

2 Enhancing the relevance of learning pathways through anticipation, adaptability and assessment of impact

Across the OECD and beyond, in 2023, governments face the double challenge of helping populations recover from recent shocks (e.g. the geopolitical implications of the war in Ukraine, the COVID-19 pandemic) while ensuring individuals and societies adapt to longer-term trends that change the way people live and work. This chapter proposes options for policy makers to develop strategies to enhance the relevance of learning pathways through: *anticipation* (generating and sharing information on the current and expected future demand for labour and skills), *adaptability* (connecting the education and training offer with identified skills needs in response to both urgent and important challenges), and *assessment of impact* (monitoring and evaluating adaptation efforts, and providing feedback on whether education policies or programmes are developing the desired skills). Lessons emerging from recent policy efforts are synthesised into key policy pointers for 2023.

In Brief

Enhancing the relevance of learning pathways through anticipation, adaptability and assessment of impact

Across the OECD and beyond, today's governments face the double challenge of helping populations recover from recent shocks (e.g. the geopolitical implications of the war in Ukraine, the COVID-19 pandemic) while empowering individuals and societies to adapt to evolving trends that keep changing the way we live and work (e.g. automation, digitalisation, climate). Education and training can play an important role in addressing this dual challenge, but only if the learning offer enables learners to learn, unlearn and relearn dynamically as the needs of economies and societies change. Enhancing learning pathways requires strengthening and mobilising knowledge of the education system and labour market to support individual and institutional readiness for change.

Infographic 2.1. Enhancing the relevance of learning pathways

	Key messages	Emerging policy pointers
Enhancing the relevance of learning pathways through anticipation, adaptability and assessment of impact	Education systems need to strengthen their skills anticipation capacity, starting by shorter-term forecasts	<ul style="list-style-type: none"> • Strengthen anticipatory capacity at various levels of the system to increase resilience • Adopt the perspectives of specific groups as inequalities risk deepening
	Proactive and reactive adaptations of education and training opportunities should ultimately seek to empower learners to navigate broader change	<ul style="list-style-type: none"> • Develop measurable strategies to help governments balance competing needs • Explore ways to gain flexibility to attract new resources in order to finance adaptation
	Assessing the impact of policy efforts to enhance learning pathways needs to become more systematised for greater future resilience	<ul style="list-style-type: none"> • Enhance monitoring capacity for local actors to support the scaling up of innovations • Build ecosystem approaches to monitoring and evaluation to provide more insightful evidence

Key messages emerging from this chapter

1. *Education systems need to strengthen their skills anticipation capacity, starting by shorter-term forecasts.*

In PISA 2018, global health and international conflicts were two global issues on which a lower share of students in the OECD reported being informed, compared to other issues surveyed (with 65% and 66% respectively on average). Since 2020, these have been on top of international agendas, reminding us that the future will always surprise us.

Several OECD countries have been generating evidence on the current and future impact of the COVID-19 pandemic and other disruptions, as well as how these are accelerating or diverting pre-existing global trends. These exercises bring together a range of tools and actors to generate at least some first insights for the immediate and more distant future across different employment sectors and population groups.

While longer-term anticipation may be more difficult to establish for education systems, analysis from recent policy efforts undertaken mostly since 2020 point to some **emerging lessons** that can help governments strengthen their shorter-term anticipatory capacity for 2023:

- Strengthening anticipatory capacity at various levels of the system can help increase resilience.
- Adopting the perspectives of specific groups is necessary as inequalities risk deepening.

2. Proactive and reactive adaptations of education and training opportunities should ultimately seek to empower learners to navigate broader change.

Informed by anticipatory approaches, several countries have adapted the overarching goals for their education and training system to establish new and revised high-level needs. Alternatively, countries have modified the content and structure of programmes at specific education levels to work towards meeting new needs. Curriculum adaptations also remain an important area of policy work as countries transform their education offer to meet longer-term needs and shorter-term challenges. In addition, several countries have adapted ongoing reforms to improve the labour market relevance and quality of existing vocational education and training (VET) and adult learning provision, with an emphasis on strengthening co-operation with employers and industry. As a response to unemployment and labour market mismatch, micro-credentials have been growing, and will be particularly important in increasing the share of older learners. However, as the future remains a moving target, these adaptations at systemic level will only be as good as the extent to which they ultimately enable learners and institutions to re-engineer their own learning pathways as they face change in the years to come.

With this objective in mind, analysis from recent policy efforts undertaken mostly since 2020 point to some **emerging lessons** that can help governments to strengthen their adaptation capacity for existing and emerging skills needs for 2023:

- Developing measurable strategies can help governments balance competing needs.
- Financing adaptation calls for exploring ways to gain flexibility to attract new resources.

3. Assessing the impact of policy efforts to enhance learning pathways needs to become more systematised.

In PISA 2018, according to school principals' reports, just over 75% of students on average across the OECD were in schools for which achievement data was tracked over time by an administrative authority.

As education systems return to some sense of stability after two years of significant disruptions, evaluative practices also need to re-establish themselves, or take root. This will help policy makers better understand how education and training pathways can be transformed to be more relevant for individuals' and societies' post-pandemic needs. Beyond the evaluation of specific policies, some countries and economies are promoting evaluative ecosystems to understand better how different initiatives interconnect for impact. In the same way, the unseen benefit of contexts of change and disruption is that they can provide fertile soil for innovations. Governments have also been employing some evaluative techniques to help innovative and effective practices scale up to other contexts.

Analysis from recent policy efforts undertaken mostly since 2020 point to some **emerging lessons** that can help governments to strengthen their evaluative capacity for 2023:

- Enhancing monitoring capacity for local actors can support the scaling up of innovations.
- Building holistic approaches to monitoring and evaluation can provide more insightful evidence.

Introduction

Across the OECD and beyond, today's governments face the double challenge of helping populations recover from recent shocks (e.g. the geopolitical implications of the war in Ukraine, the COVID-19 pandemic) while ensuring individuals and societies adapt to longer-term trends that change the way people live and work (e.g. automation, digitalisation, demographic change, mass information and climate) (OECD, 2022^[1]; OECD, 2020^[2]) (see Chapter 1). Education and training can play an important role in addressing this dual challenge, but only if it empowers the learner to actively evolve in line with the current and future needs of economies and societies.

Education policy makers recognise the importance of this challenge: improving transitions to the labour market and addressing skills mismatch have been prominent reported policy priorities of many education systems since 2008 (OECD, 2018^[3]). The COVID-19 pandemic and associated job losses had added urgency to these priorities during the first stages of the pandemic, refocusing attention on the need to provide workers with quality opportunities to upskill and reskill throughout their careers, and to develop skills in high-demand sectors. In 2022, ensuing labour shortages across most OECD countries, paired with persistent unemployment for certain groups, indicate weaknesses in the matching efficiency of education systems and labour markets (OECD, 2022^[4]). Furthermore, in 2023, as the world heads towards a global energy and food crisis, our economies—and the skills that support them—will need to transform as well.

At the same time, the disproportionate economic and social consequences of recent disruptions on young people have increased concerns for their long-term material conditions and well-being, as well as their desire and capacity to shape civic processes (OECD, 2022^[5]). Education programmes for younger learners must therefore not only equip them with the knowledge and skills they will need to thrive and adapt to changing labour markets, but also those required to participate in democratic and social life.

Enhancing learning pathways in these ways requires strengthening and mobilising knowledge of the education system and labour market. The recent disruptions experienced worldwide have highlighted governments' dependence on data, research and other types of evidence to guide action in the context of a crisis, yet little data exists about the quality of tertiary programmes and their relevance to the labour market, for example (OECD, 2022^[6]). Moreover, the extent to which different actors are currently involved in facilitating the use of evidence in further research, policy making and practice varies greatly. While over half or more OECD education systems report involving universities/education faculties, Ministries of Education, or Teacher Education Institutions, other key actors, such as teacher unions, brokerage agencies, think tanks, media and businesses, were much less present (OECD, 2022^[7]).

With this in mind, and with a view to strengthening the responsiveness and resilience of education systems in the emerging context of 2023, this chapter highlights three ways in which policy makers can mobilise knowledge, people and innovative processes to enhance the relevance of education pathways. These are:

- **Anticipation:** this relates to the capacity of education systems to generate and share information on current and expected future demand for labour and skills.
- **Adaptation:** this involves connecting the education and training offer with identified skills needs in response to both urgent and important challenges.
- **Assessing impact:** this entails monitoring and evaluating adaptation efforts, and providing feedback on whether education policies or programmes are developing the desired skills.

The rest of this chapter analyses selected emerging policy trends from OECD education systems across these three areas (see Table 2.1 at the end for the list of policies and practices included in this chapter). The chapter also presents some lessons of interest to guide education systems' efforts in 2023, concluding with a summary of key policy pointers.

