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Please cite this publication as:

OECD (2023), Flexible adult learning provision: What it is, why it matters, and how to make it work.

Acknowledgments

This document was prepared by Elif Bahar and Anja Meierkord from the Skills and Employability Division of the Directorate for Employment Labour and Social Affairs, and benefitted from the helpful comments of Glenda Quintini, Katharine Mullock and Patricia Navarro-Palau.

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Introduction

How we work, where we work and what we work on is changing. The 'twin transition', which describes the move towards a more digitalised and environmentally sustainable economy, is a key driver of these changes. While the twin transition has the potential to foster innovation, increase productivity, and create quality jobs in the medium to long term, there are short-term risks of labour market disruptions. Such disruptions can have different impacts on regions, sectors, and population groups, potentially widening green and digital divides between people, firms, and regions.

Box 1. Defining adult learning

Adult learning is understood here as the job-related learning of adults who have left initial education and training and entered working life. Job-related learning refers to education and training undertaken for the purpose of acquiring skills for a current or future job, while recognising that non-work-related 'leisure' learning can also provide individuals with valuable skills for the labour market. Adult learning encompasses three types of learning:

- **Formal learning** (accredited education and training) is intentional, institutionalised learning that has a minimum duration of one semester and is recognised by relevant authorities. Examples include vocational qualifications or Bachelor degree studies.
- **Non-formal learning** (unaccredited education and training) is intentional, institutionalised learning that is either of short duration (less than one semester) or not recognised by relevant authorities. Examples include non-formal qualifications obtained from short courses and workshops.
- *Informal learning* is intentional, non-institutionalised learning that is less structured than formal and non-formal learning and can take place anywhere. Examples include learning from colleagues, on-the-job training or learning by doing.

Source: Eurostat (2016), Classification of learning activities (CLA) Manual: 2016 edition, European Union Publications Office, Luxembourg, https://doi.org/10.2785/874604; OECD (2020), Getting Skills Right: Continuous Learning in Working Life in Finland, OECD Publishing, Paris, https://doi.org/10.1787/2ffcffe6-en.

Effective and inclusive adult learning systems are a key lever to manage these disruptions by enabling individuals, enterprises, and societies to keep pace with changes in the labour market. In this context, making adult learning provision more flexible is crucial, both to give learners more choices over their individual learning pathways and to increase the capacity of labour markets to respond to structural change.

This document provides insights for policy makers seeking to increase the flexibility of adult learning provision in their countries. It begins by highlighting the role that flexibility can play in increasing participation in and inclusiveness of adult learning. It then presents a framework of the different dimensions that should be considered when thinking about flexibility in adult learning provision. It finally highlights the policies that support such flexibility by a) diversifying the ways in which individuals can learn and have their learning recognised, and b) by increasing transparency and trust in the adult learning system.

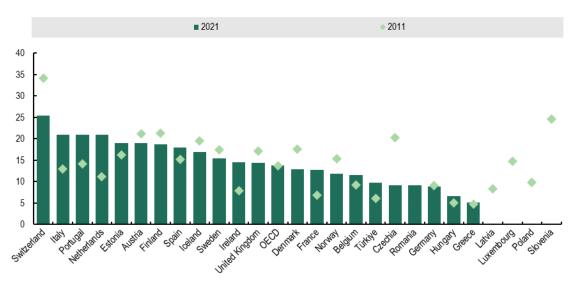
Why flexible adult learning provision matters

Skills are often seen as one of the main solutions to the challenges posed by the structural changes in the labour market brought about by megatrends such as digitalisation, the green transition and population ageing. As most of the people affected by these changes are already in the labour market, adult learning plays a key role in raising the skill levels of individuals and populations. Yet today, as twenty years ago, adult learning is the weak link in the lifelong learning agenda (OECD, 2005_[1]; OECD, 2019_[2]). Many countries are struggling to increase participation in adult learning in general and to close the participation gap between more and less advantaged groups in particular (OECD, 2020_[3]).

