries' economic and social context.
- To identify these strategic skills needs, it is important for policy makers to actively involve stakeholders in skills assessment and anticipation exercises (e.g. with sectoral expert panels), as well as strategic foresight exercises, to build on their practical experience, contextual knowledge, and industry-specific insights to the skills assessment process. Such a collaborative approach fosters a shared vision and enables a more proactive response to skills assessment and anticipation.

Questions for discussion

The topic of "Establishing a vision of future skills" needs will be discussed during Skills Summit 2024 on 22 February in the first session of the day at 09:45-11:15. Guided by a moderator, the following questions will be raised:

- What is your country's strategic vision for the future and how is this vison linked to your country's skills agenda?
- What specific skills does your country consider to be important for taking advantage of the green and digital/AI transitions (e.g. STE(A)M skills, advanced digital skills, etc.)?
- How are your government and stakeholders working together to develop the vision and identify strategic skills needs?

i) Establishing a strategic vision for the future

14. In recent years, in particular the digital and green transitions have been receiving a lot of attention by policy makers because of their significant impact on the skills that are needed for a successful transition towards a better, more competitive economy that works for everyone. These transitions are not only necessitating higher levels but are also changing the types of skills people need to succeed (OECD, 2019[1]). As a result, people will need to develop skills for new jobs, upgrade skills for existing jobs, and develop the skills required to actively participate in societies.

15. Digital skills are fast becoming a prerequisite to actively participate in more complex, interconnected societies. COVID-19 has resulted in an expansion of teleworking and online learning (OECD, 2021[2]; OECD, 2020[3]), and demand for digital skills is increasing in a wide range of professions (OECD, 2022[4]). Furthermore, the information landscape is becoming more complex and difficult to navigate and individuals need to hone-in their skills in order to be able to search for, identify and select relevant and actionable information, and to sort through information of varying quality. In this context, the recent advancements in artificial intelligence (AI) cannot be ignored. Unlike more 'traditional' automation technologies that perform narrow routine tasks, AI is able to improve over time, solve complex problems and generate innovations with little or no human supervision.

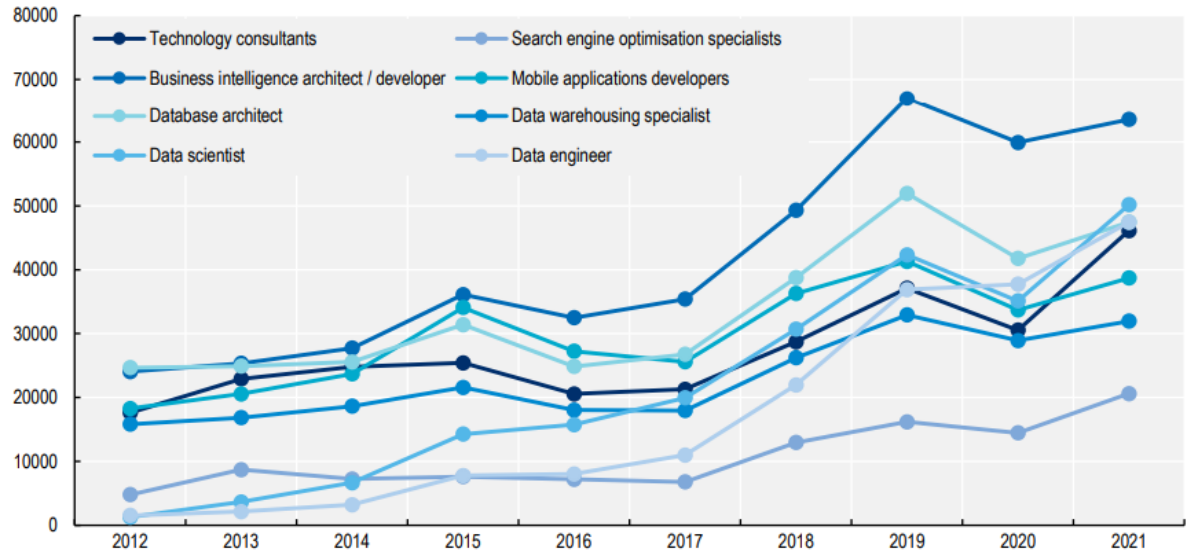
16. At the same time, countries have to fight climate change with the aim to limit global warming, loss of biodiversity and pollution. Climate change has an impact on consumer demand as well as how and what economies produce. Governments have been accelerating their shift towards greener growth and more sustainable development, with a growing number of countries strengthening their climate action in the last decade, increasing both the number and stringency of policies (Nachtigall et al., 2022[5]). The changes required to meet net-zero targets will inevitably alter the skills required in the economy, with skills needed to fulfil the new "green" jobs being projected to increase in demand.

17. There is often a considerable emphasis on the disruptive effects of these trends on skills systems. In particular, the risk posed by job automation has been the subject of various studies (Nedelkoska and Quintini, 2018[6]) (Lassébie and Quintini, 2022[7]). As firms adopt more digital technologies to conduct their work, certain job tasks and, in some cases, entire jobs may become automated. Unlike previous trends, the rise of AI will also have a far greater impact on jobs across the whole spectrum of the skills distribution, including white-collar occupations (OECD, 2021[8]). So far, AI has had little effect on aggregate employment (OECD, 2023[9]), and it has resulted mainly in job reorganisation rather than job displacement, with a reorientation towards jobs and tasks in which humans have a comparative advantage (Milanez, 2023[10]). However, AI is still in its infancy and its capabilities are improving rapidly. For example, while ChatGPT correctly answered 35% of a set of PISA mathematics tasks in November 2022, this percentage already increased to 40% in March 2023 (OECD, 2023[11]). While its performance appears to fluctuate over

time, ChatGPT is already outperforming average student performance in PISA reading and science, and its latest version, GPT-4, is doing even better on a number of school tests. One other major implication of digital and green transitions is their potential to further exacerbate existing divides between people, firms, and regions. The groups of people who are already lagging behind in education and training, are often also most affected by changing labour markets and societies.

18. Countries should aim to leverage the opportunities created by deep transformations. Technological change has the potential to improve job quality and drive productivity growth (OECD, 2023[9]). Moreover, new jobs will arise in new green and innovative industries. Already, growth of green jobs is outpacing growth of other jobs (OECD, 2023[12]). Moreover, new technological innovations have been driving growth in a range of digital occupations (see Figure 3.1 for an example from the United States). The *Skills Outlook 2023* (OECD, 2023[13]) also found that the demand for professionals working in AI development and deployment increased markedly between 2019 and 2022 – on average, the share of online vacancies requiring AI skills increased by 33% in 14 countries with available data.

Figure 3.1. Evolution of online job postings for digital occupations in the United States, 2012-2021



Source: OECD (2022[4]), *Skills for the Digital Transition: Assessing Recent Trends Using Big Data*, https://doi.org/10.1787/38c36777-en.

19. It is important to develop proactive skills policies to benefit from this changing landscape. While countries acknowledge the need to adapt skills systems to these new realities, the approach is often reactive – i.e. countries predict how economies and societies will be affected by global trends and adapt skills systems accordingly. However, these approaches ignore to some extent that the skills of people also help to shape economies and societies – numerous studies already demonstrated the importance of skills for economic growth, innovation, and a range of social indicators (OECD, 2019[1]). A more proactive approach to skills policy acknowledges that while skills systems will need to adapt to global trends, countries can also make strategic skills investments that can enable them to create and seize new opportunities. This would entail envisioning what sort of economy and society they would like to create and then using investments in skills to help steer them in this direction. For instance, by actively developing skills and supporting innovation and growth of specific sectors, countries could benefit from new opportunities that may arise by developing competitive advantages in niches. These benefits could include, for example, higher quality jobs in sectors that leverage the potential of AI (e.g. machine learning engineering, data science), new technology-intensive jobs in green sectors (e.g. renewable energy, battery technology for electric vehicles), and preparing sectors to benefit from demographic change (e.g. healthcare technology).

20. In addition, more proactive skills policies will help raise overall skill levels that will not only benefit society at large (e.g. higher productivity, more innovation), but also individuals. Adults with higher skills proficiency tend to have greater chances of being employed and, if employed, of earning higher wages (OECD, 2019[1]). Moreover, skills are also central to the capacity of individuals to participate fully in society, as well as to the cohesiveness of society itself. More highly skilled people have higher levels of trust, participate more actively in the democratic process and in community life, enjoy better health (OECD, 2019[1]) (OECD, 2023[14]).

21. A strategic approach is important to efficiently steer a countries' direction and support more proactive skills policies. Formalised in strategies, visions and action plans, a strategic approach could help to set goals, prioritise groups and targets, ensure buy-in, and clarify roles and responsibilities (OECD, 2019[1]). Such a strategic vision could put skills at the centre of its policy agenda and ensure strong linkages with other interrelated policy domains (e.g. economic, industry, innovation, etc.). Strategic visions come in different forms, ranging from comprehensive strategies that present a broad and strategic vision for a countries' future to strategies for specific policy domains with concrete policy actions for the short, medium, and/or long term. Skills could be either one of several policy domains described in strategies, or an overarching theme.

22. Box 3.1 presents examples of approaches taken by different countries internationally to develop strategic visions for guiding their countries to a desired future, all of which emphasise the central role of skills in achieving those visions. For example, Japan's Society 5.0 presents a vision for a future that is founded on science, technology and innovation (Cabinet Office Japan, 2023[15]). Estonia's Digital Agenda 2030 (Ministry of Economic Affairs and Communications, 2021[16]) presents both a vision and action plan for leveraging digital technologies to strengthen the Estonian economy, state and society.

Box 3.1. International examples: Establishing a strategic vision for the future

Society 5.0 in Japan

Japan introduced Society 5.0 as a core concept in its 5th Science and Technology Basic Plan in 2016. It presents a future society that Japan should aspire to, and which could guide and mobilise action in science, technology and innovation to achieve a prosperous, sustainable and inclusive future. For example, it describes a future with convergence between cyberspace (virtual space) and physical space (real space), and the objective to build a new human-centred society.

Estonia's Digital Agenda 2030

This document describes a vision and an action plan concerning the development of the Estonian economy, state and society with the help of digital technology in the next decade. It will be the cornerstone of future digital developments and has ambitious targets, with a strong focus on digital public services, connectivity, and cybersecurity.

Source: Cabinet Office Japan (2023[15]), *Society 5.0*, https://www8.cao.go.jp/cstp/english/society5_0/index.html; Ministry of Economic Affairs and Communications (2021[16]), *Estonia's Digital Agenda 2030*, https://www.mkm.ee/media/6970/download.

ii) Identifying skills that support the strategic vision

23. There is a lot of uncertainty surrounding what skills are needed in future economies and societies, and how skills requirements will change. This reinforces the need for countries to form a perspective on what skills will be most in demand in the future. Countries could identify the skills that reflect their vision for the future, while taking into account what types of skills are and will be needed to respond to the imminent new challenges arising from the twin transition – the green and digital transitions – and other broader trends in economies and societies.

24. Already, certain skills and attitudes are expected to be particularly relevant for green and digital transitions. The *Skills Outlook 2023* (OECD, 2023[13]) on "Skills for a Resilient Green and Digital Transition" identified the following three groups of emerging skills needs that are critical to build system-level resilience for the green and digital transition:

- **Information-processing skills**, including literacy, numeracy and digital literacy allow individuals to access, analyse, interpret, summarise, organise, store, retrieve and communicate information. Without baseline proficiency in these skills, individuals will increasingly be at risk of economic and social exclusion. Both increases in the complexity of the information landscape and growth of job profiles resulting from the green transition in service industries and industries with a high technological content make these information-processing skills increasingly important.
- **Socio-emotional and communication skills,** such as the capacity to collaborate with others, manage emotions, persevere in difficult circumstances and effectively communicate with diverse groups enable individuals to effectively navigate their social environments and make responsible decisions. These skills are critical to building a resilient green and digital transition because these are uniquely human skills and, therefore, not easily automatable even with advances in artificial intelligence in the near future. Moreover, negotiating conflict and pooling collective expertise to solve complex systemic problems will be key for the green transition.
- **Metacognitive skills,** which refer to the ability to think about and regulate one's own thinking processes, monitor and evaluate one's own learning and understanding, and plan, set goals, and adjust strategies to meet those goals. Metacognitive skills are critical if individuals are to regulate their behaviour. In the face of uncertainty from climate change and technological developments, metacognitive skills help individuals recognise biases in decision-making and make informed use of knowledge. Metacognitive skills, in fact, empower individuals by helping them to effectively work alongside others – whether humans or machines – and to solve complex problems.

25. There are various other frameworks that identify key skills needed in future economies and societies. An example is the Council Recommendation on Key Competences for Lifelong Learning (European Commission, 2018[17]), which captures a range of skills for personal fulfilment, a healthy and sustainable lifestyle, employability, active citizenship and social inclusion (some examples of these skills are literacy, multilingualism, digital skills, and entrepreneurship, among others).

26. Overall, the skills presented in these frameworks are all key in adapting people to rapidly changing societies, and could provide a starting point for countries to assess what skills they could develop to benefit from new opportunities. Not only would it be necessary to understand at a more granular level what skills could be developed, these skills also might need to take into consideration the country-specific context. In practice, this means that additional complementary skills, or more specific types of skills, could be identified for each country, which are aligned with the countries' strategic vision for the future and its economic and social context. This will help to ensure that the identified 'strategic skills needs' will support the country with achieving its long-term economic and social ambitions.