Education systems need to strengthen their skills anticipation capacity, starting with shorter-term forecasts

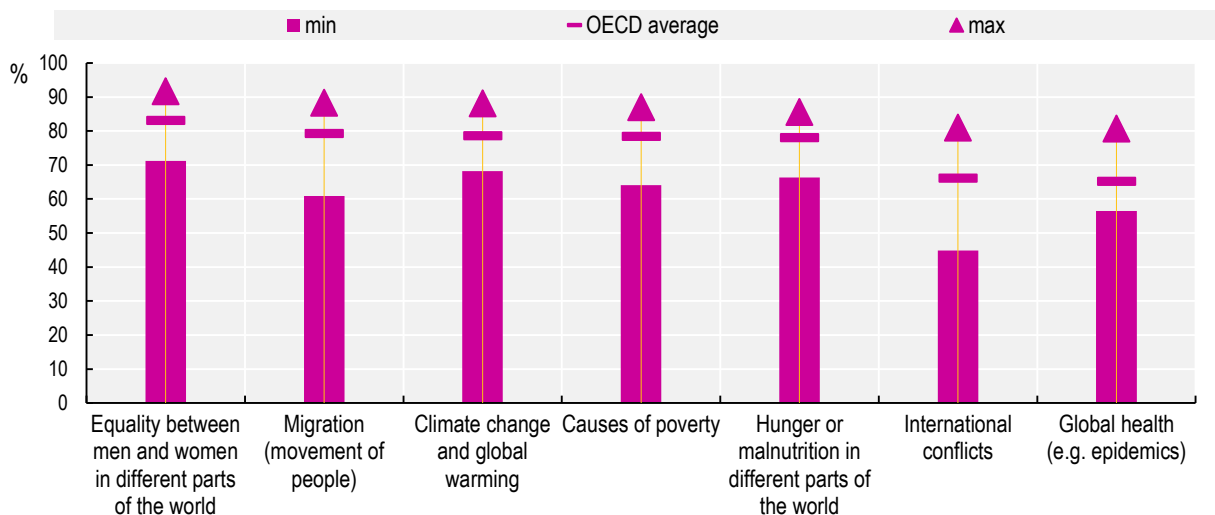
As skills demands evolve, with such changes accelerated or diverted by crisis and recovery periods, responsive and resilient education systems employ multiple tools and approaches to help skills supply keep up (OECD, 2021^[8]). Anticipation—the capacity of education systems to generate and share information on current and expected future demand for labour and skills over a certain time span—is a way in which education systems are working to achieve this.

Strengthening anticipation capacity can help education systems to better navigate the high degree of uncertainty surrounding changes to future labour markets and skills demands. Global megatrends such as digitalisation, climate and demographic change have caused labour markets to undergo structural transformations in recent decades. The shocks that countries and economies across the OECD have been experiencing recently—the energy and food crisis, mass migration, the COVID-19 pandemic, natural disasters, labour shortages—have only served to accelerate or complexify these longer-term evolutions. But today’s education systems are struggling to keep up. Across the OECD, only 6% of new entrants to tertiary education in 2020 were enrolled in information communications technology (ICT)-related programmes, and 14% in health and welfare, despite these being high-demand sectors. Furthermore, both shares had increased by less than one percentage point in the last five years (OECD, 2022^[6]).

At the same time, the impact of these trends and shocks extends beyond labour markets, changing even basic societal structures and norms by which people live. Anticipation therefore also requires identifying and promoting the skills and knowledge people will need for individual and collective well-being (OECD, 2020^[9]). In this regard there is progress to make. Student reports prior to the pandemic indicated that, on average across the OECD, around four-fifths of students felt informed about migration and gender equality in different parts of the world (see Figure 2.1). However, only around two-thirds felt the same for international conflicts and global health (with 65% and 66% respectively on average), issues which have been at the heart of the shocks and disruptions felt by OECD societies since. Anticipating the future is never a perfect exercise; nevertheless, this data indicates just how glaring blind spots can be and the importance of efforts to avoid them.

Figure 2.1. Students need to be informed about a broader span of global issues

Global issues about which 15-year-olds reported being informed (PISA 2018)



Source: OECD (2020^[10]), *PISA 2018 Results (Volume VI): Are Students Ready to Thrive in an Interconnected World?*, PISA, OECD Publishing, Paris, Table VI.B2.2.1, <https://doi.org/10.1787/d5f68679-en>.

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Anticipation approaches include mechanisms for generating labour-market information (LMI), strategic foresight to imagine a range of possible future developments and their potential implications, backcasting to identify necessary curricula changes to achieve a shared vision of student outcomes, and assessing the current level of skills in the population to identify areas for future development. Policy makers can also incorporate mechanisms for skills anticipation and assessment into policy design to help policies continue to meet evolving needs (OECD, 2020^[11]; OECD, 2020^[9]). Given that the effects of trends and shocks vary significantly across local economies and population groups within a country, the most instructive anticipation exercises provide granular data on regional and local markets as well as skill levels among vulnerable, marginalised or minority groups (OECD, 2022^[12]). This can pose a challenge to education systems, which countries and economies are trying to meet through a combination of tools and actors.

Selected recent policy efforts

Since 2020, several OECD countries have been generating evidence on the current and future impact of the COVID-19 pandemic and other disruptions, as well as how these are accelerating or diverting pre-existing global trends. These exercises bring together a range of tools and actors to generate insights for the immediate and more distant future across different employment sectors and population groups, based on the information that is available today.

Bringing together a range of tools for short- and long-term insights is helping governments overcome the limitations of data availability or sectoral bias

When it comes to anticipating the future, policy makers can only rely on evidence and analysis of current and past developments. To overcome the limitations of data availability or sectoral bias, policy makers mobilise multiple sources of evidence and adopt interdisciplinary approaches (Störmer et al., 2020^[13]). Some education systems have been generating scenarios of future short-term and longer-term change. While the latter is a harder exercise, as the future is a moving target (e.g. education systems need to define what to teach in primary education where students are more than a decade away from labour-markets), some overarching trends emerge for further reflection and monitoring.

Estonia's labour-market forecasting system (OSKA) draws on labour-market data, survey data, and interviews with experts from different sectors. Analysis by OSKA examined the impact of the COVID-19 pandemic on the demand for labour and skills in the short (1-2 years) and long term (10 years), identifying priorities for upskilling and reskilling. This work was conducted in collaboration with the Foresight Centre of the Estonian Parliament and drew on quantitative labour force data from Eurostat and Statistics Estonia, economic scenarios developed in a forecasting exercise, qualitative focus group discussions, and findings from a study into the need for sector-specific ICT skills and skills for sustainability (OSKA, 2020^[14]).

Regarding the short-term impact of the pandemic, the analysis highlights a fall in job demand in sectors with high shares of young workers (e.g. service industries, catering, and tourism) and high demand in others (e.g. ICT, agriculture, education, and health and social), as well as an increase in the need for on-the-job training in response to changing work practices. Over the long term, the research identified a need for upskilling in response to digitalisation and automation and anticipated a decline in employment among older workers. The government has used the findings to identify priority sectors for free adult learning, including health, tourism, manufacturing, and ICT (Ministry of Education and Research of Estonia, 2021^[15]).

To generate long-term insights, in 2022, the **United Kingdom's** Department for Education (DfE) commissioned research that developed five potential scenarios for the labour market over the next 15-20 years, reflecting on the possible impact of key trends (e.g. migration, public finances, working practices). An optimistic scenario sees a digital, green and more inclusive society with high demand for skills in management, engineering, communications and computer science. A pessimistic scenario imagines greater inequalities, including digital and educational, with demand for technical skills in construction and

short, tailored courses in higher education. Key policy implications for education and skills systems highlight the importance of promoting science, technology, engineering and mathematics (STEM) subjects and investing in digital skills. Ensuring clearer and more flexible vocational education and training (VET) pathways to support lifelong learning, as well as portable training with corresponding micro-credentials, and incentivising employers and workers to invest in training were also key (Dunkerley et al., 2022^[16]).

To conduct this work, the DfE drew on a wide-ranging review of 130 sources of evidence as well as expert interviews and input from various stakeholders (Dunkerley et al., 2022^[16]). Complementing this, the Working Futures projections (2017-27) offer long-term macro-economic projections of the demand for skills by occupation and qualification level to inform policy development. They draw on existing data and historical trends, as well as economic indicators from sources such as the Labour Force Survey. They use econometric modelling, alongside qualitative methods, to produce an employment baseline by sector, occupation and local area, and models of how these baselines are likely to evolve (Wilson et al., 2020^[17]).