While overall participation in adult learning has increased across the OECD over the past decade, the gap in participation between low-skilled and high-skilled adults has remained essentially the same, according to data from the European Labour Force Survey (Figure 1). In fact, there are slightly more OECD countries where the gap has widened than where it has narrowed. Only in the Nordic countries, Austria, the Czech Republic, Switzerland, and the United Kingdom has there been a substantial reduction in the participation gap between low-skilled

and high-skilled adults in percentage points between 2011 and 2021. This is despite efforts in many countries to increase participation in adult learning and is especially concerning as low-skilled adults are at increased risk of displacement due to job automation (Lassébie and Quintini, 2022_[4]; Nedelkoska and Quintini, 2018_[5]).

Figure 1. The participation gap between low-skilled and high-skilled adults is not closing



Note: Figure shows percentage point difference in learning participation of low- and high-skilled adults. Participation in formal and non-formal learning in the 4 weeks preceding the survey; unweighted OECD average, low skilled = ISCED 0-2, high-skilled: ISCED 5-8.

Source: European Labour Force Survey data.

This lack of progress can be explained by the fact that many adults face multiple, multifaceted, and interrelated barriers to participation in learning, which are difficult to address through a single policy intervention. These include dispositional barriers, such as concerns about their ability to succeed; situational barriers, such as caring responsibilities or lack of employer support; and institutional barriers, such as a lack of learning opportunities tailored to their specific needs (Roosmaa and Saar, 2016_[6]; Pennacchia, Jones and Aldridge, 2018_[7]). Low-skilled adults face a greater number of barriers than those with higher skills, national-level research from Germany shows (Osiander and Stephan, 2018_[8]; Osiander and Dietz, 2016_[9]).

Across OECD countries, lack of time for work-related reasons is the main barrier to participation in training for both low-skilled and high-skilled adults (Figure 2). 31% of high- and medium-skilled adults who wanted to participate in learning but did not, and 22% of low-skilled adults, cited this as the main reason. This difference may be partly explained by the fact that low-skilled adults are less likely to be employed and therefore face work-related time constraints than their higher-skilled counterparts. For low-skilled adults, the second most important reason is lack of time for family reasons (18%), such as caring responsibilities, followed by lack of financial resources (17%). For high and medium skilled adults, lack of financial resources (17%) is a slightly higher barrier than lack of time due to caring responsibilities. Less frequently cited barriers include inconvenient time or place, unexpected events, lack of prerequisites and lack of employer support.

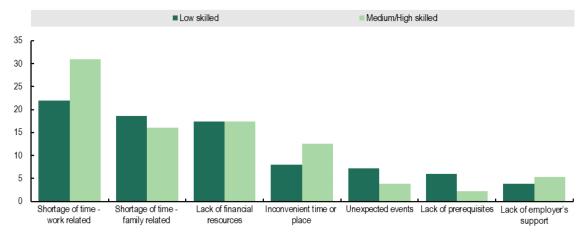


Figure 2. Lack of time is the biggest barrier to adult learning

Note: Figure shows reasons for non-participation in adult learning, for share of adults who wanted to participate but did not. Average of OECD countries participating in PIAAC.

Source: PIAAC 2012, 2015.

It is noteworthy that 17% of low-skilled adults say that problems other than those already mentioned are the main reason for not participating in learning (this figure is 12% for high and medium skilled). This catch-all category may encompass a range of other relevant dispositional, situational, or institutional barriers, such as health problems, fatigue, fear of failure or lack of appropriate opportunities. In fact, data from a different survey – the Adult Education Survey – shows that lack of suitable learning opportunities was reported as a barrier to

participation by 22% of low-skilled adults, 18% of medium and 17% of high-skilled adults (European Commission, 2021[10]) (not shown in figure).

Adult learning systems need to do better for those currently least likely to participate in education and training. The lack of progress in closing participation gaps and the persistence of barriers to participation highlight the need for a systematic reform of adult learning systems, in particular the need to give individuals greater choices and make adult learning provision more flexible.

What we mean by flexible adult learning provision

Adult learning systems need to provide a range of flexible learning options that recognise the constraints of people who are working, have family or other responsibilities and are trying to improve their skills at the same time. The learning provision should enable them to combine or move easily between education, training, and employment over the life course. Today, too many adult learning systems still mimic the rigid structures and processes of initial education. They require adults to learn at a particular time – usually during the working week – in a particular place – usually a physical classroom – and at a particular pace – completing a learning programme within a specific time frame. However, more flexible learning pathways exist and are gaining importance in many countries.