27. The identified strategic skills needs are often described in strategic policy documents, but countries applied different approaches for these documents (see Box 3.2 for international examples). One approach is that strategies can focus on fostering the development of specific types of skills that will help to prepare people for future economies and societies. For example, Canada developed a five-year strategy for strengthening financial literacy skills. In Finland, the government has aimed to strengthen media literacy, with its Media Literacy Strategy that covers a range of activities, from steering national curriculum to awareness-raising activities such as the Media Literacy Week. Another example is Germany's National Action Plan Health Literacy, which aims to strengthen health literacy and presents empirical findings and policy recommendations.

28. Alternatively, countries could develop a comprehensive strategy for strengthening the entire skills system. These strategies, often referred to as National Skills Strategies, may concentrate on promoting the development of skills across the life course, and other time focus more narrowly on the development of skills in schooling or in adulthood. These National Skills Strategies typically set a clear direction for skills policy, by identifying priority areas and making tailored recommendations for policy action. The OECD has been actively supporting over 25 economies with the development of these National Skills Strategies.

Box 3.2. International examples: Identifying skills that support the strategic vision

Canada's National Financial Literacy Strategy

"Make Change that Counts: National Financial Literacy Strategy 2021-2026" is a comprehensive five-year plan aiming to strengthen financial literacy amongst all Canadians. The literacy identifies three priority areas for reducing barriers preventing people from accessing, understanding, and using appropriate financial products, services, and information and three priority areas for catalysing action to take positive financial actions by all consumers. The National Strategy also outlines "five key consumer building blocks", on which stakeholders can work in partnership to help all individuals improve their financial resilience, while underlining the importance of collaboration between all stakeholders in the financial ecosystem.

Finland's Media Literacy Strategy

Finland has long been at the forefront of media literacy. Media literacy education has been a part of the curriculum in Finnish schools since 1970 under the umbrella term of mass media education. It is seen as a core competency, and it is taught from a very early age. The national core curriculum for early childhood education and care includes an emphasis on teaching several different literacies, including media literacy, as well as digital competence. In addition, media literacy is included in vocational education, and there are also media programmes in higher education. Other efforts to promote media literacy in Finland include: Media Literacy Week and the Media Education Forum for Professionals.

Germany's National Action Plan Health Literacy

In 2018, Germany published the National Action Plan, which consists of a section explaining health literacy's political and social relevance, the concepts and definitions of health literacy, crucial empirical findings and 15 recommendations within 4 action areas. The action areas focus on: 1) promoting health literacy in all areas of everyday life; 2) creating a user-friendly and user-centred, health literate healthcare system; 3) living a health literate life coping with chronic illness; and 4) systematically expanding health literacy research. In addition to explaining why each recommendation is relevant, the report suggested concrete actions that could be undertaken, and which actors should implement each recommendation.

Ireland's National AI Strategy

The National AI Strategy sets out how Ireland can be an international leader in using AI to benefit their economy and society, through a people-centred, ethical approach to its development, adoption and use. The strategy involves obtaining societal buy-in for AI. To do so, the government intends to engage the public and build trust in the potential of AI by promoting and expanding courses which educate the general public about AI and by having open conversations on the implications of AI. The government also plans on developing a governance ecosystem that promotes trustworthy AI.

National Skills Strategies

Since 2014, the OECD has worked with over 25 economies on skills strategies to help assess their skills challenges and opportunities, identify priority areas for action and make tailored recommendations for policy action. The resulting skills strategies set a clear direction for skills policy. The European

Commission has acknowledged the importance of national skills strategies in its European Skills Agenda, and has supported many European countries to develop their own skills strategies.

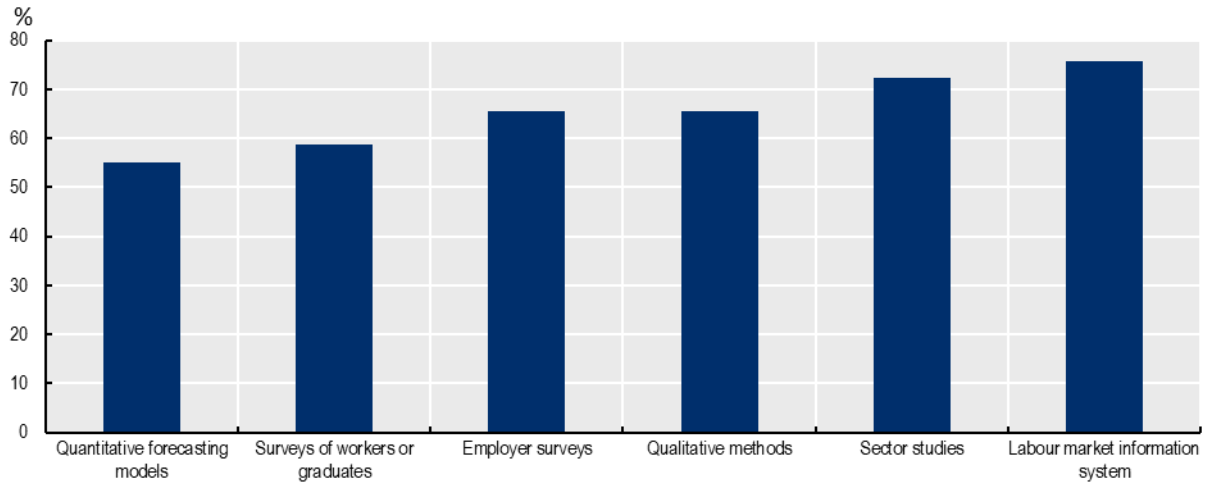
Source: OECD (2023[18]), *Website OECD Skills Strategies*, https://www.oecd.org/skills/oecd-skills-strategies.htm; Government of Canada (2023[19]), *Make Change that Counts: National Financial Literacy Strategy 2021-2026*, https://www.canada.ca/en/financial-consumer-agency/programs/financial-literacy/financial-literacy-strategy-2021-2026.html#toc13; Ministry of Education and Culture (2019[20]), *Media Literacy in Finland*, https://medialukutaitosuomessa.fi/mediaeducationpolicy.pdf; National Health Literacy Action Plan Office (2023[21]), *National Action Plan Health Literacy*, https://www.nap-gesundheitskompetenz.de/; Government of Ireland (2021[22]), *AI – Here for Good: National Artificial Intelligence Strategy for Ireland*, https://www.gov.ie/en/publication/91f74-national-ai-strategy.

iii) Applying a collaborative approach for identifying strategic skills needs

29. To identify what skills might need to be developed in the current and future labour market, countries have been adopting different systems and tools (see Figure 3.2) (OECD, 2016[23]). The methods for 'skills assessment and anticipation' vary significantly in terms of how they measure skills needs (e.g. measuring skills directly or using proxies as education level), their scope (e.g. national, regional, or sectoral), and methods applied.

Figure 3.2. Methods and tools used in skills assessment and anticipation systems

Share of 29 countries consulted with a questionnaire on Anticipating and Responding to Changing Skill Needs



Source: OECD (2016[23]), Getting Skills Right: Assessing and Anticipating Changing Skill Needs, https://doi.org/10.1787/9789264252073-en.

30. At present, quantitative sources of information (e.g. labour market analysis, surveys, and predictive modelling) are most commonly used, and also big data sources (e.g. online job vacancies), are increasingly often leveraged to assess skills needs at a more granular level (OECD, 2021[24]). For example, in the European Union (EU), online job advertisements are used for detailed information on the jobs and skills employers demand with the Skills-OVATE tool (CEDEFOP, 2024[25]). These methods provide valuable insights on how labour markets most likely will change as a result of the digital and green transition. However, for identifying skills needs that support a countries' strategic vision for the future, as described in previous sections, and to put skills needs in a broader economic and social context, it is important that skills assessment and anticipation exercises are based on a collaborative approach.

31. A collaborative approach involving stakeholders fosters a shared vision and enables a more proactive response to skills assessment and anticipation. By combining quantitative projections with these qualitative insights, policymakers can gain a deeper understanding of strategic skills needs. Experts from diverse domains can collectively define strategic skills, considering technological advancements, socioeconomic trends, and emerging industries. Stakeholders bring valuable contextual knowledge,

practical experience, and industry-specific insights to the skills assessment process. Strategic foresight exercises with stakeholders are particularly effective for proactively assessing what skills will be needed for future economies and societies, by exploring different possible futures, alongside the opportunities and challenges they might present. As will be described in more detail in Theme 2, countries can consider establishing different types of bodies or committees to bring together key stakeholders to help identify strategic skills needs (e.g. Skills councils, employer/stakeholder engagement bodies, or sectoral councils).

32. Box 3.3 presents international examples of collaborative approaches for identifying strategic skills needs. For example, the Flanders' Training for the Future initiative aims to develop a strategic vision for the future skills needs of key sectors, clusters and regions in partnership with all relevant actors. In Estonia, the Estonian Qualifications Authority combines quantitative research with insights from sectoral expert panels to forecast trends in the labour force and skills needs. The sectoral expert panels also oversee the implementation of the recommendations made for sectors. Portugal also applies a collaborative approach for producing labour market intelligence, including by engaging with a range of stakeholders in skills anticipation exercises at the national and sectoral level.

Box 3.3. International examples: Applying a collaborative approach for identifying strategic skills needs

Training for the Future in Flanders (Belgium)

In response to a government call for proposals named SCOPE (funded by the European Social Fund), sectors, clusters, and regions can apply for funds to develop a skills forecast, mapping their future skills needs and expected skills shortages or surpluses. In a follow-up 'Training for the future' call, the training needs identified in the SCOPE-forecasts are developed into new training programmes and materials. An important condition in this call is that the training programmes are developed by a strong partnership between relevant actors who ensure both the future-readiness of the training materials, but also the uptake by the sector or businesses for whom they are intended.

Sectoral expert panels for labour force and skills forecasts in Estonia

Conducted by the Estonian Qualifications Authority, Estonia's forecasting system OSKA makes labour force and skills forecasts to help people make informed career choices and to formulate forward-looking employment and education policies. The organisation conducts research on sectoral employment and skills needs based on a combination of statistical data and information collected from interviews and group discussions with sectoral expert panels. Five economic sectors are examined each year, with each sector being analysed every five years on average. Sectoral expert panels play an important role in both examining future economic trends and evaluating changes in skills and education needs, as well as overseeing the implementation of the recommendations made for sectors.

Skills anticipation approaches in Portugal

Portugal takes a collaborative approach by involving stakeholders in the process of producing labour market intelligence. Coordinated by ANQEP, a government agency, the Qualification Needs Anticipation System (Sistema de Antecipação de Necessidades de Qualificação, SANQ) provides Portugal with comprehensive analysis of the skills supply and demand and information and guidance to support the planning and the management process of skills development strategies. A range of stakeholders participate in skills anticipation exercises, including with a Coordinating Council at the national level (with representation by employer associations and trade unions, the PES, and others), as well as 16 Sectoral Councils for Qualification (Conselhos Setoriais para a Qualificação, CSQ) with ministries, social partners, companies, VET providers, technology centres, and others.

Source: OSKA (2023[26]), *OSKA website*, https://oska.kutsekoda.ee/en/; Cedefop (2023[27]), *Skills anticipation in Portugal*, https://www.cedefop.europa.eu/en/data-insights/skills-anticipation-portugal.

4 Theme 2: "Creating learning and career pathways that lead to new opportunities"

33. Learning across the life course will be essential to ensure that people develop the skills of the future and that they can adapt their skills sets to rapidly changing jobs and more diverse career pathways. For instance, the digitisation of our economy and society means that there are more and more careers linked to science, technology, engineering, arts and mathematics (STEAM). To this end, countries could provide both youth and adults with learning pathways that provide them with the required up- and re-skilling opportunities to support these career transitions throughout life. In this context, it is also important for people to have the opportunity of validating professional practice to obtain an official qualification. Building bridges between education and work, and between government and social partners, will be key to ensure that skills are developed in line with skills needs.

34. Overall, countries could consider i) preparing youth in initial education for future economies and societies; ii) encouraging adults to adapt their skill sets to changing jobs and careers; and, iii) improving the responsiveness of the skills system.

Theme 2 "Creating learning and career pathways that lead to new opportunities"

Key messages

- Initial education, from primary to higher education, through vocational training, plays an important role in preparing young people for future economies and societies. The skills, attitudes and dispositions to learn formed in schools and higher education carry over into adulthood and can help raise capacity and motivation to learn throughout life.
- Recent PISA results show that countries could do more to provide youth with the foundational skills that will help them succeed in future economies and societies.
- Transversal skills – ranging from literacy skills to skills for collaboration, problem-solving and creativity – developed in in initial education and elsewhere in youth help to prepare people to succeed in multiple and diverse learning and career pathways throughout life.
- Strong science, technology, engineering, arts, and mathematics (STEAM) skills will help to address current and anticipated shortages in professions requiring these skills. Therefore, it is vital to encourage young people – but particularly young girls – jobseekers and workers from all socio-economic backgrounds to take part in STEAM studies, training and careers.
- Adult learning is crucial in the context of rapidly changing labour markets and societies, since it helps to equip adults with updated skill sets to navigate and succeed in evolving workplaces and more digital societies. While participation in adult learning has increased over the past decade, a challenge remains to engage those who would benefit the most (e.g. adults with low levels of skills, older adults, and more).