To co-ordinate and improve data and research in this area, the DfE established a dedicated Unit for Future Skills (2022), whose broader remit is to improve the quality of jobs and skills data and to work across government to make this information more accessible to policy makers, stakeholders and the public. Key priorities for 2022 include developing a local skills dashboard with labour-market information available for different geographical areas, developing methodologies for forecasting skills demand, and developing a national skills taxonomy (Government of the United Kingdom, n.d.^[18]). The Unit for Future Skills builds on the outputs of the Skills and Productivity Board, an expert committee, which reported on skills matching and links between skills and productivity in 2022 (Government of the United Kingdom, n.d.^[19]).

Collaborating with various actors is also helping to enrich forecasts

Besides the use of multiple analytical tools, involving multiple actors also matters. Collaboration and co-ordination between actors in different sectors and across different areas and levels of government ensures a diversity of knowledge that can enrich anticipation (Störmer et al., 2020^[13]). At the same time, broader engagement helps systems set out a more inclusive vision for the future of work and skills.

Canada's Labour-Market Information Council (LMIC) has worked with partners such as Statistics Canada, Employment and Social Development Canada, sector councils and actors at the federal, provincial and territorial levels to produce data dashboards, reports and analysis on the impact of the COVID-19 pandemic on specific population groups, job types, and sectors (Labour Market Information Council, n.d.^[20]). The LMIC continues to track the recovery of different groups of Canadians, publishing thematic reports on its website (Labour Market Information Council, 2022^[21]).

Also in the context of the pandemic, Canada's Future Skills Council identified improving access for all Canadians to relevant, reliable and timely labour market information and tools as a key priority. The Council's structure as a 'network of networks' aims to help local needs from disparate regions to be reflected in national dialogue on the future skills agenda (Global Deal, 2021^[22]). Several of its recommendations relate to actions targeting the development of skills among specific population groups, as well as improving the dissemination of insights generated by bodies and helping different audiences make sense of them. These recommendations are based on evidence collected at different levels of government, analysis of foresight models, and national and international research on learning and skills (Government of Canada, 2022^[23]).

Regarding the short term, evidence collected by the LMIC provides insight into the disproportionate and unprecedented impact of the pandemic on female workers compared to previous recessions (Labour Market Information Council, 2021^[24]). Evidence from 2022 shows a strong overall recovery for women's employment, although figures point to a need to ensure that younger women (15-24 year-olds) have opportunities to gain work experience and develop the skills they need for their later career development (Labour Market Information Council, 2022^[21]).

In **Estonia** and the **United Kingdom**, the anticipation efforts outlined above also drew on multiple actors. In Estonia, OSKA's research into the impact of the pandemic drew on qualitative focus group discussions with representatives from employers' organisations, professional associations, and relevant government ministries (OSKA, 2020^[14]). Similarly, in the United Kingdom, the DfE conducted a scenario workshop involving representatives from key employment sectors, government departments, and research and international organisations (Dunkerley et al., 2022^[16]).

Some policy lessons emerge on anticipation of skills' needs for 2023

Recent data and analysis from these and other policy experiences since 2020 to anticipate skills needs and improve the relevance of education and training opportunities offer some lessons to help guide education systems' efforts in 2023.

1. Strengthening anticipatory capacity at various levels of the system can help increase resilience.

While identifying national skills needs and supply is crucial in progressing towards a societal vision of the future, understanding nuances at different administrative, sectoral and educational levels can foster greater coherence and equity.

- *OECD data indicate the importance of developing anticipatory capacity at regional and local levels to anticipate and better address imbalances. For example, among countries with available data, the share of 25-64 year-olds with tertiary degrees frequently varies by a factor of two across regions within the same country while the share of 18-24 year-old NEETs varies by up to 20 percentage points between different regions within several OECD education systems (OECD, 2022^[6]). Better understanding the possible evolution of skill levels as they differ sub-nationally can help local and regional education systems anticipate need in their specific context.*
- The OECD has recommended that **Latvia** conduct a resilience systems' analysis to identify the parts of the education system that have been most affected by COVID-19 and which are most vulnerable to future shocks. In the same way, the OECD suggested exploring different possible future scenarios affecting skills—including associated risks—to strengthen the system's capacity for strategic planning (OECD, 2020^[25]).
- Evidence from **Finland** recommends that more VET and higher education providers should include short- and medium-term foresight in their quality assurance arrangements to better respond to sudden structural changes in the labour market. Complementing this, the evidence also underlines the importance of national-level foresight objectives in creating the conditions for foresight at the institutional level. These national targets include improving the timeliness and availability of foresight data, notably by developing unified channels and reducing fragmentation (Frisk et al., 2022^[26]; Finnish Education Evaluation Centre, n.d.^[27]).

2. Adopting the perspectives of specific groups is necessary as inequalities risk deepening.

Labour-market forecasts point to a need to strengthen efforts to enhance employment and training strategies for groups such as women, young people, older workers, and the lowest-skilled in 2023.

- *OECD data illustrate this further. As of early 2021, an OECD 25-29 year-old without upper secondary education was four times as likely to be not in employment, education or training (NEET) as one with tertiary education (OECD, 2022^[6]). In 2020, only one-fifth of new entrants to tertiary ICT programmes were women, despite this being among the highest-demand and highest-earning sectors (OECD, 2022^[6]). Adopting the perspective of specific groups within wider anticipation efforts may help foresee and understand the inequitable impacts of change and disruption.*

- Evidence from **France** suggests that adult learners with low qualification levels will need more support, as they were disproportionately affected by disruptions to learning in the early stages of the pandemic (Bucher et al., 2021^[28]).
- In **Canada**, evidence shows that governments need to ensure that labour markets continue to provide opportunities for younger learners to access quality work experiences to support entry into the labour market (Government of Canada, 2022^[23]).

Proactive and reactive adaptations of education and training opportunities should ultimately seek to empower learners to navigate broader change

Building on insights from anticipation exercises, adaptation (i.e. connecting the education and training offer with identified skills needs) efforts involve proactively reforming the content, structure, resourcing or target audience of different pathways within the education and training system today, in line with expected change. At the same time, skills anticipation is not without uncertainty that a given expected change will happen or not, particularly for longer time spans. Also, unexpected crises and shocks require adaptations that are reactive, responding to emerging realities and changing situations in real time, to support learners and systems to navigate disruption.

Failing to adapt in these ways can be costly, both to individuals—who may lose time and money dropping out of learning pathways, working under precarious contracts or underutilising their skills—and to society as a whole, for whom the collective returns to education and potential impact on economic growth and productivity are reduced. This is why adaptations efforts need to look beyond immediate changes in contexts and labour markets; they should seek ultimately to empower learners and institutions to navigate these and other changes by re-engineering their own learning pathways. As such, specific skills that learners need for adaptation should also include aspects such as creative and critical thinking, or metacognitive skills, capacity for self-assessment of their learning progress, growth mindset, as well as capacity for agency and co-agency (see Chapter 4).

At the more structural level, previous OECD research suggests that education systems most commonly use information from skills assessment and anticipation exercises to inform the design of pathways in upper secondary, tertiary, or adult education (OECD, 2016^[29]). Such adaptation efforts include developing new qualifications and courses in high-demand/low-supply skill areas and updating or removing outdated offers (OECD, 2019^[30]). Alongside this, efforts to enhance the quality of priority pathways, both new and long-standing, and to increase accessibility or incentivise enrolment, are also important. This can include increasing work-based learning, strengthening quality assurance, introducing training breaks, extensions and short-duration study options, and establishing more flexible skills assessment or qualification processes (OECD, 2021^[8]).