Figure 3. There are four main ways in which adult learning provision can offer greater flexibility



Note: Figure depicts dimensions of flexibility in adult learning provision.

There are four key dimensions along which adult learning provision can offer greater flexibility to learners and allow them to follow their own learning path: time, place, mode, and content (Figure 3).

Time: As lack of time is the main barrier to adults' participation in learning, it is important to offer more flexibility in terms of when learning opportunities take place, how long they last, and how much time learners need to dedicate to them. This includes allowing learners to vary their study load, for example by going parttime or by incorporating asynchronous learning into course curriculums, which means that students can study at a time that suits them – be it at night or on weekends. Greater flexibility can also be offered through learning opportunities with flexible start and finish dates, avoiding rigid semester schedules and allowing individuals to stop and start learning as they see fit. The key is that there is no one size fits all when it comes to the timing of learning opportunities and evidence suggests that a variety of options should be offered to improve access. A German study on public adult learning centres, for example, found that access to a wider and more flexible range of course offerings (with different temporal formats) increased student participation in training (Rüter and Martin, 2021[11]). The same study also found that learning participation generally increased with longer duration courses, though this largely reflected individuals' preferences to obtain a certificate or degree after completing the course (i.e., longer courses were more likely to offer qualifications) (Rüter and Martin, 2021[11]).

Place: In addition to timing issues, an inconvenient location is frequently cited as a reason for not participating in learning. This barrier can partly be addressed by offering distance or online learning options, allowing adults to learn at a place that suits them. *Distance learning* is defined as any learning that is conducted at a place other than a traditional classroom or workplace. Prior to the COVID-19 pandemic, distance learning was not very wide-spread in OECD member countries. On average, one in five participants in non-formal learning engaged at a distance, although there were wide variations between countries with shares ranging from 6% in France to over 40% in Lithuania and Poland, according to data from the Survey of Adult Skills (PIAAC) (OECD, 2020_[12]). *Online learning*, i.e., learning through the use of digital materials, often facilitates distance learning, though learners can also engage in offline (or non-digital) distance learning methods (European Commission, 2021_[10]). Another option to address timing issues it to offer more training at work, which can serve as a convenient learning location for employees.

Mode: Offering a variety of learning modes accommodates learners with preferences for different learning styles. It can also significantly reduce the timecost of training, for instance, the use of online delivery reduces commuting times to and from a classroom. There has been a shift towards online learning in recent years, particularly accelerated by the COVID-19 pandemic (OECD, 2020[12]; Di Pietro and Karpiński, 2021[13]). Multi-modal learning environments are also gaining increasing popularity: A hybrid environment is one in which instruction is delivered using a mix of online and on-site instruction. In some cases, online and in-person instruction takes place simultaneously. In a blended environment onsite instruction is supplemented with online materials and activities (Siegelman, 2019_[14]). Both types of learning environments allow students to experience the benefits of face-to-face interaction with their teacher and other students, while also taking advantage of the benefits of online learning. Evidence, mainly from higher education research, suggests that the use of flexible modes (i) is more attractive to students with multiple commitments, who live far away or have specific learning requirements (McKenna et al., 2020[15]); (ii) result in learners reporting greater flexibility, satisfaction and active engagement with learning, but also issues with the reliability of technology and increased cognitive load (Bower et al., 2015_[16]); and (iii) can improve test scores and pass rates, although this may be explained by higher dropout rates amongst weaker students (Deschacht and Goeman, 2015[17]).

Content: The most challenging dimension in which to offer greater flexibility is in the content of programmes, courses, and other learning opportunities, essentially enabling adults to create individual learning experiences that meet their needs. Advances in learning analytics, driven in particular by artificial intelligence (AI) and the decreasing cost of electronic devices, have brought education systems closer to personalised learning, although this is not yet used on a large scale (OECD, 2021_[18]). In addition, learning provision that provides transversal – alongside technical – skills ensures that adults can build on a common set of skills as they upskill and reskill throughout their lives, including in the context of recognition of prior learning (see below). Another aspect of content flexibility is to enable adults to participate in modularised learning opportunities, rather than learning that is delivered only en bloc (see below for more details). Individuals can be offered a choice between learning that is *modular sequential* (to be taken in a particular order) or *modular concurrent* (to be taken at the same time or in any order).