- A concerted effort could help to address the multiple and interrelated barriers to participation, including dispositional factors (e.g. lack of motivation), situational factors (e.g caring responsibilities) and institutional factors (e.g. lack of flexible learning opportunities). Policy measures to promote adult learning might include: i) information and guidance; ii) the flexibility of learning provision; iii) financial incentives; iv) the quality of the learning provision.
- Particular attention might be paid to strengthening systems to validate skills already acquired, including professional skills. Additionally, countries should ensure that the skills and training outcomes of individuals are certified and recognised, including by promoting the use of micro-credentials.
- It is important for policy makers to engage with non-governmental stakeholders (i.e. employers, trade unions, etc.) to ensure that learning and career pathways are responsive to new opportunities.
- Continuous and structured stakeholder engagement could be stimulated by establishing dedicated bodies (e.g. Skills Councils, Committees or similar bodies) that provide a forum for engagement between government and stakeholders, as well as the establishment of mechanisms that primarily foster engagement between stakeholders themselves (e.g. to facilitate dialogue and/or collaboration on the design and content of training courses).
- Countries might also assess if the provider base can deliver the range and quality of education and training that both learners and employers need.

Questions for discussion

The topic of "Creating learning and career pathways that lead to new opportunities" will be discussed during Skills Summit 2024 on 22 February in the second session of the day at 11:30 – 13:00. Guided by a moderator, the following questions will be raised:

- How is your country preparing youth in initial education for future economies and societies (e.g. adapting curricula, building a foundation for lifelong learning, providing career guidance, etc.)?
- What support measures and incentives are in place to encourage adults to adapt their skills sets and careers to new future opportunities and changing skills needs?
- How are government and stakeholders working together to ensure that learning pathways and opportunities are responsive to new future opportunities and changing skills needs?

i) Preparing youth in initial education for future economies and societies

35. Initial education, from primary to higher education, through vocational training, is key to prepare youth (aged 15-25 years-old) for future economies and societies. Many of the skills that will become increasingly important can be developed early in life. However, there are clear indications that countries could do more to better prepare young people for the future. In particular, it is a concern that recent results of PISA 2022 indicate that mean performance in reading, mathematics, and science across OECD countries has shown a downward trend, which accelerated between 2018 and 2022 (OECD, 2023[28]).

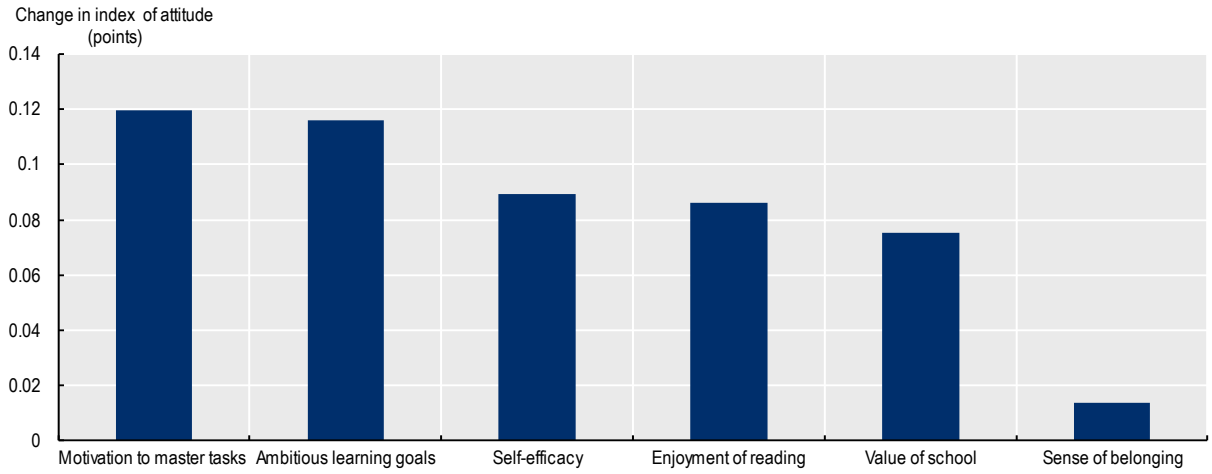
36. Furthermore, initial education plays an important role in preparing young people for future economies and societies, by laying the foundation for developing positive attitudes and dispositions to lifelong learning, and equipping learners with transversal skills important for their employability and well-being in a rapidly changing socio-economic context. In the past, some education and training pathways may have been viewed as leading to a lifelong career in a single occupation. In the context of rapidly changing labour markets, however, adults increasingly need to adapt over the course of their lives, develop new skills or change careers. One implication is that all learners, regardless of the type of schooling they

choose to pursue, need skills and capacities that enable them to pursue further learning opportunities (Georgieff and Milanez, 2021[29]).

37. While individual attitudes and dispositions to learn mostly develop early in life – starting with kindergarten and evolving throughout the schooling years – their benefits carry over into adulthood. In fact, youth with positive learning attitudes are more prone to engage in further learning throughout life (OECD, 2019[30]; Tuckett and Field, 2016[31]). PISA data show that 15-year-old pupils who have stronger attitudes and dispositions to learn tend to perform better at school. They also develop higher educational and career expectations than peers whose attitudes and dispositions are not as strong (OECD, 2021[24]).

38. Among the factors shaping the formation of lifelong learning attitudes early in life, teachers and the practices they adopt appear particularly effective (OECD, 2021[24]). Teachers play a key role in furthering children's and adolescents' cognitive and non-cognitive abilities. Specific pedagogies or behaviours by teachers are especially important for developing lifelong learning attitudes, including teachers' enthusiasm for the content of instruction, their interactions with pupils during the lessons, and their practice of stimulating their critical ability. For example, there is a strong positive relationship between teacher enthusiasm and students' motivation to master tasks and develop ambitious learning goals, as well as their self-efficacy and enjoyment of reading (see Figure 4.1). These findings highlight the importance of support for teachers by schools, as well as continuous training and professional development for teachers.

Figure 4.1. Change in lifelong learning attitudes associated with students reporting their teacher is inspiring, OECD average



Note: Estimates represent changes in the index of each LLLA associated with a change in the dummy variable of whether the student perceived the teacher as inspiring. Regressions are estimated separately for each LLLA, taking into account the student's and school's SES, age, gender, reading performance, parental support, other TPs and disciplinary climate.
Source: OECD calculations based on OECD (2019[32]), PISA database 2018, https://www.oecd.org/pisa/data/2018database/.

39. In addition, families play a key role in developing children's attitudes towards lifelong learning. As active participants in their children's education at home and in school, as role models, as their children's chief champions, and in the expectations they hold for their child's future, parents play a very important role in forming children's self-belief and disposition towards learning. When parents encourage their children's efforts and build their confidence, children are more likely to internalise positive attitudes towards lifelong learning (OECD, 2021[24]). The need to strengthen school-family partnerships and keep parents involved in student learning is also one of the key insights of the most recent PISA survey (OECD, 2023[28]).

40. The development of transversal skills early on in life is also important for building a foundation for lifelong learning. Transversal skills are defined and labelled in various ways. They typically refer to skills

that cut across disciplines or occupations. For example, literacy, numeracy and digital problem-solving skills are needed in a wide range of work and life contexts and underpin the capacity to learn (OECD, 2019[1]). Other transversal skills, such as collaboration, problem-solving and creativity, are hard to automate and therefore become crucial complements to more technical skills in labour markets that are increasingly automated (Lassébie and Quintini, 2022[7]).

41. Developing transversal skills is a challenge for vocational programmes in particular, which focus on occupational preparation and sometimes put limited emphasis on general education. While vocational programmes need to prepare for entry into the labour market and serve learners who are less attracted to academic forms of learning, they also need to equip all learners with a broader set of skills that will help them adapt to changing contexts in the course of their lives.

42. In response to these challenges, a number of countries have developed dedicated frameworks to guide the development of transversal skills and/or systematically integrate transversal skills into all types of qualifications (Field, 2023[33]). Box 4.1 presents international examples of frameworks and initiatives designed to ensure that programmes emphasise the development of transversal skills. For example, in Denmark, regulations for vocational programmes highlight the need to develop a range of transversal skills, including cooperation and communication skills, professional and social problem-solving skills, the development of initiative, flexibility, and more. In the United States, an Employability Skills Framework has been developed that presents a unified set of skills that cuts across the workforce development and education sectors, capturing applied knowledge, effective relationships, and workplace skills.

43. Preparing youth for future economies and societies also involves strengthening their science, technology, engineering, and mathematics (STEM) skills. The learning of these skills is evolving towards a more integrated and multidisciplinary approach that also captures the creative and innovative transition, i.e. the arts, thereby creating the concept of STEAM skills. It is important that the development of such a mix of skills is based on an active, project-based learning approach, that will prepare youth for societal, economic, cultural and ecological challenges of the 21st century.

44. Digitalisation in particular is resulting in higher demand for STEAM skills, but in many countries fields of study that develop these skills are still not attracting enough applicants and, as a result, many professions face critical shortages. To this end, it is vital to encourage young people, jobseekers and workers from all socio-economic backgrounds, particularly young girls and (future) workers, to take part in STEAM studies, training and careers. In recognition of this challenge, through its Recovery Plan, Wallonia (Belgium) is aiming to boost the attractiveness of growing sectors, professions, and fields of study associated with STEAM skills and digital technology. An example of such an initiative in Wallonia is the Alternance apprenticeship, which helps youth develop relevant skills for the green transition through training programmes that include modules on building energy performance, insulation, sustainable renovation (see Box 4.1). In addition to promoting enrolment in STEAM studies, countries could actively work towards fostering inclusivity and creating a more welcoming environment for diverse groups within STEAM jobs and sectors.

Box 4.1. International examples: Preparing youth in initial education for future economies and societies

Transversal skills in vocational programmes in Denmark

In Denmark, the regulations for vocational programmes emphasise transversal skills. The programme must contribute to the development of the pupil's and apprentice's character formation, professional pride and ability to take independent positions, cooperate and communicate. Training shall also promote professional and social problem-solving skills, the development of initiative, flexibility and a sense of quality, and the development of the basic skills of learners and apprentices, in particular in mathematics,

reading, oral and written communication and information technology. Regulations for each programme define how transversal skills are applied in the workplace.

The Employability Skills Framework in the United States of America

The United States Department of Education compiled the Employability Skills Framework, in an effort to leverage and connect the efforts of policy makers, educators, and employers. The Framework advances a unifying set of skills that cuts across the workforce development and education sectors based on an inventory of existing employability skills standards and assessments. The framework contains the following elements: applied knowledge (including applied academic skills and critical thinking skills); effective relationships (interpersonal skills and personal qualities); workplace skills (resource management, information use, communication skills, systems thinking and technology use).

Alternance apprenticeships in Belgium (Wallonia)

Alternance is an apprenticeship scheme that combines periods of general and vocational training (in a school environment or approved training centre) with periods of practical work experience in a company. It enables learners to acquire training, experience and skills relevant to the job market, as well as an official, recognised qualification and remuneration. The work-study training programme is organised through a partnership between an approved training operator (CEFA or IFAPME), a trainee and a company. To meet current and future challenges linked to the energy transition, training programmes include modules on building energy performance, insulation, sustainable renovation. Work-linked training is a way of gaining access to the job market. The programme is a direct response to the skills required by companies and employers have the opportunity to train young people (aged between 15 and 24) or adults in line with their needs. Nearly 90% of IFAPME graduates find a job within 6 months.

Source: OECD (2023[34]), *Building Future-ready Vocational Education and Training Systems*, https://doi.org/10.1787/28551a79-en.

ii) Encouraging adults to adapt their skill sets to changing jobs and careers

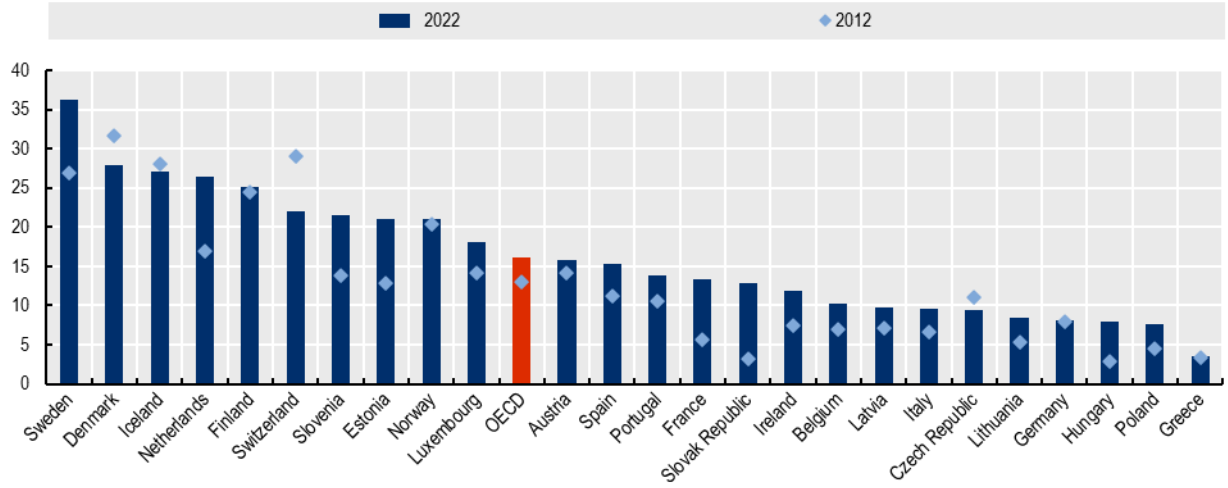
45. Adult learning[1] is crucial in the context of rapidly changing labour markets and societies. It plays a vital role in equipping adults with updated skill sets to navigate and succeed in evolving workplaces and more digital societies. In many OECD countries, the skills of adults are not well aligned with the skills that are needed in the labour market. Indeed, about 1 in 3 workers in OECD countries does not have the level of education typically required for their job, and many skills needed in the labour market are hard to find, including scientific knowledge, cognitive skills and medicine knowledge (OECD, 2022[35]). Furthermore, many adults do not have the skills to succeed in more digital and complex societies – e.g. only 55% of adults in the EU had at least basic digital skills in 2023 (Eurostat, 2024[36]). Adult learning will be key to address these challenges. Recognising the importance of adult learning, many countries have placed it at the heart of their skills policy agenda and are working to make it more accessible, flexible, of high quality and relevant to changing labour market needs.