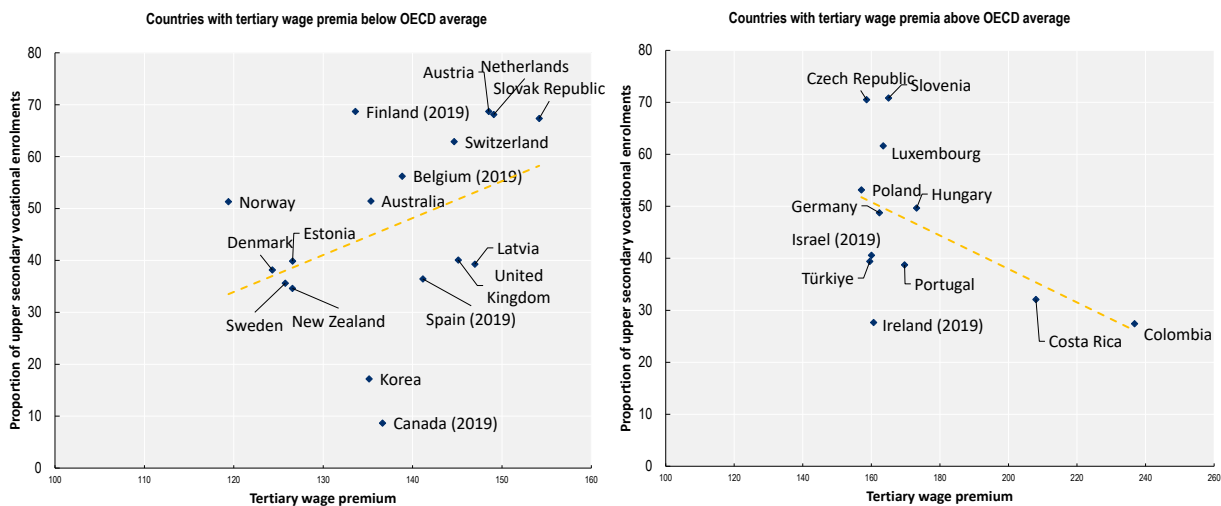
Recent policy trends in the VET sector provide an illustration of adaptation efforts. OECD research has consistently shown high-quality VET to be conducive to effective youth transitions. The COVID-19 pandemic further highlighted VET's role in preparing the workforce that makes up the backbone of our economies, and in aiding recovery from the crisis by equipping students with the skills the labour-market needs and providing adults with relevant upskilling and reskilling opportunities (OECD, 2021^[31]). Even prior to the pandemic, however, VET pathways had a growing importance in education systems across the OECD, partly driven by economic challenges following the financial crisis of 2008. Common policy priorities as reported by OECD education systems between 2008-17 included raising the attractiveness of VET, creating or strengthening apprenticeship systems, and encouraging employer engagement.

At the same time, evidence indicates a need for education systems to strengthen the quality of the specific and transversal skills that VET can provide, with learners voting with their feet based on expected longer-term rewards. In countries and economies where people with tertiary education benefit from a

comparatively high wage premia, that is, tertiary wage premia above the OECD average of 154.44, enrolments in vocational upper secondary education tended to decrease as premia increased in 2020. This was not the case for countries and economies with below-average tertiary wage premia during the same year: in this group, vocational upper secondary enrolments appear to increase as tertiary wage premia increase (Figure 2.2). Increasing quality and relevance in education delivery across education pathways—through a better integration of the world of learning and the world of work—can help enhance their attractiveness to both learners and employers and can be considered as effective options for future careers.

Figure 2.2. In some countries, learners can vote with their feet based on expected longer-term rewards

Wage premia in tertiary education and enrolment in upper secondary VET (2020)



Sources: OECD (2021^[32]), *Education at a Glance 2021: OECD Indicators*, OECD Publishing, Paris, <https://doi.org/10.1787/b35a14e5-en>; OECD (2022^[6]), *Education at a Glance 2022: OECD Indicators*, OECD Publishing, Paris, <https://doi.org/10.1787/3197152b-en>.

1. Data for both series are always from the same year. Data are from the latest year for which data are available for both series. Data from 2019 are indicated in parenthesis next to the country name.
2. Note that the ranges for wage premia always start at 100; however, range max for left graph is 160, while range max for right graph is 260.
3. The OECD average tertiary wage premium was 150.34 in 2019 and increased to 154.44 in 2020. Slovak Republic was above the average in 2019 (153.72) but below the average in 2020 (154.16), so it is grouped with the "below" group in these figures.

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Selected recent policy efforts

Informed by anticipatory approaches, several countries have adapted the overarching goals for their education and training system to establish new and revised high-level needs. Alternatively, and often informed by these overarching frameworks, countries have modified the content and structure of programmes at specific education levels to work towards meeting new needs.

Countries and economies continue to adapt comprehensive lifelong learning strategies and other overarching frameworks

Previous analysis undertaken by the Education Policy Outlook indicated that defining national education goals and strategies was among the three most commonly identified policy priorities across OECD education systems from 2008-19 (OECD, 2019^[33]). Either despite the pandemic or in response to it,

countries have continued to adapt comprehensive lifelong learning strategies and other overarching frameworks in recent years setting out a vision for the future of education, economies and societies.

In 2021, the **Flemish Community of Belgium** approved an action plan on lifelong learning that aims to provide a coherent and mobilising framework for all partners involved in lifelong learning, in the context of ongoing transformations highlighted by the COVID-19 pandemic, including technological developments, demographic change, and climate change. Developed through a collaborative process that began in 2020, the resulting action plan sets out a compass with 10 ambitions for policy orientation and seven flagships, each consisting of a set of concrete actions. Actions address four target groups (the learning individual; the learning organisation; the learning offering; and the learning society), five action streams (develop know-how; raising awareness and mobilising; focus on competencies; support and guidance; and stimulate partnerships). The plan also identifies the barriers that may prevent individuals or organisations from engaging in lifelong learning. Based on the overarching ambition of the European Union to achieve participation rate of 60% for formal and non-formal learning for adults by 2030, the Lifelong Learning Partnership will develop a dashboard with various indicators to monitor progress (Government of Flanders, 2021^[34]).

Japan's Third Basic Plan for the Promotion of Education (2018-22) articulates different education policies aimed at helping individuals prepare for 2030. It sets out a goal to maximise lifelong possibilities and opportunities for learners and workers of all ages. Based on this overarching aim, the plan identifies targets in five areas with corresponding actions that cover different levels of the education system and indicators to measure progress.

Building on the previous Strategy 2020, the **Czech Republic's** Strategy 2030+ responds to trends affecting the labour market such as digitalisation and automation, but also aims to develop the competencies required to combat climate change. An expert working group began work on a draft strategy in 2018, with a series of public consultations and round tables involving various education stakeholders from 2020 (Ministry of Education, Youth and Sport of the Czech Republic, 2020^[35]). In 2022, the Czech Republic began preparing the Strategy 2030+ implementation plan for the period 2023-27, with a particular focus on implementing a revised framework curriculum for primary and lower secondary education (see below).

Latvia's Education Development Guidelines (EDGs) for 2021-27 set out four inter-related education policy goals: 1) an excellence-oriented cohort of teachers and academic staff; 2) a high-quality education offer based on high-value and high-demand skills; 3) equity and inclusion; 4) effective resource management (Government of Latvia, 2021^[36]). The EDGs commit to key actions such as curricula reforms to embed STEM, social and emotional learning, and transversal skills such as digital literacy and civic participation, and to better connect VET curricula with labour-market standards (Government of Latvia, 2021^[36]).

The EDGs were developed through a whole-of-government and whole-of-society approach bringing together different ministries and levels of government, and a wide range of labour-market partners and other stakeholders. Phase one involved developing a shared understanding of Latvia's skills, challenges and opportunities based on evidence from different sources (including a foresight workshop organised by the OECD). In phase two, stakeholders identified key actions to address the identified priorities, as well as indicators to monitor progress. Although this process began before the COVID-19 pandemic, it took account of its impact on the demand for labour and skills alongside longer-term trends such as digitalisation, skills imbalances, migration, and Latvia's ageing population.

Adaptations of overarching national frameworks or strategies can also be shaped or encouraged by action at regional and international level. The **European Union's** (EU) Recovery and Resilience Facility provides member states with EUR 723.8 billion of funding in grants and loans to mitigate the economic impact of the COVID-19 pandemic and implement reforms that address key EU priorities. This includes the target to achieve climate neutrality by 2050 and to move towards a digital transition that creates jobs and spurs growth. Reforms should also address specific challenges identified in country-specific recommendations under the European Semester framework of economic and social policy co-ordination (European

Commission, n.d.^[37]). The twin focus on the digital and green transitions is reflected in member states' Recovery and Resilience Plans: in 22 recovery plans available, around 40% of government spending had been allocated to climate measures (compared to an agreed target of 37%) and over 26% was allocated to digital transitions (well above the 20% target) (European Commission, n.d.^[37]). Although the plans guide adaptations across all areas of government, countries have outlined many measures addressing education and skills, some examples of which are outlined in the following sections.

Curriculum adaptations for compulsory education remain a way for countries to meet longer-term needs and shorter-term challenges

Curriculum adaptations remain an important area of policy work as countries transform their education offer to meet longer-term needs and shorter-term challenges. In particular, this includes adaptations to cross-curricular and subject-specific goals, as well as the introduction of new subjects (subject renewal), or adding or reducing content within pre-existing subjects (content renewal) (OECD, 2020^[9]).

OECD research indicates that curriculum adaptations in recent years align with broad societal goals. In the OECD Policy Questionnaire on Curriculum Redesign (2016-18), 18% of the total number of reported policies, declarations and statements articulating education goals included goals relating to economic outcomes, 17% to social outcomes, 13% to future workforce needs, and 8% to environmental circumstances (OECD, 2020^[9]). Many of these goals respond to common economic and demographic challenges (e.g. ageing population and declining birth rates), future workforce needs (e.g. lifelong learning, skills development, entrepreneurship) or global challenges (e.g. environmental awareness, sustainability). More recently, the COVID-19 pandemic appears to have pushed several countries to strengthen digital skills in their curricula.