Synchronous and asynchronous learning are two concepts that cut across several of the above dimensions. *Synchronous learning* describes a situation where instruction and learning take place at the same time. This could be in the same physical place, such as a classroom, or in an online environment, such as a virtual learning platform. The key feature is that the instructor and learner(s) can interact in real-time. In contrast, *asynchronous learning* describes a situation in which the instructor and the learner(s) are not interacting with each other in real-time. In some cases, there may not even be an instructor. This type of learning can be virtual, for example in the form of pre-recorded video lectures, or face-to-face, such as a self-directed practical exercise in a learning workshop.

Policies that make adult learning provision more flexible

Policy makers can use a wide range of measures to increase the flexibility of adult learning provision. For example, they can regulate that publicly funded education and training providers must offer part-time or evening learning opportunities. Or they can provide financial incentives for providers to develop online, hybrid or blended learning opportunities for on-demand skills. While these types of measures are incredibly useful to increase flexibility on a specific dimension – notably time, place, and mode – policy makers also need to consider major structural changes that increase the flexibility of the whole adult learning provision.

Such measures fall broadly into two categories (Figure 4). First, they include policies that diversify the ways in which individuals can learn and have their learning recognised, such as modularisation, recognition of prior learning, more flexible admissions policies to formal learning and micro-credentials. Second, they include policies that increase transparency in the adult learning system, namely through national qualifications frameworks and standards, credit systems and quality assurance systems. Both types of measures need to go hand in hand to build flexible learning provision that are trusted by individuals, employers and education and training providers. These different policy options, how they induce greater flexibility and international experiences with these policies are discussed in the following.

Figure 4. Increasing flexibility of and trust in adult learning provision must go hand-in-hand

Diversifying learning pathways

- Modularisation
- · Recognition of prior learning
- Admission policies to formal learning
- Micro-credentials

Increasing transparency

- · Qualification frameworks
- Qualification standards
- Credit transfer systems
- Quality assurance systems

Flexible and trusted adult learning provision

Note: Figure depicts policy options to make adult learning provision more flexible.

1) Diversifying learning pathways

Giving adults more choice about when, where, how and what they learn can be achieved through a range of closely linked and mutually reinforcing approaches. These include the provision of (i) modularised learning opportunities, (ii) opportunities for the recognition of prior learning, (iii) flexible admissions policies to formal adult learning and (iv) shorter learning opportunities such as microcredentials.

Modularising adult learning provision

A module is a self-contained part of an adult learning programme that has its own learning outcomes. Modularising adult learning provision means breaking down a learning programme into a number of discrete modules. Learners may be able to obtain partial or 'mini' qualifications – such as a micro-credential (see below) – on completion of each module, thereby gaining recognition of training without having to complete a full programme, although this is not always the case (Cedefop, 2023[19]).

A modularised adult learning system allows individuals to learn at their own speed, perhaps working towards a full qualification over several months or years

at their own pace. Providing modular learning opportunities can particularly help to engage low-skilled adults in training by allowing them to work slowly towards a higher qualification (OECD, 2019_[20]). Splitting learning into manageable modules can also be particularly motivating for learners.

Furthermore, modularisation allows individuals to create their own learning pathways, by allowing them to combine elements from different qualifications and potentially study across different parts of the adult learning system (i.e., across non-formal, vocational, and tertiary education). This is particularly the case when modularisation is combined with a strong credit transfer system (see below). Modularisation also provides the basis for effective systems for the recognition of prior learning (discussed in more detail below).

Box 2. Danish experience in modularising learning opportunities

Denmark has a long tradition of modularised programmes throughout the adult learning system. Learners can combine modules from different learning programmes and from different learning providers (e.g. general, vocational or higher education institutions). In the sub-system of general adult education, these modules can be built up to a full qualification that provides access to further education. In other subsystems, modules can be combined to build an individual portfolio of skills, but they are not necessarily stackable to build a full qualification.