46. On the positive side, adults' participation in learning has increased over the past decade, despite the disruptions caused by the COVID-19 pandemic and a temporary drop in participation in 2020. According to Labour Force Survey data, in 2022 on average 16% of adults in OECD-EU countries for which data are available participated in formal and non-formal learning per month (Eurostat, 2022[37]). This is up from 13% a decade earlier (see Figure 4.2). On the downside, many countries continue to struggle to engage those who would benefit most from participating in learning, including adults with low levels of

[1] Adult learning encompasses three types of learning: formal learning, which includes accredited education and training such as Master degree studies; non-formal learning, which involves unaccredited education and training of shorter duration, such as certificates obtained during short-courses; and informal learning, such as learning from colleagues or learning by doing.

skills, adults earning low wages, older adults, adults in rural areas and those working in small and medium sized enterprises (OECD, 2019[38]) (see also Theme 3).

Figure 4.2. Participation in formal and non-formal learning (last 4 weeks), 2012 and 2022



Note: Unweighted average for OECD member countries, where data is available
Source : Eurostat (2022[37]), European Labour Force Survey.

47. Addressing these participation gaps in adult learning is not only a matter of ensuring equal access to new opportunities, but also an important factor in building a skilled workforce capable of responding effectively to the challenges of the green transition and other transformative changes. A concerted effort could help to promote adult learning and ensure that individuals can acquire the skills necessary for sustainable employment and meaningful participation in a changing labour market. These efforts need to address the multiple and interrelated barriers to participation in adult learning, including dispositional factors (e.g. self-doubt, lack of motivation), situational factors (e.g. caring responsibilities, lack of employer support, financial constraints) and institutional factors (e.g. lack of flexible learning opportunities) (Roosmaa and Saar, 2016[39]; Pennacchia, Jones and Aldridge, 2018[40]).

48. OECD research highlights that there is no single solution to increasing participation in adult learning. Instead, concerted packages of reforms that include different measures for different target groups are needed to make a difference (OECD, 2020[41]). Options for policy makers include:

- **Providing information and guidance** to individuals to help them make informed choices about education, training, and careers. This might include outreach activities to disadvantaged groups, as OECD survey data shows they are less likely to seek advice (OECD, 2021[42]). Information and guidance services can also be targeted at enterprises, which are a key provider of education and training for adults across OECD countries, with support to assess enterprises' skills and training needs, identify suitable training opportunities for employees and take advantage of the financial support available (OECD, 2021[43]).
- **Increasing the flexibility of learning provision** in terms of time, place, and mode of learning, such as by offering part-time, online, hybrid or blended learning options. Adult learning provision can also be made structurally flexible through modularisation, i.e. breaking down a learning programme into discrete parts; recognition of prior learning (i.e. validating an individual's existing knowledge and skills); making access to formal education more inclusive; and offering alternative qualifications such as micro-credentials (2023[44]).

- **Offering financial incentives** to motivate individuals to take part in and enterprises to offer (more) education and training. Different instruments are available to policy makers to reduce the costs of training, such as subsidies and tax incentives; to decrease the opportunity costs of training, such as paid training leaves, allowances and job rotation schemes; to tackle temporary liquidity constraints, such as loans; and to ensure that resources are set aside for future training, such as saving/asset building mechanisms and training levies (OECD, 2017[45]).
- **Ensuring that adult learning provision is high quality**, including through the recognition and certification of providers, for example by awarding quality certificates and labels, as well as the monitoring of the outputs and outcomes of adult learning provision (OECD, 2021[46]; OECD, 2021[47]; Espinoza and Martinez-Yarza, 2023[48]).

49. Particular attention might be paid to the validation of skills developed in a wide range of context, including schools, workplaces and through independent learning. Among other things, this entails ensuring that all adults who practice a trade, but who do not have a corresponding academic qualification, can have their skills officially recognised and obtain a recognised credential that can be used as part of a professional project (job search, career) or training (access and exemptions). It also necessary to ensure greater consistency and convergence of qualifications in general, at least in the public sphere, so as to facilitate not only the mutual recognition of prior learning between these same providers, but also the fluidity of learner pathways, both within and between countries, an objective pursued in particular by the EQF.

50. Moreover, it is important that skills and training outcomes of individuals are certified and recognised. More specifically, the development of micro-credentials that reflect the learning outcomes of short training courses could be considered, especially on cross-functional themes such as digital skills, transversal skills or safety at work. Micro-credentials also allow for a more individualised approach to skills development and they support lifelong training strategies, which both will be to the benefit of adults with low levels of skills, those furthest from the job market, and other vulnerable groups. However, it will be important to continue cultivating trust in micro-credentials among employers, learners, and stakeholders. This need has already been recognised by the European Commission, as evidenced by its incorporation of this objective in its Council_Recommendation on the European approach to micro-credentials, which presents a common definition and elements for micro-credentials.

51. Furthermore, the responsiveness of the adult learning provision to changing skill needs is important for increasing participation in adult learning, as is examined in more detail in the next section.

52. Box 4.2 presents several international examples of measures to stimulate adult learning. It describes European reference frameworks used for skills assessment exercises, among others; lifelong learning centres in Iceland, which are a good example of local centres providing high quality learning opportunities to adults; guidelines and a centralised online platform for micro-credentials in Australia, which allow the country to be a front runner in the adoption of micro-credentials; France's Individual Learning Account *(Compte Personnel de Formation),* which allows all workers to accumulate credits for training and education; and Wallonia's competence centres, which enable jobseekers, apprentices, teachers, students and employees to train to meet the labour and skills needs of the market as well as future needs.

Box 4.2. International examples: Encouraging adults to adapt their skill sets to changing jobs and careers

Official reference frameworks in Europe

There are several reference frameworks for both individual positioning tests and skills assessments, developed by the European Commission and its services, or through EU-funded projects. These include a transversal competences framework used for identification of transversal skills linked to employability and certifications developed as part of the Rectec project, DigComp (Digital Competence Framework for Citizens providing a common understanding, across the EU and beyond, of what digital competence is), and EntreComp (European reference framework designed to illustrate the skills that make up entrepreneurial competences). In addition to providing a common understanding of what digital competences are, the power of these frameworks is that they can be used to frame digital skills policy, for curricula reform, to develop digital skills assessment tools and certification systems.

Lifelong learning Centres in Iceland

In Iceland, Lifelong Learning Centres are operated in various locations and their role is to strengthen the variety and quality of education and encourage general participation. They focus on adults who have not completed upper secondary education, and each centre has one or more educational- and vocational counsellors who work on reaching out to this target group, mostly through companies, and motivating them towards learning. The geographical coverage and high-skilled staff are key success factors of these centres.

Micro-credentials in Australia

Australia is a front-runner in the provision of micro-credentials, with a consistent set of guidelines through the National Micro-credentials Framework, and the centralised online platform *microcred seeker*, which displays the full range of options across providers and industries. The portal allows users to search micro-credentials by industry, level, the award of academic credits, start date, duration, delivery mode, price, provider and region.

France's Compte Personnel de Formation

France subsidises training through an Individual Learning Account *(Compte Personnel de Formation)* that empowers individuals to take charge of their own skill development. As one of the only real individual learning accounts implemented to date, it allows all workers to accumulate credits for training and education. Workers accumulate credits at a rate of EUR 500 per year (based on full-time employment) up to a maximum of EUR 5 000 over 10 years, for training programmes aligned with career goals and interests and that delivers a certificate. The individual learning account is financed through a compulsory training levy on firms.

Competence centers in Wallonia (Belgium)

A competence centre is an organisation that specialises in one or more fields of activity and strategic innovation to promote the acquisition of knowledge, skills or technologies. This concept builds on the Centre of Vocational Excellence (CoVE) EU model by integrating the needs of socio-economic players and implementing partnerships between the public and private sectors. The Competence Centres enable jobseekers, apprentices, teachers, students and employees to train to meet the labour and skills needs of the market as well as future needs resulting from technological and economic developments. In addition, they organise technological monitoring and awareness of current and future professions.

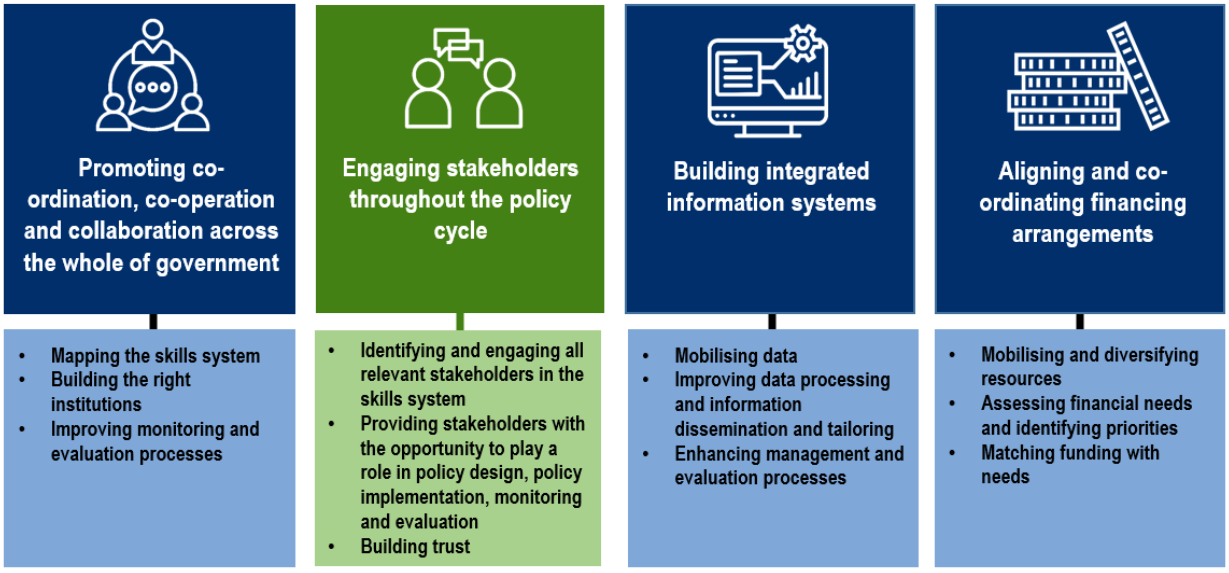
Source: Government of Iceland (2023[49]), *Website Lifelong Learning in Iceland*, https://island.is/en/lifelong-learning; OECD (2023[44]), *Flexible adult learning provision: What it is, why it matters, and how to make it work*, https://www.oecd.org/els/emp/skills-and-work/adult-learning/booklet-flexibility-2023.pdf; OECD (2019[50]), *Individual Learning Accounts : Panacea or Pandora's Box?*, https://doi.org/10.1787/203b21a8-en.

iii) Improving the responsiveness of skills systems

53. In this context of digital and green transitions that reshape societies and economies (see above), policy makers are faced with the pressing task of designing skills policies and reforms responsive to the rapidly changing labour market needs, while carefully considering "what works and what does not on the ground". Engaging with non-governmental stakeholders (i.e. employers, trade unions, education and training providers, community service organisations, learners, etc.) can support policy makers in ensuring that learning and career pathways are responsive to new opportunities and labour market developments. Stakeholder engagement also allows for assumptions regarding the real-world effects of skills policies to be tested and for alternatives to be found, while helping to build trust in government and generating a greater degree of political legitimacy, which can itself be an important resource during the policy implementation phase (OECD, 2020[51]; OECD, 2021[52]). Stakeholder engagement is therefore one of the key pillars of effective skills system governance (see Figure 4.3).

54. Innovative ways of engaging stakeholders throughout the policy cycle are already being used in OECD countries and beyond. Instead of simply focusing on sharing information with stakeholders or holding policy consultations (e.g. through online surveys, public presentations and discussion sessions, etc.), some countries are targeting the development of more continuous and structured stakeholder engagement by establishing dedicated bodies, such as Skills Councils, Committees or similar (OECD, 2019[1]; OECD, forthcoming[53]; OECD, 2019[54]; Global Deal, OECD, ILO, 2020[55]; Global Deal, 2023[56]).

Figure 4.3. Stakeholder engagement – essential for improving responsiveness of skills systems – is one of the four key building blocks of strong skills system governance



Source: Elaboration on OECD (2019[1]), *OECD Skills Strategy 2019: Skills to Shape a Better Future,* https://doi.org/10.1787/9789264313835-en.; OECD (2020[51]), *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries,* https://doi.org/10.1787/3a4bb6ea-en.

55. Stakeholder engagement bodies exist at national, regional, local and/or sectoral levels, and provide a forum for engagement between government and stakeholders on the strategic direction of skills policies as a whole or in a particular sub-sector of skills policy (e.g. vocational education and training, VET). The scope of engagement that the bodies facilitate varies from country to country. While certain countries may establish and use stakeholder engagement bodies to regularly receive feedback from stakeholders on certain skills policy issues and/or proposals, others are used for partnering with stakeholders through

much closer and more intensive co-operation across the skills policy cycle, for example on the development of National Skills Strategies. Other bodies may even facilitate joint decision-making by government and stakeholders, for example on the duration and structure of VET programmes (OECD, 2022[57]).

56. Given the horizontal, cross-cutting nature of skills policies, stakeholder engagement on skills can equally take place through bodies with mandates broader than skills policy, such as National Economic and Social Councils in Europe or National Productivity Committees in Latin America, where space for skills policy discussions can be reserved for specific working groups or workstreams (OECD, forthcoming[53]).