Recent curriculum reforms in **Korea** focus on enabling learners to adapt to an uncertain future and to respond to trends such as digitalisation, the climate crisis, and population decline (OECD, 2020^[9]; Korean Ministry of Education, 2021^[38]). To develop the reforms, Korea used forecasting mechanisms and consultation with students and teachers, including an initiative to collect suggestions from students on the future of the education system (OECD, 2020^[9]). Subsequent implementation plans have further emphasised the involvement of teachers, students, and parents: over 50% of teachers will participate as researchers in the development of the proposed curriculum (Korean Ministry of Education, 2021^[38]). Such mechanisms help to ensure that the curriculum is relevant to the needs of students and practical realities of teachers, and can enhance implementation by giving these actors a sense of ownership.

Following a pilot programme in 2020 and accompanying broader curriculum reforms that emphasise skills development as a complement to knowledge acquisition, **Greece** rolled out 21st Century Skills Labs modules in all kindergartens, primary and lower secondary schools in 2021. The Skills Labs aim to develop the skills students will need for a rapidly changing world, with a particular emphasis on the 4Cs of 21st century learning (critical thinking, communication, collaboration and creativity) and the 4Cs in a digital environment (e.g., digital critical thinking, digital communication, etc.) (Institute of Educational Policy of Greece, n.d.^[39]). During the pilot phase, some 2 500 teachers in 217 schools worked collaboratively within teaching teams to design skills programmes, but could also collaborate with colleagues across the country and access resources via an online learning environment (Global Education Network Europe, 2021^[40]).

Based on the Strategy 2030+, the **Czech Republic** is introducing reforms to its framework curriculum for primary and lower secondary. These include the piloting, evaluation, and full implementation of a new framework curriculum for information science and digital literacy. The Ministry of Education, Youth and Sport has worked with expert panels to develop proposals for other subject areas, with a focus on updating the curriculum for recent scientific and technological advances and reducing curriculum overload. This material went through an external feedback process and a public consultation. Other measures, such as launching an online platform for curriculum development and developing professional support interventions for lower-performing schools, aim to support teachers and other professionals with implementation

(Ministry of Education, Youth and Sport of the Czech Republic, 2022^[41]; Ministry of Education, Youth and Sport of the Czech Republic, 2020^[35]). As part of the EU's Recovery and Resilience Facility, the **Slovak Republic** has also committed to reforming its primary and lower secondary curricula (2021) to strengthen the competencies learners will need for life in a low-carbon digital economy and society (e.g. critical thinking, digital skills, problem solving, and teamwork). Building on a pilot implemented in the early stages of the COVID-19 pandemic, the reforms will create new content organised in multi-year cycles as opposed to grade level. There is also an emphasis on moving beyond the transmission of information to a more active pedagogical approach where learners interpret information in real-life contexts. This is supported by a reform of teachers' professional learning to increase the focus on inclusive education and digital skills, and the development of new state textbooks (Ministry of Education, Science, Research and Sport of the Slovak Republic, n.d.^[42]; European Commission, n.d.^[43]).

Efforts targeting Vocational Education and Training and adult learning are taking place, with an emphasis on strengthening co-operation with employers and industry

Despite, or perhaps because of, the post-2020 disruptions, several countries have adapted ongoing reforms to improve the labour-market relevance and quality of existing VET and adult learning provision, with an emphasis on strengthening co-operation with employers and industry. This is important: as tertiary attainment levels continue to increase across the OECD, where 47% of 25-34 year-olds now have a tertiary qualification, VET must continue to offer a competitive alternative pathway to successful labour-market participation (OECD, 2022^[6]).

Apprenticeship reforms in **England (United Kingdom)** (2015-21) aimed to align provision with international best practice, emphasise the role of employers, and ensure a skilled workforce for the future. By 2021, over 3 000 employers had been involved in the design of new apprenticeship standards to enhance the alignment of training with present and future skill and competency needs (Department for Education of England, 2021^[44]). England has also introduced a minimum duration of one year for apprenticeships. An internal progress report found that these reforms had increased the quality of apprenticeships (Department for Education of England, 2021^[44]). As in many countries, however, the COVID-19 pandemic impacted apprenticeship start and completion rates. The DfE therefore introduced short-term adaptations such as changes to final assessments, a new redundancy support service and financial incentives to encourage businesses to launch new apprenticeship schemes. Analysis of these measures concluded that efforts to strengthen quality within the system prior to 2020 facilitated flexibility during the pandemic (Department for Education of England, 2021^[44]).

England (United Kingdom) went through a similar collaborative process to develop the T Levels, a two-year course launched in 2020 that combines practical and knowledge-based learning at school or college and at least 315 hours of work-based learning. Groups of employers have worked with education providers to define the content and skills requirements for each T level, based on the same standards as apprenticeships. While apprenticeships are more suited to those who want to earn a wage while learning and are ready to enter the workforce at 16, T levels prepare students for work, training, or further study (Department for Education of England, 2022^[45]).

In the **Republic of Türkiye**, in 2021, the Ministries of National Education and of Industry and Technology signed a co-operation protocol to strengthen links between VET institutions and Organised Industrial Zones (OSBs). OSBs are regional hubs that bring together representatives from different employment sectors. Each OSB is now linked with at least one VET provider and has a dedicated liaison office, each of which has a formal attachment with a teacher or training manager from each institution to facilitate institutional collaboration for curriculum planning (Ministry of National Education of Türkiye, 2022^[46]). Prior to this, Türkiye introduced the School Protectorate Project (2016), which aimed to link all VET institutions to at least one sector organisation, and a revised co-operation model (2019) that requires sector representatives to collaborate on curriculum reform and provide workplace training for students and teachers (OECD,

2020^[47]). Finally, a VET mapping study (2019) at provincial level aimed to assess the capacities, employment opportunities and investment plans of different sectors, and compare this with current VET provision (Ozer, 2019^[48]).

In 2020, **Greece** began a broad reform of its VET and lifelong learning systems based on three core pillars: integrating strategic planning for VET and lifelong learning; enhancing the alignment of education and training pathways with the real needs of the labour market through collaboration with social partners; and upgrading the structures, procedures, curricular, and certification of initial and continuing. At the national level, a newly established Central Council for Vocational Education and Training conducts analysis of labour-market developments and makes recommendations for updates to VET courses, curricula, and infrastructure. Production-Labour Market Liaison Councils operate at the regional level, identifying gaps in VET and adult learning provision and developing proposals based on local skill needs (Ministry of Education and Religious Affairs of Greece, n.d.^[49]; Government of Greece, 2021^[50]; Government of Greece, 2020^[51]). To support the upgrading of VET, Greece launched a three-year pilot to test and evaluate innovative practices in six upper secondary schools across the country in 2021. These schools have additional freedoms to develop new teaching methods and Greece plans to transform them into centres of vocational excellence in the medium term (ReferNet Greece; CEDEFOP, 2021^[52]).

As part of the Recovery and Resilience Facility, **Italy** is implementing measures to better align the curricula of technical and vocational upper secondary education with the demand for skills, with a particular focus on digital innovation and the needs of regional labour markets. Italy also plans to expand its network of tertiary VET institutions and strengthen their partnerships with local companies, universities, and municipalities to develop courses in high-demand sectors (e.g. energy efficiency, sustainable mobility, and ICT) (Ministry of Education, University, and Research of Italy, n.d.^[53]).

Similarly, **Spain's** Recovery and Resilience Plan has introduced reforms to modernise the VET and adult learning systems to make them more dynamic and responsive to current and future needs, and to ensure unemployed and employed adults have flexible opportunities to develop their skills at any stage of their career. This includes working with employers from different sectors to review current VET qualifications and design new pathways in emerging fields. Measures to support upskilling and reskilling among adult workers include the introduction of Mentor Classrooms, which will provide non-formal training courses aligned with the National Catalogue of Professional Qualifications in rural areas, with a particular focus on women (Government of Spain, 2021^[54]; European Commission, n.d.^[55]).

Germany has taken steps towards a more co-ordinated approach to ensuring adult learning responds to structural changes in the labour market resulting from processes such as digitalisation and automation. In an effort to enhance collaboration and coherence within Germany's complex adult learning landscape, the National Skills Strategy brings together 17 key actors in Germany's continuing education and training (CET) system, including the Federal Ministries of Education and Research, and of Employment and Social Affairs, representatives of federal states, as well as trade unions, employer organisations, and other social and economic partners. This platform for exchange and policy development appears to be appreciated by participating stakeholders (OECD, 2021^[56]).