This high degree of flexibility is made possible by the fact that participation in all modules is certified in both paper and electronic format, and a full record of all modules taken is linked to an individual's civic personal number. This enables both the individual and the learning provider to keep track of the modules taken. The certificates are also included in the Danish Qualifications Framework. This kind of highly flexible approach to modularisation supports a high proportion of adults achieving full qualifications.

Source: Cedefop (2015), *The role of modularisation and unitisation in vocational education and training*, European Union Publications Office, Luxembourg, https://doi.org/10.2801/38475; Desjardins, R. (2017), *Political Economy of Adult Learning Systems: Comparative Study of Strategies, Policies and Constraints*, Bloomsbury Publishing, London, https://doi.org/10.5040/9781474273671; OECD (2019), *Getting Skills Right: Engaging low-skilled adults in learning*, OECD Publishing, Paris, https://www.oecd.org/els/emp/engaging-low-skilled-adults-2019.pdf.

Creating a system for the recognition of prior learning

Recognition of prior learning (RPL) is the process by which authorised bodies validate an individual's existing knowledge and skills, which may have been acquired through formal, non-formal or informal learning. Validation involves an assessment of whether individuals have achieved the required learning outcomes, or the desired competencies as set out in relevant standards (discussed in more detail below). If these outcomes have been achieved, the authorised body can award a full or partial qualification, a credential, or a certificate of equivalence. The RPL process may also provide other outcomes in the form of credits or units towards a new qualification, an exemption from admission prerequisites, or a certificate of labour market competences (Meghnagi and Tuccio, 2022_[21]).

RPL processes can support flexible adult learning pathways by shortening training times and fast-tracking the acquisition of a new qualification. By allowing individuals to skip certain subjects or accelerate their qualification, RPL reduces the time spent on re-learning course material, providing efficiency gains as well as supporting learner morale. It also reduces application costs, for example where RPL processes result in exemptions from certain admissions processes (see below). More generally, RPL values and rewards learning that has taken place in a variety of settings and is a way for adults to gain recognition for the knowledge and skills they have acquired throughout their lives.

Whilst historically, it was more common for formal learning in the form of prior educational qualifications to be validated in the RPL process, competences acquired through non-formal or informal learning are now increasingly being validated and recognised (Meghnagi and Tuccio, 2022_[21]). Many adults have gained knowledge and skills from many years of work experience, and authorised bodies may recognise this experience as equivalent to a more traditional qualification. This is particularly relevant for low skilled but experienced adults who wish to up-skill or re-train, or simply to gain recognition for their skills.

Box 3. French experience with the recognition of prior learning

France has had a system for recognising and validating experience for more than 20 years. Adults with at least one year's work experience in a relevant field are eligible to have their work experience validated. Experience can include work experience as well as any knowledge and skills developed through volunteering, self-employment, or community service. This process gives greater visibility to knowledge and skills acquired in a variety of settings (formal, non-formal and informal) and enables adults with no prior formal education to enrol in formal learning programmes. Learning providers manage the validation process themselves but are guided by a national code that sets out the factors to be considered in the process.

To have their prior learning validated, applicants go through a two-stage process, usually consisting of a portfolio and an interview. Once eligibility has been confirmed, applicants submit a portfolio of evidence to demonstrate their skills. The portfolio, prepared with the assistance of a counsellor, contains a detailed written description of the skills and knowledge the applicant has acquired. Applicants include all documents that can be used to demonstrate and potentially prove this acquired experience, including work certificates, testimonials, and examples of professional achievements. The portfolio is then assessed by a panel in an interview, where panel members can ask questions to test the applicant's knowledge. In some cases, applicants may also be asked to complete a real or simulated situation in which they demonstrate their acquired experience by carrying out professional tasks. In the end, the panel decides whether to award a full, partial or no qualification, and may provide feedback on the applicant's future path.

Source: Singh et al. (2013), Linking recognition practices and national qualifications frameworks: international benchmarking of experiences and strategies on the recognition, validation and accreditation (RVA) of non-formal and informal learning, UNESCO Institute for Lifelong Learning, Hamburg; Meghnagi, M. and M. Tuccio (2022), "The recognition of prior learning: Validating general competences", OECD Social, Employment and Migration Working Paper No. 270, OECD Publishing, Paris, https://doi.org/10.1787/2d9fb06a-en; information on France's RPL system can be found here: https://www.vae.gouv.fr/.