57. In order to foster the responsiveness of learning pathways to future opportunities, countries can equally consider the establishment of engagement mechanisms, which primarily foster engagement between stakeholders themselves. For example, facilitating dialogue and/or collaboration between education and training providers and other stakeholders (e.g. employers, trade unions, etc.) supports the design of education and training courses, the content of which can better keep up with the fast changing labour market needs (OECD, 2017[58]). To this end, countries have established and/or funded a range of engagement mechanisms such as Sectoral or Industry Skills Councils (OECD, forthcoming[53]) through which stakeholders exchange information, collaborate on co-developing education and training programmes, national qualifications frameworks, and skills forecasts and surveys, among others. Box 4.3 describes how Chile, Korea, Poland and Wallonia (Belgium) support stakeholder collaboration through dedicated bodies and platforms, ranging from industry-led skills development councils in specific sectors and industries to councils within universities.

58. While it is positive that countries are establishing mechanisms for more continuous and structured stakeholder engagement on skills policy, the mechanisms do not facilitate effective and meaningful stakeholder engagement automatically. In establishing and managing stakeholder engagement mechanisms, it is important to clearly define the mechanisms' mandate, pay attention to the heterogeneity and representativeness in their membership, ensure adequate accountability vis-à-vis stakeholders' input, provide sufficient resourcing, allow stakeholder engagement to develop over time, and prevent gridlock while managing the risk of undue influence by special interests, among others.

59. In addition to effective stakeholder engagement, countries might conduct a thorough assessment of the provider base to ensure that it can deliver the range and quality of education and training that both learners and employers need. This could involve examining the distinct roles that various provider types, such as schools, universities, independent providers, and more, could play in developing the skills of people needed in future economies and societies. By strategically analysing and optimising the mix of providers and their respective roles, countries can cultivate a dynamic and responsive educational ecosystem that aligns with the evolving demands of digitalised economies and societies.

Box 4.3. International examples: Improving the responsiveness of the skills system

Sectoral Councils in Chile

Sectoral Councils (*Consejos Sectoriales*) in Chile play an important role in supporting the responsiveness of education and training to labour market needs. For example, the Industry 4.0 Skills Council, through a more dedicated Maintenance 4.0 Skills Council, developed the Maintenance 4.0 Qualifications Framework. The Maintenance 4.0 Skills Council also monitors sectoral labour market developments and supports the alignment of the education and training offer with the developed occupational standards, among others. Members of the Maintenance 4.0 Skills Council include representatives of education and training providers and employers from a range of sectors, from mining to energy.

Industry Skills Councils in Korea

Industry Skills Councils in Korea, operating in 17 industries, were established in 2015 to encourage industry-led skills development. The Councils develop the National Competence Standards, suggest corresponding training options, and monitor labour market demand in respective sectors. Each Council has 20 members drawn from employer associations, unions, the Ministry of Employment and Labour and other experts. The Councils are financed by the Ministry of Employment and Labour.

University Councils in Poland

The Law on Higher Education and Science in Poland introduced a new body in public academic higher education institutions in 2018, the university council, with stakeholders from outside the given institution constituting at least 50% of its composition. The members of university councils can express opinions on the draft university strategies and statutes, provide feedback on the reports about the implementation of the university's strategy, and monitor university management, among other tasks.

Wallonia Skills for the future platform in Wallonia (Belgium)

In 2020, the Walloon government adopted an action plan that aims to create a new dynamic in vocational training, making VET an essential lever for supporting professional integration and economic recovery. "Wallonia skills for the future" is a platform whose objective is to design responses, in terms of training, to the skills needs of companies which cannot be covered by the existing offer of providers, whether in qualitative terms or in quantitative terms. To do this, it coordinates the expertise of these same providers to create training courses adapted to the job market demands.

Source: Fundación Chile (2023[59]), *Consejos Sectoriales*, https://fch.cl/iniciativa/consejos-sectoriales/; OECD (2021[60]), *OECD Skills Strategy Implementation Guidance for Korea: Strengthening the Governance of Adult Learning*, https://doi.org/10.1787/f19a4560-en; OECD (2019[61]), *OECD Skills Strategy Poland: Assessment and Recommendations*, https://doi.org/10.1787/b377fbcc-en

5 Theme 3: "Enabling everyone to develop the skills for new opportunities"

60. To ensure that everyone can thrive in a rapidly changing world, countries could identify and promote the skills that are most favourable to human development, both personal and collective, as well as to the promotion of sustainable economic development. Moreover, it is important to develop inclusive skills systems that support the people most vulnerable (e.g. youth from disadvantaged backgrounds, jobseekers, workers in jobs at risk of disappearing, etc.) to adapt to changes in the world of work. To reach these people and to provide them with the required support, countries could build bridges between governments and the actors who work most directly with them.

61. In general terms, countries could consider i) supporting the most disadvantaged groups in initial education; ii) promoting lifelong learning among underrepresented groups of adults; and, iii) engaging with stakeholders to reach the most underrepresented groups.

Theme 3 "Enabling everyone to develop the skills for new opportunities"

Key messages

- While progress has been made in improving equity and inclusion in initial education, significant challenges remain with access to and participation in education for different groups. To overcome these challenges, countries could do more to foster a range of teaching, training and educational programmes that ensure all youth have access to the best opportunities and support to develop the skills that are necessary to ensure their employability in a changing world, as well as to support the development of their critical thinking and innovation capacities.
- The OECD identified six key steps for promoting equity and inclusion in education: i) develop a policy framework for equitable and inclusive education; ii) ensure flexibility and responsiveness to student needs; iii) consider equity and inclusion for funding mechanisms; iv) promote stakeholder engagement; v) ensure that teachers and school leaders have skills for promoting equity and inclusion; and vi) identify students' needs, support them and monitor progress.
- To address adult learning participation gaps, countries could target support to the groups least likely to participate and who would benefit the most from learning, including adults with low skills, adults earning low wages, older adults, adults in rural areas, those working in SMEs, and jobseekers.
- Various barriers may prevent adults from learning, including weak basic skills (e.g. insufficient digital skills to participate in online/hybrid learning), a lack of motivation, time and financial resources. Diverse policy measures are needed, including targeted and tailored information, guidance and incentives, as well as a more flexible and responsive learning offer.

- Vocational programmes are often viewed as a key component of adult learning, especially because of their potential to engage those at risk of being left behind. Adults could, for instance, enter specifically designed vocational programmes at an upper secondary or tertiary level.
- Non-governmental stakeholders have a key role to play in reaching the most underrepresented groups, as they are often in direct contact with potential learners. For instance, adults with low levels of skills could be effectively engaged within their workplace, with trade unions facilitating communication between employers and employees, and education and training providers, as well as community leaders, can equally facilitate targeted outreach to specific groups.

Questions for discussion

The topic of "Enabling everyone to develop the skills for new opportunities" will be discussed during Skills Summit 2024 on 22 February in the third session of the day at 14:00 – 15:30. Guided by a moderator, the following questions will be raised:

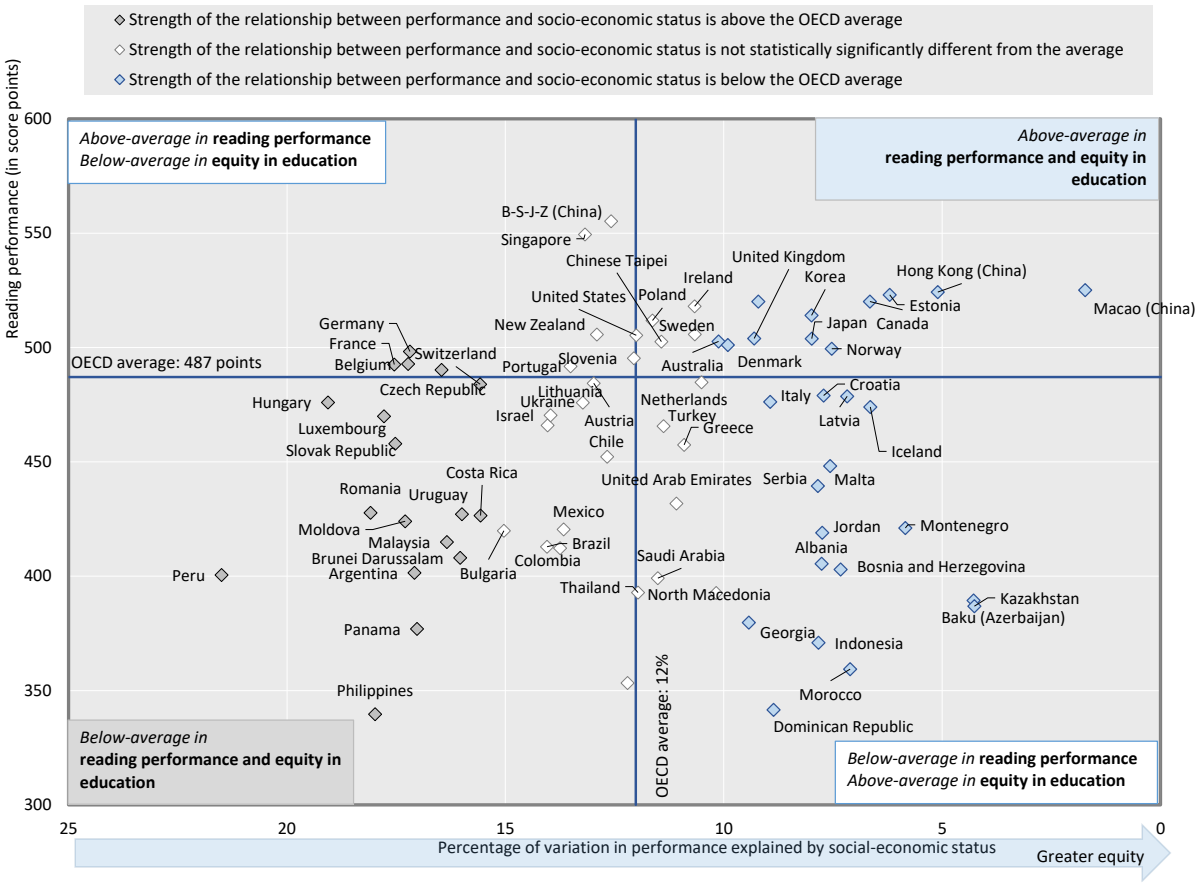
- How is the learning system in your country supporting the most disadvantaged groups in society to participate in education?
- Do the adults who are vulnerable to changing economies and societies and who are not yet participating in learning (e.g. low educated workers, jobseekers, the inactive), have access to sufficient information and guidance on lifelong learning, as well as accessible learning opportunities?
- How is your country working with stakeholders (e.g. at the local level) to encourage and support vulnerable adults to participate in education and training?

i) Supporting the most disadvantaged groups in initial education

62. Equity and inclusion are critical issues that have been at the forefront of discussions in initial education for many years. While progress has been made in recent years, significant challenges remain. Access to and participation in initial education varies by socio-economic, immigrant and ethnic background, as well as between students with and without special education needs (Mezzanotte, 2022[62]; OECD, 2008[63]; OECD, 2018[64]; OECD, 2019[65]; OECD, 2021[66]). The latest PISA survey indicates that socio-economically disadvantaged students in OECD countries are seven times more likely on average than advantaged students not to achieve basic mathematics proficiency (OECD, 2023[28]). Furthermore, gender differences persist in school performance, fields-of-study, employment rates and wages (OECD, 2023[67]). Differences in skill levels – and educational opportunities – driven by diversity-related factors also permeate long after leaving initial education (Mezzanotte, 2022[62]; OECD, 2021[24]).

63. However, inequalities in education and beyond are not a destiny, and education systems can be both equitable and high-performing (see Figure 5.1). To this end, a recent OECD report (2023[68]) highlights six key steps to equity and inclusion in education. The first step outlines that a comprehensive policy framework is needed to develop an equitable and inclusive education system. It is important to connect key areas for equity and inclusion, including the design of curricula, teaching practices, capacity building of staff and monitoring of student outcomes. Policy frameworks can ensure that progress toward equity and inclusion is continuously monitored and evaluated by embedding monitoring and evaluation systems with clearly stated goals and priorities (OECD, 2023[68]).

Figure 5.1. Strength of the socio-economic gradient and reading performance



Note: Socio-economic status is measured by the PISA index of economic, social and cultural status.
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Source: OECD (2019[65]), PISA 2018 Results (Volume II): Where All Students Can Succeed, https://doi.org/10.1787/b5fd1b8f-en.

64. Secondly, it is important to ensure that the education system is flexible and responsive to the needs of students (OECD, 2023[68]). Responsiveness and flexibility in all aspects of an education system are key to supporting learners and their needs. Education systems can address each student's unique needs, talents and aspirations by developing an inclusive curriculum, adopting various teaching strategies and applying differentiated instruction.

65. Thirdly, while a minimum level of investment in education is essential, what also matters is to include equity and inclusion as principles of both main resource allocation mechanisms and targeted funding of the education system (OECD, 2017[69]; OECD, 2023[68]). Main allocation mechanisms can streamline the resourcing system but may lack accountability measures. Targeted funding, in turn, can be useful in directing resources toward specific groups or issues, but may result in a lack of coordination and inefficiencies (OECD, 2022[70]). See Box 5.1 for an example from Norway on financial policy levers that promote equity in higher education.