The partners have identified ten objectives (e.g. enhancing transparency of the CET offer to support learners to identify suitable opportunities, expanding CET provision in response to structural changes, and improving strategic foresight and the use of CET data) with corresponding commitments. In 2021, analysis of the platform's work in view of the impact of the COVID-19 pandemic highlighted the importance of improving digital pedagogy and infrastructure. By 2021, ongoing actions included the development of an online catalogue of CET learning opportunities, the introduction of new online courses and the funding of several innovation projects run by regional clusters to enhance the attractiveness of CET (National Skills Strategy Implementation Committee, 2021^[57]).

Micro-credentials are being propelled in many countries and economies

As a response to unemployment and labour market mismatch, micro-credentials—short, targeted and flexible qualifications programmes—can meet the needs of learners for whom traditional learning pathways are poorly suited, of employers who only require a narrow set of skills to fill vacancies, or to upskill employees as industries' skills requirements evolve. Pathway innovations of this type will be particularly important in increasing the share of older learners. In 2021, only 14% of adults had participated in either formal or non-formal education and training in the four weeks prior to being surveyed, and across all OECD countries participation decreased with age (OECD, 2022^[6]). Ensuring that the pathway offer attracts learners of all ages will be crucial in helping societies transition to sustainable, digital futures.

The OECD's Labour Market Relevance and Outcomes of Higher Education Project has previously identified a need to support higher education institutions (HEIs) to build organisational capacity for supporting upskilling and reskilling learning opportunities. The COVID-19 pandemic added greater urgency to this need and propelled the development of micro-credentials in many countries. In **Japan**, for example, universities received funding in 2021 to develop courses in areas for which the pandemic led to higher labour market demand. Through this funding, about 40 HEIs developed over 60 courses in areas such as healthcare and ICT in collaboration with local employers and businesses. These programmes target people who are unemployed or on temporary contracts and aim to provide flexibility to facilitate access (OECD, 2021^[58]).

In **Slovenia**, some HEIs have collaborated with employers through appointing company representatives to governing boards and programme development committees to better understand their upskilling and reskilling needs, and whether these can be met through existing provision. Ongoing challenges exist in ensuring that prospective adult learners can easily access information on available study programmes. One suggested approach is to develop a joint online platform bringing together the upskilling and reskilling opportunities offered by HEIs across the country.

Indeed, improving learners' access to information about micro-credential course offers is important. The OECD has previously observed that learner decisions could be better supported by a trusted source of public information that supports comparisons of micro-credential offers (OECD, 2021^[58]). Micro-credentials providers and programmes in several countries are aiming to address this issue with the help of online portals. In **Australia**, the Higher Education Relief Package provided over AUD 4 million for the development of the Micro-credentials Marketplace, an online information portal to be completed in 2023 to allow learners to compare available courses and credit point value. The portal will also provide information on the stackability of micro-credentials courses for those intending to pursue a larger qualification or skillset. In **Ireland**, the Towards a Multi-campus Micro-credentials System project (MC2), led by the Irish University Association and financed by Human Capital Initiative grant funding, also envisages the creation of an online portal. This will provide information and gateway access to a curated menu of all micro-credentials across the seven universities participating in the MC2 project.

Some policy lessons emerge on adaptation for 2023

Recent data and analysis from these and other policy experiences since 2020 of adapting education and training opportunities to improve relevance offer some lessons to help guide education systems' efforts in 2023.

1. Developing measurable strategies can help governments balance competing needs.

Adaptation efforts generally involve bringing together diverse groups of people, often with contrasting or unrelated needs, and require policy makers to balance urgent and important priorities for individuals and societies. Breaking down high-level, strategic objectives into multiple, targeted and measurable actions can help governments respond to these different needs flexibly and focus public attention on areas where prioritisation is needed.

- *Recent OECD data indicate that measurable efforts introduced as part of COVID-19 adaptations are helping many countries understand how to enhance their recovery strategies. At the primary and lower secondary level, 15 out of 19 countries with available data reported that they have assessed the national recovery programmes implemented in 2021/22 in a standardised way, or that they plan such assessments (OECD, 2022^[6]).*
- The experience of **Germany's** National Skills Strategy is illustrative of the challenges that many education systems face in agreeing concrete, ambitious objectives among varied stakeholder groups. To develop the strategy further, Germany has been advised to develop overarching objectives for the whole strategy, clear objectives for each identified area of action, and a theory of change about how individual actions contribute to these objectives.
- In the emerging policy area of micro-credentials, governments are looking to strike a balance between the flexibility that micro-credentials offer in addressing specific needs and the more systemic priority of ensuring their quality and transferability beyond immediate demand, so that individual qualifications gained can lead to better employment opportunities and broader social outcomes. In the **European Union**, the European Consortium of Innovative Universities (ECIU) published a white paper on micro-credentials in 2021, setting out their future strategy on micro-credential development. This breaks down the strategy into efforts already made, and key actions to be taken across five areas: definitions and standards; quality assurance; credits and recognition; storage, portability and platforms; and successful uptake (Brown et al., 2021^[59]).

2. Financing adaptation calls for exploring ways to gain flexibility to attract new resources.

As education systems adapt learning pathways to new contexts, education decision makers face challenges securing sufficient and adequate human and financial resources.

- *Recent OECD data reveal that in 2019/20 only 16 out of the 27 education systems with available data extended eligibility for tuition fee supports (e.g. public grants or scholarships) in tertiary education to part-time students, 19 extended it to those enrolled in online programmes, and 22 to those in blended learning (OECD, 2022^[6]). In many countries, then, public financial support will need to become more flexible itself in order to ensure that the expansion of more flexible tertiary pathways is accessible to more than only relatively affluent learners, or those employed in firms with generous support for reskilling.*
- In **Finland**, VET and higher education providers have encountered challenges recruiting trainers in specialist, high-demand fields. This is particularly the case where they must compete with the higher salaries offered by the private sector. Besides revising the conditions that influence the attractiveness of the position, one suggested solution has been to recruit and train specialist trainers from abroad (Frisk et al., 2022^[26]).
- In **Estonia**, the pandemic has led to an increase in the demand for labour in the ICT sector and industry experts have reported that workers from other sectors will need to take part in technical training to gain employment in the field. This training is both expensive and time-consuming. Possible identified solutions include strengthening co-operation with the unemployment insurance fund and providing on-the-job training for workers seeking to change fields (OSKA, 2020^[14]). Furthermore, since larger institutions are often better placed to recruit staff and deploy resources flexibly, some countries could benefit from networking smaller institutions so they can share resources (Frisk et al., 2022^[26]; Gouëdard, 2021^[60]).
- In **Finland**, analysis of the capacity of VET providers to respond to new and fast-changing needs during the COVID-19 pandemic revealed that targeted project funding was conducive to their reported ability to act in fast-changing situations in the labour market. At the same time, there was also evidence that repurposing pre-existing financial resources within the block grant funding may have given some HEIs more flexibility to develop new provision (Frisk et al., 2022^[26]).

Assessing the impact of policy efforts to enhance learning pathways needs to become more systematised for greater future resilience

Once adaptations to enhance the relevance of learning pathways have been made, efforts to assess the impact of these policy measures, and to provide feedback on the alignment of education policies or programmes and skill demands are important. Previous policy analysis undertaken by the Education Policy Outlook highlighted that this type of evaluative thinking is an important transversal component of responsive and resilient education ecosystems (OECD, 2021^[8]).

Monitoring, evaluation, and other evidence-generation strategies have multiple uses for policy makers, particularly in contexts of disruption and change. As societies recover from the shock of the COVID-19 pandemic and navigate its economic aftershocks, as well as those of the war in Ukraine that include the additional pressures on energy and food prices, questions of efficiency and efficacy will be at the forefront of policy makers' minds. Many countries, for example, have made considerable investments in digital infrastructure or initiatives to support those who have been affected by the economic fallout of the pandemic and will be seeking to assess the impact of these investments (OECD, 2021^[8]). In addition, systems will need to consider how well policies and pathways, including those mobilised in response to economic instability, are meeting the needs of learners, as well as the broader needs of labour markets and societies. Finally, the high level of policy activity and innovation demanded by the global pandemic has the potential to generate valuable lessons to support the continuous improvement and scaling up of new policies and practices (OECD, 2021^[8]).