Making admission to formal education more inclusive

Introducing greater flexibility into admissions policies can make entry processes to formal education more inclusive, equitable and diverse. In many countries, access to formal education is based on standardised examinations and formal qualifications. Countries can make admission policies more flexible by establishing an alternative set of criteria that allow individuals to enter formal education. For example, many countries offer access to tertiary education via a vocational pathway, even if individuals do not have university entrance qualifications (European Commission, 2017_[22]). This type of procedure helps to bridge the gap between vocational education and tertiary education, opening-up pathways into formal education. Adult learning providers can also grant access to further learning by conducting RPL procedures to recognise previously acquired learning during admissions (see above).

Box 4. Norwegian experience with flexible admission policies

In order to facilitate access to higher education, Norway has several alternative access routes. Adults without upper secondary education can enter higher education if they are at least 23 years old and have at least 5 years of work experience. Alternatively, adults who have completed an approved 2-year vocational programme can apply for higher education, possibly after a bridging course. In addition to work experience, people aged 25 and over who do not meet the general entry requirements for post-secondary and tertiary education can have their formal, non-formal and informal learning recognised. In this way, RPL procedures in Norway help to make learning more accessible to a wider range of students. In addition, 2020 reforms now allow individuals to go directly from general upper secondary education to vocational education by crediting hours already completed, thus shortening the time spent studying.

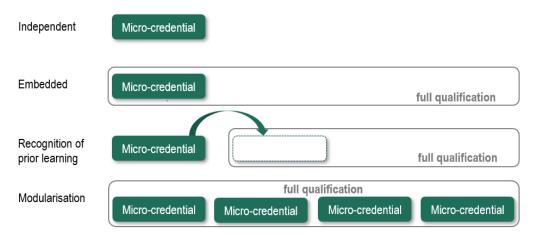
Source: Norric (2023), *Norway*, https://norric.org/nordbalt/Norway/ (accessed on 14 March 2023); (Cedefop, 2017_[24]), *Spotlight on VET Norway*, European Union Publications Office, Luxembourg, https://doi.org/10.2801/91336; Hiim, H. (2020), "The quality and standing of school-based Norwegian VET", *Journal of Vocational Education and Training*, Vol. 72/2, pp. 228-249, https://doi.org/10.1080/13636820.2020.1734062.

Evidence on the outcomes of flexible admissions procedures is mixed, although in general the introduction of greater flexibility in admissions grants access to more students. One European study found that institutions with high autonomy over student selection, namely those that can set additional entry criteria and have the power to admit more students, have higher enrolment rates, including higher entry rates for mature students (European Commission, 2017_[22]). However, the same study found that the more selective a system is in admitting students, the higher the completion rate. Furthermore, a Canadian university study found that students admitted through a flexible admission policy (namely via RPL) were as academically successful as students admitted through traditional admission policies (Grundy et al., 2017_[23]). Overall, countries should consider a range of outcomes when considering how flexible to make their admission processes.

Providing opportunities to acquire micro-credentials

Micro-credentials are broadly defined as organised learning activities with an associated credential. However, there are many and often conflicting definitions of the term. What the definitions have in common is that micro-credentials are smaller in scale in terms of duration or workload, more targeted in terms of skills or subject matter, and more flexible in delivery than traditional degree programmes (OECD, 2021_[25]). Micro-credentials refer to both the credential itself and the programme leading to the credential (Kato, Galán-Muros and Weko, 2020_[26]; OECD, 2021_[27]). Recognised as valuable learning tools by governments and education and training providers, they are part of a growing range of alternative credentials that include academic certificates, industry certifications and digital badges (OECD, 2021_[28]; OECD, 2021_[27]).

Figure 5. Micro-credentials can be independent or integrated with other qualifications



Note: Figure depicts relationship between micro-credentials and full qualifications.

Source: Adapted from Kato, S., V. Galán-Muros and T. Weko (2020), "The emergence of alternative credentials", OECD Education Working Paper No. 216, OECD Publishing, Paris, https://doi.org/10.1787/b741f39e-en.