66. The fourth step outlines how stakeholder engagement can promote equity and inclusion in education. It could involve a range of actors, including teacher unions, local authorities, parents and organisations representing specific groups (OECD, 2023[68]). Stakeholders could also be included in the policy cycle from policy development to implementation and evaluation, and their feedback needs to be taken into account to identify and address challenges. Engaging stakeholders at the lower levels is also

essential in creating a positive climate supporting all learners (Cerna et al., 2019[71]). For example, Colombia's Sacúdete Strategy providing skills development opportunities to disadvantaged youth is implemented in collaboration with a Youth Advisory Committee (see Box 5.1). Raising awareness of diversity is also important to promote acceptance and inclusion and mitigate stereotypical or discriminatory beliefs that may impact diverse students (OECD, 2023[68]).

67. Step five highlights that education systems could prepare and support teachers and school leaders in developing the competencies and knowledge areas for promoting equity and inclusion (OECD, 2023[68]). Teaching in diverse settings requires staff to possess various competencies, knowledge and attitudes to create equitable and inclusive learning environments. Therefore, it is important that education systems prepare and support teachers to promote equity and inclusion through initial teacher education and continuous professional learning (see Box 5.1 for an example from Australia on training to foster teachers' capacity to teach in multicultural environments). Diversity among staff members can also promote more equitable and inclusive classroom environments (Brussino, 2021[72]; OECD, 2022[73]). Moreover, management plays a crucial role in facilitating equitable and inclusive teaching and creating a positive school climate (European Agency for Special Needs and Inclusive Education, 2020[74]; UNESCO, 2020[75]; OECD, 2022[76]).

68. Finally, identifying students' needs, supporting them and monitoring their progress are essential to promote equity and inclusion (OECD, 2023[68]). Diagnostic assessments are typically used to identify students who are at risk of failure and evaluate their learning needs, which are then addressed by providing tools such as Individual Education Plans, accommodations and modifications. Additionally, educational institutions can provide psychological services and social and emotional learning programmes to support the well-being of diverse learners. The assessment of student progress could also be designed to avoid bias and allow all students to show what they have learned using multiple assessment forms and techniques (OECD, 2013[77]; OECD, 2023[68]).

Box 5.1. International examples: Supporting the most disadvantaged groups in initial education

Financial policy levers promoting equity in higher education in Norway

To increase access and participation among disadvantaged groups, Norway set up special grants and loans for higher education students with special education needs, and special grants and academic leave for up to 49 weeks for students with children. Furthermore, higher education institutions offer study programmes in the three Indigenous Sámi languages, and Sámi University of Applied Sciences is responding to the needs of the Sámi community specifically.

Engaging stakeholders in the implementation of the Sacúdete Strategy for disadvantaged youth in Colombia

The Sacúdete Strategy in Colombia supports more than 370 000 adolescents and young men and women, in more than 700 municipalities of the 32 departments of Colombia, with strengthening skills in critical thinking, digital skills, innovation, creativity, leadership, assertive communication, citizenship, teamwork, and empathy. Target groups of the Sacúdete Strategy include young people from socio-economically disadvantaged backgrounds and conflict victims, among others. The Strategy is implemented by the Colombian Institute for Family Welfare, in collaboration with the Youth Advisory Committee.

Initial teacher education fostering teachers' capacity to teach in multicultural environments in Australia

In Melbourne, Australia, the eTutor programme aimed to strengthen pre-service teachers' capacity to teach in multicultural environments by creating an online space to interact and engage in dialogue with students from other cultures. These interactions helped shift the attitudes of many pre-service teachers

who participated and promoted greater understanding and empathy for students from diverse cultural backgrounds.

Targeted non-instructional support in disadvantaged areas in Ireland

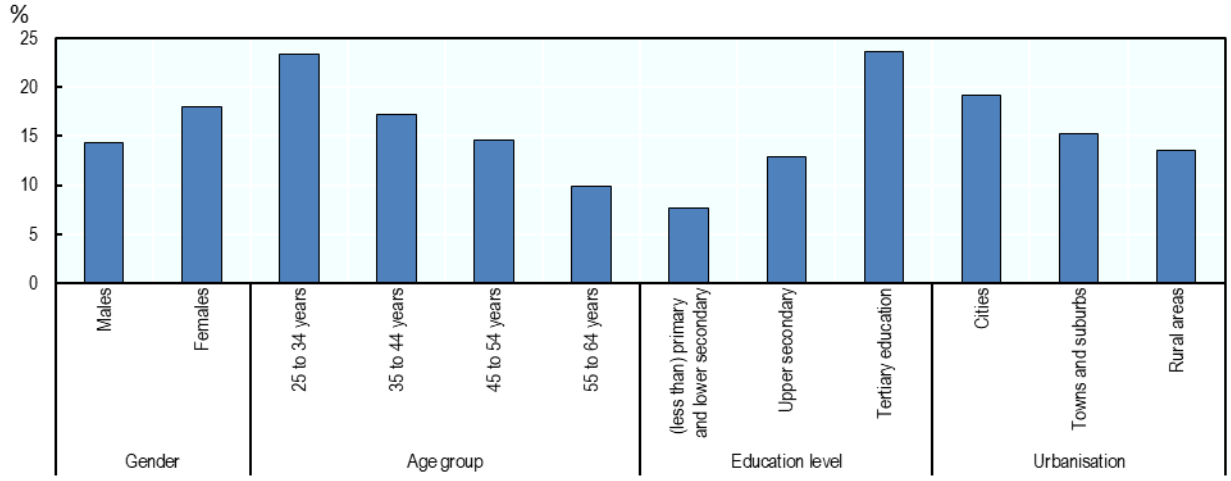
In Ireland, the Home School Community Liaison scheme targets schools in disadvantaged areas, and provides support for families to become more engaged in their child's education, which includes visits by scheme co-ordinators. The role of co-ordinators includes encouraging parental involvement, addressing educational disadvantage, integrating parents into the school planning process, supporting parents as a resource and building trust through home visits.

Source: OECD (2023[68]), *Equity and Inclusion in Education: Finding Strength through Diversity*, https://doi.org/10.1787/e9072e21-en; (Guthrie et al., 2019[78]; Santiago et al., 2017[79]); Department of Education, Tusla Education Support Service (2021[80]), *Information Booklet for DEIS schools participating in the Home School Community Liaison Scheme*, https://www.cpsma.ie/wp-content/uploads/files/_Secure/DEIS/Information-Booklet-for-DEIS-schools-participating-in-the-Home-School-Community-Liaison-Scheme_May_2014.pdf; OECD (2019[81]); *Benchmarking Higher Education System Performance*, https://doi.org/10.1787/be5514d7-en; OECD (2022[82]), *Skills Summit 2022 Joint Summary: Strengthening Skills for Equity and Sustainability*,. https://one.oecd.org/document/SKC(2022)3/en/pdf.

ii) Promoting lifelong learning among underrepresented groups of adults

69. While participation in adult learning is increasing in most countries (see Theme 2), a major challenge is that progress is unequal. Therefore, countries could provide support particularly to the groups of adults that are least likely to participate and who would benefit the most from learning, including adults with low levels of skills, adults earning low wages, older adults, adults in rural areas and those working in small and medium sized enterprises, and (long-term) jobseekers (OECD, 2019[38]). The largest participation gaps exist between adults with low and high levels of education (see Figure 5.2 – while 24% of adults with tertiary education participated in formal or non-formal learning in the last 4 weeks in 2022, only 8% of adults with less than upper secondary education did. Moreover, those with a vocational qualification have lower levels of participation than their peers with a general qualification at upper-secondary or post-secondary non-tertiary level (Vandeweyer and Verhagen, 2020[83]).

Figure 5.2. Participation in formal and non-formal learning (last 4 weeks), by characteristics, 2022



Note: Unweighted average for OECD member countries in the EU, where data is available
Source: Eurostat (2022[37]), European Labour Force Survey.

70. Various barriers prevent the most underrepresented groups of adults from pursuing learning opportunities. Weak basic skills are a common challenge. On average across OECD countries, 20% of adults have weak literacy skills and 24% have weak numeracy skills (i.e. scoring at or below level 1 in the OECD Survey of Adult Skills [PIAAC]), and about a third of adults have no ICT skills or only weak digital problem-solving skills (i.e. no computer experience, failed the ICT core test, or scored below-level one in the assessment of problem-solving skills in a technology-rich environment in PIAAC) (OECD, 2021[24]). This matters, because foundational skills are not only required in the labour market but also underpin upskilling and reskilling activities – e.g. a minimum level of digital skills is required to participate in online/hybrid learning (OECD, 2021[24]). Those least likely to participate in, and who would benefit the most from, learning need support to develop the foundational skills that can enable them to access a wide variety of learning pathways. For example, the Brussels Public Employment Service carries out a digital, linguistic and vocational Skills Assessment for every new jobseeker, with priority given to long-term jobseekers. If their basic skills are not strong enough, the jobseekers are directed to a training programme (see Box 5.2).

71. Motivation is another key factor. A lack of interest is the main reason for not participating in education or training by adults, and this is especially true for the groups of adults who are most at risk of being left behind in a rapidly changing world. Information and guidance are therefore very important to make underrepresented groups of adults aware of the benefits of learning and to inform them about the available learning offer and incentives. It is important that information and guidance is easily accessible (e.g. with one-stop-shop information portals) and targeted and tailored to the specific needs of adults. For example, a recent study in Flanders demonstrated how a segmentation approach, including through customer journey research, could help to identify different profiles of learners and how policies, including information and guidance, could be made more relevant to these different groups of learners (OECD, 2022[84]). Furthermore, active outreach is often needed to reach the groups most in need (see also next section).

72. Many adults from underrepresented groups are already interested in learning, but a range of obstacles prevent them from participating in learning activities, especially a lack of financial resources and a lack of time (OECD, 2023[34]). Financial and non-financial incentives, such as levies, subsidies and training leave, could help to address these obstacles, especially when they are targeted to the most vulnerable groups. Box 5.2 describes Brussels' paid training leave scheme, which aims to target the most vulnerable groups, such as part-time workers that are mostly mothers or people with disabilities. Individual learning schemes (e.g. individual learning accounts and vouchers) also have the potential to address obstacles and raise motivations for the most underrepresented groups, and they have the additional advantage of making training rights "portable" from one job or employment status. However, it is important that they are targeted to the right groups of adults to reduce deadweight loss (i.e. costs of being used by adults who would have participated regardless of support), have substantial funding, are kept simple, and are accompanied by other policies to reach the groups most at risk of being left behind (e.g. information and guidance) (OECD, 2019[50]). In particular individual learning accounts have been receiving a lot of policy attention in recent years, including because the European Commission has been promoting these schemes with the Council Recommendation on Individual Learning Accounts.

73. The lack of flexibility in education and training systems can equally be a deterrent to participation in learning to those who do not participate. Several countries already seek to make the provision of education and training more flexible, for example with the use of micro-credentials and hybrid modes of delivery (Kato, Galán-Muros and Weko, 2020[85]; OECD, 2021[86]). Box 5.2 describes Mexico's approach to providing flexible learning opportunities to low-skilled adults, as well as how Brussels made their paid training leave measure more flexible by allowing training online, from home or the office. Higher education programmes are also becoming shorter and are increasingly being delivered online (European Consortium of Innovative Universities (ECIU), 2021[87]). The modularisation of programmes also has the potential to improve flexibility of learning for adults. Breaking up programmes into smaller, stackable pieces can allow adults to develop a specific set of skills, and if they wish, progress towards a full qualification at their own

pace. This flexibility can also benefit employers, allowing them to train their workforce in areas of most relevance to their needs. The need for a more modular and personalised training offer was also of the conclusions of a study by the OECD in Wallonia on improving the funding of partnerships for skills development pathways (OECD, 2023[88]).

74. Vocational programmes are often viewed as a key component of adult learning, especially because of their potential to engage those at risk of being left behind: adults with lower levels of prior education and weaker skills. Vocational education and training (VET) has close links to the labour market and it provides up-skilling or re-skilling programmes with clear pathways to careers, especially if training is tailored to employer's needs. Consultation with professional sectors when designing VET programmes ensures the match between the programmes and the needs of the labour market. As a result, the benefits of vocational programmes are quite transparent. Moreover, work-based learning provides a great alternative for people who have negative experiences from classroom-based learning. These characteristics could help to motivate even the most discouraged learners. For example, during 2018-2022, Slovenia implemented a targeted programme aimed at the development of basic and vocational skills amongst individuals with low-skills, in at-risk jobs and over 45 years-old, with promising results (see Box 5.2).

75. Formal vocational programmes have the advantage of being easier to navigate for potential learners and employers than non-formal programmes, as they are usually underpinned by a transparent quality assurance framework (OECD, 2021[46]). Countries have taken different approaches to providing formal vocational programmes for adult learners. In some countries (e.g. Estonia, Germany and Sweden) upper secondary vocational programmes are designed for adults, with content and mode of delivery adapted to their needs, while in other countries upper secondary level vocational programmes serve both recent school leavers and adult learners (e.g. Australia and New Zealand). Higher level vocational programmes, at post-secondary non-tertiary or short-cycle tertiary level, also offer a key route to advanced occupational skills to graduates of upper secondary VET in many countries. For example, in several Scandinavian countries graduates from upper secondary VET can pursue short-cycle tertiary level programmes and other higher vocational programmes (OECD, 2022[89]).

Box 5.2. International examples: Promoting lifelong learning among underrepresented groups of adults

The digital, linguistic and vocational Skills Assessment in Brussels

Since September 2023, every new jobseeker who registers with the Brussels Public Employment Service now carries out a digital, linguistic and vocational skills assessment. The objective assessment of the skills levels provides a basis on which the jobseeker is oriented to a training programme. Such an assessment allows the development of skills necessary for a professional path but also the necessary skills to follow lifelong learning. Furthermore, precise information on training offers given in this context gives jobseekers a sense of clarity that has the potential to attenuate a lack of motivation.