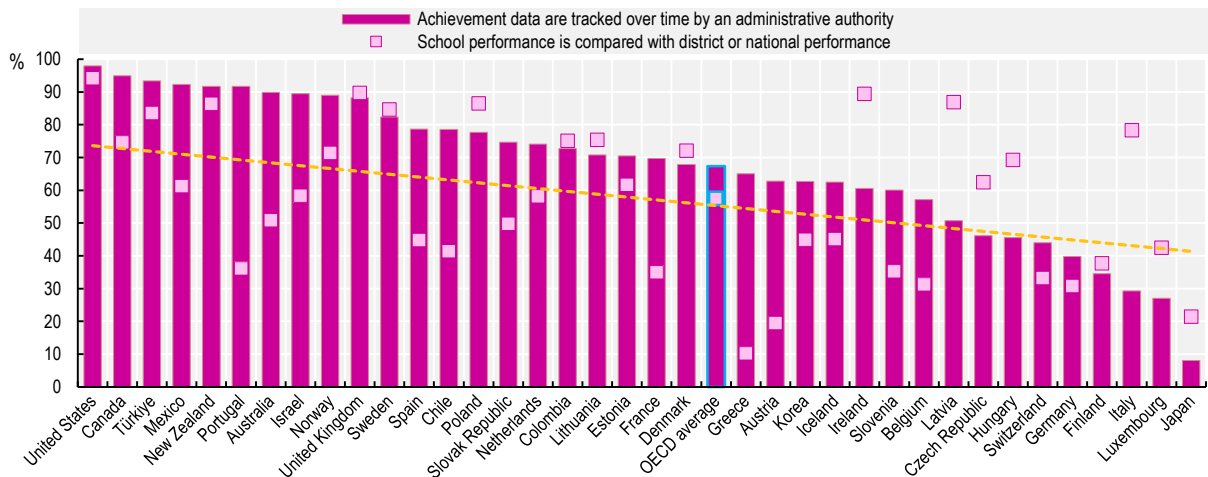
However, despite growing awareness of the importance of monitoring and evaluation in recent years, OECD evidence points to a need for more regular, systematic, and robust evaluation efforts in education policy. Previous analysis from the Education Policy Outlook suggests that while many education evaluations highlight changes in outcomes that occurred over the period of policy implementation, most were not designed to attribute the changes to the policy itself, or to control for contextual factors (Golden, 2020^[61]; OECD, 2018^[3]). Some education systems have looked to experimental or quasi-experimental methodologies, such as randomised controlled trials or impact evaluations, as a way of exploring a causal relationship between an intervention and a given outcome. However, there can be important ethical and logistical obstacles to developing robust analyses of this kind in education policy.

Selecting relevant indicators covering inputs (i.e. the financial, human and physical resources invested in a policy), outcomes (i.e. the desired results of a policy, both direct and indirect) and process (i.e. the performance of implementation processes and the participation of different actors) is also important (OECD, 2022^[62]; Gouédard, 2021^[60]). Responsive education ecosystems also recognise that people are at the heart of policy making and play an important role in assessing the impact of reforms (OECD, 2021^[8]). Teachers, learners, parents, and other education stakeholders provide a unique perspective on policy implementation. Strengthening their capacity to collect, provide and interpret evidence helps ensure monitoring and evaluation efforts support continuous improvement (OECD, 2018^[3]; Gouédard, 2021^[60]).


Education systems tend to use student achievement data as evidence to guide the continuous improvement of education policy and practice, although with important variations across countries. On average across the OECD, just over two-thirds of students are in schools for which achievement data is tracked over time by an administrative authority (see Figure 2.3). Under three-fifths are in schools for which achievement data is used to compare the school's performance to district- or national-level performance. The mild association between the two indicators illustrates that systems where the tracking of data is less common are also systems in which using assessment data to analyse institutional and system performance is less common.

Figure 2.3. School monitoring by administrative authorities can vary largely across countries

Percentage of students in schools where school principals reported the following accountability practices (PISA 2018)



Source: OECD (2020^[63]), *PISA 2018 Results (Volume V): Effective Policies, Successful Schools*, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/ca768d40-en>.

StatLink  <https://stat.link/29szjf>

Selected recent policy efforts

As education systems strive to return to some sense of stability after two years of significant disruptions, evaluative practices also need to re-establish themselves, or take root. This will help policy makers better understand how education and training pathways can be transformed to be more relevant for individuals' and societies' needs. This section considers evaluative approaches adopted by governments to better assess the impact of policies in VET, higher education and adult learning.

Some governments promote evaluative ecosystems including for VET and higher education

Beyond the evaluation of specific policies, some countries and economies are promoting evaluative ecosystems to understand better how different initiatives interconnect for impact. This approach can help education systems provide better opportunities to learners to succeed in their education opportunities or transitions into the labour market.

Finland's Education Evaluation Centre (FINEEC) conducts evaluations of the whole education system, from early childhood education and care (ECEC) to higher education, with some evaluations focusing on learning outcomes and others focusing on themes relevant to national policy goals. Between 2020 and 2022, FINEEC examined the ability of VET providers and HEIs to respond to challenges for continuing education and training caused by sudden structural changes in the labour market. This involved consultation with various VET authorities and stakeholders, along with a self-evaluation survey completed by all relevant institutions. This survey was completed by a small group of institutional representatives (e.g. leaders, teaching and guidance staff, key private sector partners, adult learners). The evaluation team also conducted two case studies based on focus group interviews, exploring both positive and negative structural changes (Frisk et al., 2022^[26]).

The evaluation found that the ability of providers to respond to changes was generally good, although there was variation according to education level and regional administrative capacity. National and regional models to facilitate co-operation between different institutions, government agencies and partners in the

employment sector played an important role in helping providers to adapt, but institutions also developed their own models (Frisk et al., 2022^[26]). Although COVID-19 was not the explicit focus of the study, the research provides insight into how some institutions adapted their offer in response to labour-market changes associated with the pandemic. For example, some HEIs reported that they had collaborated with employers in the healthcare sector's in-service training in the early stages of the pandemic while others had offered free open studies courses to the unemployed (Frisk et al., 2022^[26]).

Evaluative work in **France** (2021) sheds light on the impact of COVID-19 on professional training activities, drawing on evaluations of activities organised as part of the Skills Investment Plan (PIC), established before the pandemic. The overarching objectives of the PIC are to train 1 million young people and 1 million unemployed people with low qualifications levels, but also to transform professional training through enhancing skills analysis, pedagogical practices, and the training offer (Bucher et al., 2021^[28]). The government appointed a research committee to evaluate the PIC on an ongoing basis.

As part of its work, the committee develops and commissions national and regional evaluations, and uses the evidence to highlight effective practices and to assess how the PIC is transforming the professional learning landscape (Bucher et al., 2021^[28]). For example, the committee conducts a trimestral survey of unemployed participants in adult learning between six and nine months after they have completed or left their programme. The survey gathers information on participants' satisfaction with their programme, the support they received, and the skills acquired, but also aims to identify common barriers to participation in adult learning and the reasons why some learners fail to complete their studies. Since the outbreak of COVID-19, the survey also includes a set of questions aimed at understanding how the pandemic has affected the implementation of training (Ministry of Labour, Full Employment and Integration of France, 2022^[64]).

Some governments test innovative approaches to generate evidence for adult learning

The unseen benefit of contexts of change and disruption is that they can provide fertile soil for innovations. Governments have also been employing some evaluative techniques to help innovative and effective practices scale up to other contexts. Some recent examples come from the adult learning sector.

In 2019, **Canada's** Future Skills Centre was created to be an independent innovation and applied research centre that identifies emerging in-demand skills, tests new approaches to skills assessment and development, and disseminates evidence widely to inform future programming. Projects are often identified through an open call process, and 50% of funding is reserved for projects that target under-represented groups. Based on evidence from the first wave of projects (2020), Blueprint, one of the founding partners of the centre, has developed a multi-dimensional framework that sets out the kinds of evidence required at different stages of a project, from piloting to evaluation and scaling up. Alongside evaluation methods such as cost-benefit analysis and process, implementation, and outcome evaluation, the framework includes models to support continuous learning and improvement in design and delivery, such as rapid cycle evaluation (Blueprint, 2022^[65]).

As part of these efforts and through the Scaling Up Skills Development initiative, in 2021 the Future Skills Centre supported the expansion of 10 projects that showed early signs of success and had the potential for application in a wider context (Future Skills Centre, n.d.^[66]). For example, one programme, first implemented in Toronto, Calgary, Halifax, and Vancouver, gave low-income young adults from diverse backgrounds access to professional and technical skills training and work placements to help them transition to employment in the ICT sector. Building on its early success, the programme is being expanded into Indigenous, francophone, and northern communities, as well as larger metropolitan areas. A randomised control trial will examine the effect of the training on participants' employment outcomes.

The evidence from this round of projects also pointed to a need for technical assistance and capacity building for project partners. As such, one-to-one coaching and training in innovation and evidence generation are being provided and Blueprint is commissioning independent impact evaluations (Blueprint,

2022^[65]). Blueprint has also launched an initiative that supports community service organisations in using data and evidence to improve their service delivery. Moving forward, key priorities include improving the dissemination of insights from the innovation projects among policy makers and practitioners and testing innovative ideas for career guidance (Blueprint, 2022^[65]).