A more flexible Paid Training Leave in Belgium

The Brussels paid training leave scheme allows employees to take leave from their employer to undertake training, while continuing to receive their salary. Since the scheme was initially not reaching underrepresented groups such as people with disabilities, part-time workers and indirectly women, it has been reformed to make it more flexible. Today, the training leave can also be used for courses accessible to part time workers and in an online format, so the employee has the possibility to follow lessons from home or from work. This flexibility provides a motivation to participate in training for underrepresented groups.

Flanders introduced a 'joint right of initiative' in its system of Training Leave. This joint right of initiative allows the employer to actively propose training to their employees, and calls on workers and employers alike to actively engage with each other about training needs. Since this reform, the number of participants has risen, especially among the low educated and financially vulnerable.

The Model for Life and Work Programme for low-skilled adults in Mexico

In Mexico, the Model for Life and Work Programme (*Modelo Educación para la Vida y el Trabajo*), offers low-skilled adults the opportunity to complete primary or secondary education qualifications. The programme is highly flexible and allows learners to select from various modules at different levels: initial, intermediate (primary education), and advanced (lower secondary education). The subjects covered encompass language and communications, mathematics and science, social development and citizenship, along with civic education. The programme empowers individuals to design their own learning journey and provides them with the freedom to choose their preferred mode of learning, ranging from independent study, group settings in community learning centres, mobile learning spaces, or online.

Developing basic and vocational skills among underrepresented groups in Slovenia

Slovenia's vocational education and training programme, which was implemented during 2018-2022 building on the recommendations in the OECD Skills Strategy project for Slovenia (2017), aimed to increase participation in lifelong learning and provide access to labour market relevant skills (e.g. language skills and ICT skills), with a specific focus on those with low levels of education, in at-risk jobs, and over 45 years old. The programme was delivered via consortia with partner organisations. Results show that 80% of individuals who participated in the programme either pursued further adult learning opportunities, transitioned to new employment, or received a promotion.

Source: OECD (2019[90]), *Getting Skills Right: Engaging low-skilled adults in learning*, https://www.oecd.org/els/emp/engaging-low-skilled-adults-2019.pdf; OECD (2022[91]), *Proceedings of the 9th OECD Skills Strategy Peer-Learning Workshop: How to keep skills in balance? Learning from international approaches to reducing skills imbalances*, https://one.oecd.org/official-document/SKC(2022)4/en.

iii) Engaging with stakeholders to reach the most underrepresented groups

76. Direct and proactive outreach to the most underrepresented groups is important for motivating and incentivising these individuals among which jobseekers to start (re-)engaging with learning (OECD, 2019[90]). As noted above, participation in adult learning is often the lowest among individuals who are the most in need of training and whose participation would yield high social returns, such as jobseekers that are low-skilled and older, as well as individuals from socio-economically disadvantaged backgrounds, among others (OECD, 2021[24]).

77. Non-governmental stakeholders have a key role to play in reaching the most underrepresented groups, as the former are often in direct contact with the potential learners. In OECD countries, different types of stakeholders support engagement of underrepresented groups in learning, depending on the specific profile of individuals in need of training.

78. Engaging adults with low levels of skills can be effectively achieved by reaching out to them within their workplace. It is often in the workplace where individuals recognise their upskilling/reskilling needs and participate in training. However, individuals who lack basic skills may feel reluctant and/or face challenges in expressing their training needs to employers. Research indicates that trade unions can play a vital role in facilitating communication between employers and employees with low levels of skills, acting as a bridge (OECD, 2019[90]). For example, a trade union in the United Kingdom (UK) provides support with upskilling and reskilling to employees (see Box 5.3).

79. Education and training providers in pre-primary and initial education can facilitate effective, targeted outreach to underrepresented groups. Schools and kindergartens can leverage the fact that they may be frequented by low-skilled adults with children (OECD, 2019[90]). Box 5.3 describes a project developed in Vienna, Austria, where German language and basic skills training is provided for mothers with low education levels.

80. Beyond trade unions and education and training providers, stakeholders working with communities (e.g. community sector organisations and community leaders – i.e. individuals representing a specific community) are important for outreach to the most underrepresented groups with the view of engaging them in learning. These stakeholders can reach diverse members of the community with information about benefits of adult learning and learning possibilities, and their role is especially important in areas with low internet coverage and low levels of digital skills preventing potential learners to access such information online (OECD, 2019[90]).

81. In addition to direct outreach, countries can facilitate engagement of the most underrepresented groups in adult learning by designing and implementing skills programmes and initiatives well-suited to the specific needs of these potential learners. Therefore, it is important that stakeholders who represent the groups of learners who tend to engage less in adult learning and/or face specific challenges to participation (e.g. the disabled, migrants, etc.) have a seat at the table in stakeholder engagement bodies (see Theme 2) and an opportunity to influence skills policy design, implementation, monitoring and evaluation (OECD, 2020[51]).

Box 5.3. International examples: Engaging with stakeholders to reach the most underrepresented groups

Union Learning Representatives in the United Kingdom

Unionlearn is the learning and skills organisation of the Trades Union Congress, a federation of trade unions in the United Kingdom. Unionlearn supports union-led learning and assists member unions with upskilling/reskilling, including through the so-called Union Learning Representatives (ULRs). The ULRs are members of independent trade unions and elected in the workplace to facilitate employee learning by assessing employees' skills, connecting employees with suitable training providers, arranging flexible learning options for shift workers and offering advice and guidance on employees' learning pathways, among others.

"Mama lernt Deutsch!" programme in Austria

Mama lernt Deutsch! – Mum is learning German! is a project aiming to support mothers with developing their German language and basic skills in Vienna, Austria. The programme targets low-skilled mothers, with maximum of eight years of schooling in their home country, for whom German is not the first language. In addition to German, training in basic skills such as reading, writing and arithmetic is also provided. The training takes place in the educational institution of the women's child/children and/or in adult learning centres and associations supporting integration of migrants. Where required, child-care is provided to enable training participation.

Source: Unionlearn (2023[92]), *Union Learning Reps (ULRs)*, https://www.unionlearn.org.uk/union-learning-reps-ulrs ; European Commission (2023[93]); *"Mama Learns German", German courses for mothers with a migration background at schools and kindergartens* ; https://ec.europa.eu/migrant-integration/integration-practice/mama-lernt-deutsch-deutschkurse-fur-mutter-mit-migrationshintergrund-schulen_en.

6 Conclusions

82. This paper provides an overview of the issues that will be discussed at the OECD Skills Summit 2024, which is on the topic of "Skills for the future: Building bridges to new opportunities". It presents analysis of the opportunities and challenges for skills policy, consolidates information on what countries are doing in this field, and presents findings from OECD research and beyond on each of the three themes of the Summit: i) Establishing a vision of future skills needs; ii) Creating learning and career pathways that lead to new opportunities; iii) Enabling everyone to develop the skills for new opportunities.

83. It is important to act now to ensure that people will have the skills to succeed in this fast-changing world. Megatrends are already having a profound impact on economies and societies, and by extension on skills systems. Recent events, such as the advancements in AI, including the rapid proliferation in use of ChatGPT and similar generative AI, illustrate how rapidly change can take place. Investments in effective and responsive skills systems are needed to ensure that everyone can benefit from these trends.

84. Policy makers could focus their attention on the potential opportunities arising from these megatrends and consider how they can contribute to building a better and more inclusive future for all. Adopting a forward-looking outlook will be important for harnessing the inherent opportunities within these transformative shifts. While countries will have to respond to external developments, they could also position themselves to take advantage of them, including by adopting a strategic vision for the future, identifying the skills needed to meet this vision, and adapting their skills systems to bring their vision to fruition.

85. The imperative of lifelong learning cannot be overstated as it is indispensable for individuals to adapt to the dynamic and evolving job landscapes and societal shifts and, ultimately, for influencing their success in future economies. Learning across the life course will allow people to develop the right skills initially and upskill and reskill in response to inevitable changes in job demands, career pathways, and patterns in the way people produce, consume and live. Initial education also plays a pivotal role in laying the groundwork by instilling positive attitudes and dispositions toward lifelong learning.

86. Building bridges across ministries, communities and levels of government as well as with a broad range of stakeholders will be needed to develop and implement a compelling and strategic vision that will foster the policies and behaviours needed to make lifelong learning, finally, a reality for all. By fostering partnerships and open dialogue, countries can create an inclusive and sustainable approach that ensures lifelong learning becomes an integral part of our collective reality.

87. Skills Summit 2024 aims to foster a shared understanding among participating countries about the imperative to make skills the foundation for the future of their people. The summit will stimulate discussion of how countries can effectively formulate a strategic vision as well as how to best identify what the strategic skills needs are. It will also explore the policies that are needed to strengthen learning and career pathways, improve the inclusiveness of skills systems, and strengthen skills governance arrangements. By learning from each other's experiences and by sharing good practices, the Skills Summit 2024 will help to build momentum for the development and implementation of skills policies that will allow countries to benefit from the new opportunities that are inherent in a rapidly changing world.

References

Brussino, O. (2021), "Building capacity for inclusive teaching: Policies and practices to prepare all teachers for diversity and inclusion", *OECD Education Working Papers*, No. 256, OECD Publishing, Paris, https://doi.org/10.1787/57fe6a38-en. [72]

Cabinet Office Japan (2023), *Society 5.0*, https://www8.cao.go.jp/cstp/english/society5_0/index.html (accessed on 3 August 2023). [15]

CEDEFOP (2024), *Skills-OVATE tool*, https://www.cedefop.europa.eu/en/tools/skills-online-vacancies (accessed on 26 January 2024). [25]

Cedefop (2023), *Skills Anticipation in Portugal*, https://www.cedefop.europa.eu/en/data-insights/skills-anticipation-portugal#_summary (accessed on 3 August 2023). [27]

Cerna, L. et al. (2019), "Strength through diversity's Spotlight Report for Sweden", *OECD Education Working Papers*, No. 194, OECD Publishing, Paris, https://doi.org/10.1787/059ce467-en. [71]

Department of Education, Tusla Education Support Service (2021), *Information Booklet for DEIS schools participating in the Home School Community Liaison Scheme*, Department of Education, https://www.gov.ie/pdf/?file=https://assets.gov.ie/39197/15d50fa404d24908b1c705c5a8e50a83.pdf#page=1 (accessed on 7 June 2023). [80]

Espinoza, R. and N. Martinez-Yarza (2023), "Quality matters: A comparative analysis of quality assurance models in adult education and training in OECD countries", *OECD Social, Employment and Migration Working Papers*, No. 302, OECD Publishing, Paris, https://doi.org/10.1787/fc5ae97c-en. [48]

European Agency for Special Needs and Inclusive Education (2020), *Inclusive School Leadership: Exploring Policies Across Europe*, European Agency for Special Needs and Inclusive Education, https://www.european-agency.org/sites/default/files/sisl_synthesis_report.pdf (accessed on 16 December 2022). [74]

European Commission (2023), *"Mama Learns German", German courses for mothers with a migration background at schools and kindergartens*, https://ec.europa.eu/migrant-integration/integration-practice/mama-lernt-deutsch-deutschkurse-fur-mutter-mit-migrationshintergrund-schulen_en. [93]

European Commission (2018), *Council Recommendation on Key Competences for Lifelong Learning*, https://education.ec.europa.eu/focus-topics/improving-quality/key-competences (accessed on 30 November 2023). [17]

European Consortium of Innovative Universities (ECIU) (2021), *Paving the Road for the Micro-credentials Movement: ECIU University White Paper on Microcredentials*, https://assets-global.website-files.com/551e54eb6a58b73c12c54a18/6043a9dd006226486010050e_ECIU_Sheet-update_3032021.pdf. [87]

Eurostat (2024), *Individuals' level of digital skills 2023*, https://ec.europa.eu/eurostat/databrowser/view/isoc_sk_dskl_i21/default/table?lang=en (accessed on 25 July 2022). [36]

Eurostat (2022), *EU-Labour Force Survey*, https://www.eui.eu/Research/Library/ResearchGuides/Economics/Statistics/DataPortal/EU-LFS (accessed on 13 July 2022). [37]

Field, S. (2023), *Transferable Competences and Personal, Social and Employability (PSE) Qualifications: Some International Evidence*, Gatsby Charitable Foundation, London, https://www.gatsby.org.uk/uploads/education/international-comparisons-transferable-and-pse-skills.pdf. [33]

Fundación Chile (2023), *Consejos Sectoriales*, https://fch.cl/iniciativa/consejos-sectoriales/. [59]

Georgieff, A. and A. Milanez (2021), "What happened to jobs at high risk of automation?", *OECD Social, Employment and Migration Working Papers*, No. 255, OECD Publishing, Paris, https://doi.org/10.1787/10bc97f4-en. [29]

Global Deal (2023), *Upskilling and reskilling for the twin transition: The role of social dialogue*, https://www.theglobaldeal.com/resources/Upskilling-and-reskilling-for-the-twin-transition.pdf. [56]

Global Deal, OECD, ILO (2020), *Social Dialogue, Skills and COVID-19*, https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_758550.pdf. [55]

Government of Canada (2023), *Make Change that Counts: National Financial Literacy Strategy 2021-2026*, https://www.canada.ca/en/financial-consumer-agency/programs/financial-literacy/financial-literacy-strategy-2021-2026.html#toc13. [19]

Government of Iceland (2023), *Website Lifelong Learning in Iceland*, https://island.is/en/lifelong-learning (accessed on 18 July 2023). [49]

Government of Ireland (2021), *AI - Here for Good: National Artificial Intelligence Strategy for Ireland*, https://www.gov.ie/en/publication/91f74-national-ai-strategy/ (accessed on 3 August 2023). [22]

Guthrie, C. et al. (2019), "Strength through diversity: Country spotlight report for Chile", *OECD Education Working Papers*, No. 210, OECD Publishing, Paris, https://doi.org/10.1787/058bc849-en. [78]

Kato, S., V. Galán-Muros and T. Weko (2020), "The emergence of alternative credentials", *OECD Education Working Papers*, No. 216, OECD Publishing, Paris, https://doi.org/10.1787/b741f39e-en. [85]

Lassébie, J. and G. Quintini (2022), "What skills and abilities can automation technologies replicate and what does it mean for workers?: New evidence", *OECD Social, Employment and Migration Working Papers*, No. 282, OECD Publishing, Paris, https://doi.org/10.1787/646aad77-en. [7]

Mezzanotte, C. (2022), "The social and economic rationale of inclusive education : An overview of the outcomes in education for diverse groups of students", *OECD Education Working Papers*, No. 263, OECD Publishing, Paris, https://doi.org/10.1787/bff7a85d-en. [62]

Milanez, A. (2023), "The impact of AI on the workplace: Evidence from OECD case studies of AI implementation", *OECD Social, Employment and Migration Working Papers*, No. 289, OECD Publishing, Paris, https://doi.org/10.1787/2247ce58-en. [10]

Ministry of Economic Affairs and Communications (2021), *Estonia's Digital Agenda 2030*, https://www.mkm.ee/media/6970/download (accessed on 3 August 2023). [16]

Ministry of Education and Culture (2019), *Media Literacy in Finland*, https://medialukutaitosuomessa.fi/mediaeducationpolicy.pdf (accessed on 3 August 2023). [20]

Nachtigall, D. et al. (2022), "The climate actions and policies measurement framework: A structured and harmonised climate policy database to monitor countries' mitigation action", *OECD Environment Working Papers*, No. 203, OECD Publishing, Paris, https://doi.org/10.1787/2caa60ce-en. [5]

National Health Literacy Action Plan Office (2023), *National Action Plan Health Literacy*, https://www.nap-gesundheitskompetenz.de/ (accessed on 3 August 2023). [21]

Nedelkoska, L. and G. Quintini (2018), "Automation, skills use and training", *OECD Social, Employment and Migration Working Papers*, No. 202, OECD Publishing, Paris, https://doi.org/10.1787/2e2f4eea-en. [6]

OECD (2023), *Améliorer le financement des partenariats pour les parcours de renforcement des compétences en Wallonie [Improving the funding of partnerships for skills development pathways in Wallonia]*, https://www.oecd.org/els/emp/skills-and-work/adult-learning/financement-partenariats-wallonie.htm (accessed on 30 November 2023). [88]

OECD (2023), *Building Future-ready Vocational Education and Training Systems*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, https://doi.org/10.1787/28551a79-en. [34]

OECD (2023), *Education at a Glance 2023: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/e13bef63-en. [14]

OECD (2023), *Equity and Inclusion in Education: Finding Strength through Diversity*, OECD Publishing, Paris, https://doi.org/10.1787/e9072e21-en. [68]

OECD (2023), *Flexible Adult Learning Provision: What it is, Why it Matters, and How to Make it Work*, OECD, Paris, https://www.oecd.org/els/emp/skills-and-work/adult-learning/booklet-flexibility-2023.pdf (accessed on 4 August 2023). [44]

OECD (2023), *Job Creation and Local Economic Development 2023: Bridging the Great Green Divide*, OECD Publishing, Paris, https://doi.org/10.1787/21db61c1-en. [12]

OECD (2023), *Joining Forces for Gender Equality: What is Holding us Back?*, OECD Publishing, Paris, https://doi.org/10.1787/67d48024-en. [67]

OECD (2023), *OECD Employment Outlook 2023: Artificial Intelligence and the Labour Market*, OECD Publishing, Paris, https://doi.org/10.1787/08785bba-en. [9]

OECD (2023), *OECD Skills Outlook 2023: Skills for a Resilient Green and Digital Transition*, OECD Publishing, Paris, https://doi.org/10.1787/27452f29-en. [13]

OECD (2023), *PISA 2022 Results*, https://www.oecd.org/publication/pisa-2022-results/ (accessed on 21 December 2023). [28]

OECD (2023), "Putting AI to the test: How does the performance of GPT and 15-year-old students in PISA compare?", *OECD Education Spotlights*, No. 6, OECD Publishing, Paris, https://doi.org/10.1787/2c297e0b-en. [11]

OECD (2023), *Website OECD Skills Strategies*, https://www.oecd.org/skills/oecd-skills-strategies.htm (accessed on 3 August 2023). [18]

OECD (2022), *Engaging Employers in Vocational Education and Training in Brazil: Learning from International Practices*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, https://doi.org/10.1787/d76a2fe6-en. [57]

OECD (2022), *OECD Skills Strategy Implementation Guidance for Flanders, Belgium: The Faces of Learners in Flanders*, OECD Skills Studies, OECD Publishing, Paris, https://doi.org/10.1787/7887a565-en. [84]

OECD (2022), *Pathways to Professions: Understanding Higher Vocational and Professional Tertiary Education Systems*, OECD Reviews of Vocational Education and Training, OECD Publishing, Paris, https://doi.org/10.1787/a81152f4-en. [89]

OECD (2022), *Proceedings of the 9th OECD Skills Strategy Peer-Learning Workshop: How to keep skills in balance? Learning from international approaches to reducing skills imbalances*, https://one.oecd.org/official-document/SKC(2022)4/en. [91]

OECD (2022), *Quality and Equity of Schooling in the German-speaking Community of Belgium*, OECD Publishing, Paris, https://doi.org/10.1787/9a6b6f3a-en. [76]

OECD (2022), *Review of Inclusive Education in Portugal*, Reviews of National Policies for Education, OECD Publishing, Paris, https://doi.org/10.1787/a9c95902-en. [73]

OECD (2022), *Skills For Jobs database*, https://www.oecdskillsforjobsdatabase.org/#FR/_ (accessed on 23 November 2018). [35]

OECD (2022), *Skills for the Digital Transition: Assessing Recent Trends Using Big Data*, OECD Publishing, Paris, https://doi.org/10.1787/38c36777-en. [4]

OECD (2022), *Skills Summit 2022 Joint Summary: Strengthening Skills for Equity and Sustainability*, https://one.oecd.org/document/SKC(2022)3/en/pdf. [82]

OECD (2022), *Value for Money in School Education: Smart Investments, Quality Outcomes, Equal Opportunities*, OECD Publishing, Paris, https://doi.org/10.1787/f6de8710-en. [70]

OECD (2021), *Artificial Intelligence and Employment: New Evidence from Occupations Most Exposed to AI*, OECD, Paris, https://www.oecd.org/future-of-work/reports-and-data/AI-Employment-brief-2021.pdf (accessed on 22 June 2023). [8]

OECD (2021), *Career Guidance for Adults in a Changing World of Work*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/9a94bfad-en. [42]

OECD (2021), *Education at a Glance 2021: OECD Indicators*, OECD Publishing, Paris, https://dx.doi.org/10.1787/b35a14e5-en. [66]

OECD (2021), *Improving the Quality of Non-Formal Adult Learning: Learning from European Best Practices on Quality Assurance*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/f1b450e1-en. [46]

OECD (2021), *OECD Regulatory Policy Outlook 2021*, OECD Publishing, Paris, https://doi.org/10.1787/38b0fdb1-en. [52]

OECD (2021), *OECD Skills Outlook 2021: Learning for Life*, OECD Publishing, Paris, https://doi.org/10.1787/0ae365b4-en. [24]

OECD (2021), *OECD Skills Strategy Implementation Guidance for Korea: Strengthening the Governance of Adult Learning*, OECD Skills Studies, OECD Publishing, Paris, https://doi.org/10.1787/f19a4560-en. [60]

OECD (2021), "Quality and value of micro-credentials in higher education: Preparing for the future", *OECD Education Policy Perspectives*, No. 40, OECD Publishing, Paris, https://doi.org/10.1787/9c4ad26d-en. [86]

OECD (2021), *Strengthening Quality Assurance in Adult Education and Training in Portugal. Implementation guidance*, OECD, Paris, https://www.oecd.org/skills/centre-for-skills/Strengthening-Quality-Assurance-in-Adult-Education-and-Training-in-Portugal-Implementation-Guidance.pdf. [47]

OECD (2021), "Teleworking in the COVID-19 Pandemic: Trends and Prospects", *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, https://doi.org/10.1787/72a416b6-en. [2]

OECD (2021), *Training in Enterprises: New Evidence from 100 Case Studies*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/7d63d210-en. [43]

OECD (2020), *Increasing Adult Learning Participation: Learning from Successful Reforms*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/cf5d9c21-en. [41]

OECD (2020), *Strengthening the Governance of Skills Systems: Lessons from Six OECD Countries*, OECD Skills Studies, OECD Publishing, Paris, https://doi.org/10.1787/3a4bb6ea-en. [51]

OECD (2020), "The potential of online learning for adults: Early lessons from the COVID-19 crisis", *OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, https://doi.org/10.1787/ee040002-en. [3]

OECD (2019), *Benchmarking Higher Education System Performance*, Higher Education, OECD Publishing, Paris, https://doi.org/10.1787/be5514d7-en. [81]

OECD (2019), *Getting Skills Right: Engaging low-skilled adults in learning*, OECD, Paris, https://www.oecd.org/els/emp/engaging-low-skilled-adults-2019.pdf. [90]

OECD (2019), *Getting Skills Right: Future-Ready Adult Learning Systems*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/9789264311756-en. [38]

OECD (2019), *Getting Skills Right: Making Adult Learning Work in Social Partnership*, OECD, Paris, https://www.oecd.org/employment/emp/adult-learning-work-in-social-partnership-2019.pdf. [54]

OECD (2019), *Individual Learning Accounts : Panacea or Pandora's Box?*, OECD Publishing, Paris, https://doi.org/10.1787/203b21a8-en. [50]

OECD (2019), *OECD Skills Outlook 2019: Thriving in a Digital World*, OECD Publishing, Paris, https://doi.org/10.1787/df80bc12-en. [30]

OECD (2019), *OECD Skills Strategy 2019: Skills to Shape a Better Future*, OECD Publishing, Paris, https://doi.org/10.1787/9789264313835-en. [1]

OECD (2019), *OECD Skills Strategy Poland: Assessment and Recommendations*, OECD Skills Studies, OECD Publishing, Paris, https://doi.org/10.1787/b377fbcc-en. [61]

OECD (2019), *PISA 2018 Database*, https://www.oecd.org/pisa/data/2018database/. [32]

OECD (2019), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/b5fd1b8f-en. [65]

OECD (2018), *Education at a Glance 2018: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/eag-2018-en. [64]

OECD (2017), *Enhancing Higher Education System Performance*, OECD Publishing, Paris, http://www.oecd.org/education/skills-beyond-school/LMRO%20Report.pdf (accessed on 6 February 2019). [58]

OECD (2017), *Financial Incentives for Steering Education and Training*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/9789264272415-en. [45]

OECD (2017), *The Funding of School Education: Connecting Resources and Learning*, OECD Reviews of School Resources, OECD Publishing, Paris, https://doi.org/10.1787/9789264276147-en. [69]

OECD (2016), *Getting Skills Right: Assessing and Anticipating Changing Skill Needs*, Getting Skills Right, OECD Publishing, Paris, https://doi.org/10.1787/9789264252073-en. [23]

OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, https://doi.org/10.1787/9789264190658-en. [77]

OECD (2008), *Tertiary Education for the Knowledge Society: Volume 1 and Volume 2*, OECD Reviews of Tertiary Education, OECD Publishing, Paris, https://doi.org/10.1787/9789264046535-en. [63]

OECD (forthcoming), *Building Stronger Skills through Social Dialogue: The Power of Stakeholder Engagement in Education and Skills Policy*. [53]

OSKA (2023), *OSKA website*, https://oska.kutsekoda.ee/en/ (accessed on 17 July 2023). [26]

Pennacchia, J., E. Jones and F. Aldridge (2018), *Barriers to learning for disadvantaged groups*, Department for Education, London, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/735453/Barriers_to_learning_-_Qualitative_report.pdf (accessed on 17 September 2020). [40]

Roosmaa, E. and E. Saar (2016), "Adults who do not want to participate in learning: a cross-national European analysis of their perceived barriers", *International Journal of Lifelong Education*, Vol. 36/3, pp. 254-277, https://doi.org/10.1080/02601370.2016.1246485. [39]

Santiago, P. et al. (2017), *OECD Reviews of School Resources: Chile 2017*, OECD Reviews of School Resources, OECD Publishing, Paris, https://doi.org/10.1787/9789264285637-en. [79]

Tuckett, A. and J. Field (2016), *Factors and Motivations Affecting Attitudes Towards and Propensity to Learn Through the Life Course*, Foresight, Government Office for Science, UK Government, http://dera.ioe.ac.uk/id/eprint/29182. [31]

UNESCO (2020), "Inclusive Teaching: Preparing all teachers to teach all students", *Inclusive Teaching: Preparing all teachers to teach all students*, https://unesdoc.unesco.org/ark:/48223/pf0000374447 (accessed on 10 June 2022). [75]

Unionlearn (2023), *Union Learning Reps (ULRs)*, https://www.unionlearn.org.uk/union-learning-reps-ulrs. [92]

Vandeweyer, M. and A. Verhagen (2020), "The changing labour market for graduates from medium-level vocational education and training", *OECD Social, Employment and Migration Working Papers*, No. 244, OECD Publishing, Paris, https://doi.org/10.1787/503bcecb-en. [83]