Australia's Try, Test and Learn Fund (TTL, 2016-21) provided funding to stakeholder groups to trial new and innovative approaches to getting at-risk unemployed adults back into work or training. Through this, the government aimed to generate evidence on what works and for whom. Over 50 projects were implemented through the funding programme. Initial analyses indicate that the fund achieved its main purpose of generating insights and empirical evidence on what works to reduce long-term welfare dependence, even if individual projects varied with regards to their impact. A key identified strength of the TTL model is that it involved a broad range of stakeholders in the co-design and co-development of proposals. The number and diversity of the projects this attracted contributed to building a substantial evidence base for future policy design. Some 15 projects were identified as having the potential to reduce welfare dependency among at-risk groups. Common features included tailoring interventions to the specific target group and providing targeted vocational training, alongside pathways to employment and ongoing support during and after participants' transitions to work. Many also offered paid work experience or traineeships. Recognising that projects serving less work-ready groups may take longer to show impact, the Department of Social Services continues to monitor longer-term outcomes through administrative data (Institute for Social Science Research/The Melbourne Institute, 2021^[67]).

Some policy lessons emerge on assessing impact for 2023

Recent data and analysis from these and other policy experiences since 2020 on assessing the impact of policies to improve the relevance of education and training opportunities offers some lessons to help guide education systems' efforts in 2023.

1. Enhancing monitoring capacity for local actors can support the scaling up of innovations.

The quality of evidence collected about the strengths and challenges of potentially scalable initiatives depends on the capacity of local teams to design and implement robust monitoring and evaluation strategies. Investing in the capacity of local teams to design and implement these can help enhance knowledge about how these initiatives can be better scaled up.

- *Recent OECD data indicate a research deficit among many actors at local level. School leaders, teachers and community members were least likely to be reported by participating education systems as being "active" or "very active" in research production, with just 9%, 6% and 3% of countries reporting them as such, respectively. In contrast, the most active contributors were academic researchers and government researchers who were reported as being "active" or "very active" by 88% and 70% of participating systems, respectively (OECD, 2022^[71]).*
- Evidence from **Australia** underlines the importance of ensuring that procedures for data collection and evaluation are incorporated into the design of local initiatives. Since some local teams in the Try, Test, and Learn Fund projects lacked expertise in evaluation, it has been recommended that future initiatives of this kind require the inclusion of team members with previous experience in evaluation or engagement of external experts.
- **Canada's** Future Skills Centre identified similar challenges during the first round of funded innovation projects. One of the aims of its evidence framework is to support local projects to generate evidence at different stages of implementation and scaling-up efforts. The Centre also supports capacity building in evidence generation through workshops and one-to-one coaching (Blueprint, 2022^[65]).

2. Building holistic approaches to monitoring and evaluation offers more insightful evidence.

Recent evidence also underlines the need for different types of indicators and evaluative evidence that are relevant to different desired outcomes.

- *Recent OECD data reveal that in 2021/22, countries' efforts to assess the impact of COVID-19 in education have not been limited to examining learning losses. While studies to evaluate the impact of school closures on learning outcomes were undertaken at a national level in more than 50% of the countries with available data (at any level from primary to upper secondary), all but three undertook studies on the impact of COVID-19 on the mental health and well-being of students, and more than 75% did the same for teachers (OECD, 2022^[6]).*
- One of the aims of **France's** Skills Investment Plan (PIC) is to improve the quality of the follow-up support of trainees as well as encourage the development of adult learning pathways that link multiple interventions together and allow for better personalisation. This is a change of direction from previous adult learning initiatives, where targets focused on the volume of training activities. In some cases, this had the perverse effect of incentivising regional actors to organise shorter courses, rather than seeking to develop skills holistically and provide ongoing support for participants. The broader aims of the PIC therefore call for a more holistic approach to monitoring and evaluation. While quantitative indicators shed some light on the number of adults participating in more than one training activity, France has identified a need to conduct qualitative evaluations drawing on multiple sources and to generate more granular data to assess whether provision has evolved with the aims of the strategy (Bucher et al., 2021^[28]).

Some policy pointers to move forward

In 2023, as governments continue to face the implications of local and global change and disruption in 2020-2022, undergoing policy efforts provide advice on steps they could take to enhance the relevance of their learning pathways. Key messages of the policy lessons mentioned earlier in this chapter follow below.

Anticipation of skills

1. **Strengthen anticipatory capacity at various levels of the education system to increase resilience.** While identifying national skill needs and supply is crucial in progressing towards a societal vision of the future, policy makers need to understand nuances at different administrative, sectoral and educational levels in order to foster greater coherence and equity.
2. **Adopt the perspectives of specific groups as inequalities risk deepening.** Labour market forecasts point to a need for policy makers to strengthen efforts to enhance employment and training strategies for groups such as women, young people, older workers, and the lowest-skilled in 2023.

Adaptation of education and training opportunities

1. **Develop measurable strategies to help governments balance competing needs.** Adaptation efforts generally involve bringing together diverse groups of people, often with contrasting or unrelated needs, and require policy makers to balance urgent and important priorities for individuals and societies. Breaking down high-level, strategic objectives into multiple, targeted and measurable actions can help governments respond to these different needs flexibly and focus public attention on areas where prioritisation is needed.
2. **Explore ways to gain flexibility to attract new resources in order to finance adaptation.** As education systems adapt learning pathways to new contexts, education decision makers face challenges securing sufficient and adequate human and financial resources.

Assessment of impact

1. **Enhance monitoring capacity for local actors to support the scaling up of innovations.** The quality of evidence collected about the strengths and challenges of potentially scalable initiatives depends on the capacity of local teams to design and implement robust monitoring and evaluation strategies. Policy makers need to invest in the capacity of local teams to design and implement these in order to help enhance knowledge about how these initiatives can be better scaled up.
2. **Build holistic approaches to monitoring and evaluation to provide more insightful evidence.** Recent evidence also underlines the need for different types of indicators and evaluative evidence that are relevant to different desired outcomes.

Table 2.1. Selected education policies and practices on enhancing the relevance of learning pathways

<i>Anticipating the skills that learners will need in the emerging context</i>		
Canada – Future Skills Council (2019); Labour Market Information Council reports on COVID-19 (2020)	Estonia – OSKA report on the impact of COVID-19 on the demand for labour and skills (2020)	United Kingdom – Working Futures 2017-2027 (2020); Skills and Productivity Board (2020-2022); Labour market and skills demand horizon scanning and future scenarios (2022); Unit for Future Skills (2022)
<i>Adapting education and training opportunities to help learners navigate change</i>		
Australia – Micro-credentials Marketplace (2023) European Union – Recovery and Resilience Facility (2020) Flemish Community of Belgium – Action plan on lifelong learning (2021) Czech Republic – Strategy 2030+ (2020); Primary and lower secondary curriculum reforms (2021) Germany – National Skills Strategy (2019) Greece – 21st Century Skills labs (2020); Holistic reform to vocational education, training, and lifelong learning (2020)	Ireland – Towards a Multi-Campus Micro-credentials System (MC2, 2020) Italy – Futura (2021) Japan – Third Basic Plan for the Promotion of Education (2018-22); Funding for higher education courses in high-demand sectors (2021) Korea – Curriculum Reforms (2022) Latvia – Education Development Guidelines 2021-2027 (2021)	Slovak Republic – Primary and lower secondary curriculum reforms (2021) Slovenia – Collaborations between HEI and employers Spain – Strategic Plan for the Promotion of VET (2021) Türkiye – School Protectorate Project (2016); Revised co-operation model (2019); VET mapping study (2019); Protocol to strengthen co-operation between VET institutions and Organised Industrial Zones (2021) England (United Kingdom) – Apprenticeships Reform Programme (2015-2021); T Levels (2020)
<i>Assessing the impact of policy efforts to further enhance learning pathways</i>		
Australia – Try, Test and Learn Fund (2016-21) Canada – Future Skills Centre (2018)	Finland – Report on the ability of the VET and FE systems to respond to sudden structural changes in the labour market (2022)	France – Skills Investment Plan (PIC, 2019)

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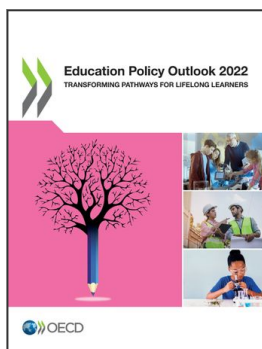
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From:
Education Policy Outlook 2022
Transforming Pathways for Lifelong Learners

Access the complete publication at:
<https://doi.org/10.1787/c77c7a97-en>

Please cite this chapter as:

OECD (2022), “Enhancing the relevance of learning pathways through anticipation, adaptability and assessment of impact”, in *Education Policy Outlook 2022: Transforming Pathways for Lifelong Learners*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/c2b03d88-en>

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