Micro-credentials are closely related to the modularisation of adult learning provision, although the two are not equivalent. Figure 5 outlines the different ways in which micro-credentials relate to other qualification programmes, the recognition of prior learning and modularisation. It shows that micro-credentials can be integrated into another qualification, for example through modularisation, but can also be offered as a stand-alone credential. Micro-credentials can also be recognised towards a qualification through the recognition of prior learning.

Micro-credentials have several characteristics which render them particularly flexible learning options:

- 1. The **speed** at which they can be acquired makes them more accessible than traditional learning opportunities, making them particularly attractive options for time-poor individuals. They are a good way to quickly fill a specific knowledge gap or address a particular skill shortage.
- 2. They are easily **personalised** in place, mode and content to meet the needs of learners. Many micro-credentials are now delivered entirely digitally, though learners may still have the option to undertake in-person courses or

- opt for hybrid instruction. The pace of learning can also be adapted, with many courses taken asynchronously and at the learner's own pace.
- 3. Many providers now offer **stackable** courses, where multiple micro-credentials can be combined to form a more advanced diploma or degree. To be stackable, micro-credentials require modularisation and ideally, a strong system for the recognition of prior learning (both are discussed above).
- 4. They should be **portable** and able to be combined with courses offered at other providers. New systems may need to be developed to support portability, for example a national credit transfer system (discussed below) that allows credits to be transferred between learning providers, or a digital personal learning record which lists all the qualifications obtained by individuals.
- 5. Short courses are typically **targeted** to a specific subject matter or skill. Microcredentials are therefore a good way of providing small amounts of rapid upskilling or re-training in specific areas, enabling learners to acquire a particular skill in a relatively short period of time. Governments also see microcredentials as a way to address small labour market mismatches, which in aggregate helps to reduce unemployment and improve productivity (OECD, 2021_[28]).

Box 5. Australian experience in fostering micro-credentials

Australia's centralised online platform for micro-credentials – called *microcred seeker* – was launched at the end of 2022, after the *Australian Qualifications Framework Review 2019* recommended a national micro-credential framework. Whilst the recommendation to incorporate micro-credentials into Australia's qualification framework was not accepted, it was clear after extensive stakeholder consultation that a nationally consistent set of guidelines for micro-credentials would provide greater clarity and understanding as to the value, structure, and recognition of micro-credentials. The new framework also creates transparency and objectivity around credit recognition arrangements for micro-credentials.

The *microcred seeker* website displays the full range of available microcredential course options across all training providers and industries in the country. The functional website displays the course level (from novice to expert), delivery mode (online, on campus and multi-modal) and duration for each course, offering learners a range of choice. The website is highly transparent – it allows learners to select a course with the level of study commitment and mode of instruction most appropriate for them. The website also indicates whether a course offers credit points, and whether it is stackable – some microcredentials can be combined with other courses offered at either the same or a different provider, facilitating greater learner mobility across providers. Additional details listed include course fees (including any available discounts), language of instruction, start and end dates, and course details such as syllabus and assessment structure.

Source: Department of Education, Skills and Employment (2018), *Review of the Australian Qualifications Framework*, Australian Government, Canberra, https://www.education-paper-review-australian-qualifications-framework; Department of Education, Skills and Employment (2021), *National Micro-credentials Framework*, Australian Government, Canberra, https://www.education.gov.au/higher-education-publications/resources/national-micro-credentials-framework; see *microcred seeker* website here: https://www.microcredseeker.edu.au/.

6. By nature of their flexibility, micro-credentials are a **less risky** educational investment compared to more traditional, longer-term learning options. They allow learners to test a new subject area before committing to a job change or more comprehensive training, potentially addressing some of the financial barriers to training.

2) Increasing transparency to create trust

Giving adults more choice in shaping their learning pathways must be accompanied by policies that provide structure and transparency to ensure that individuals, employers and education and training providers have confidence in the adult learning system and the skills it delivers. This includes the implementation of (i) qualifications frameworks, (ii) credit systems, (iii) national standards and (iv) quality assurance systems.

Providing structure through qualifications frameworks

National Qualifications Frameworks (NQFs) are instruments by which countries organise, recognise, and assign value to qualifications. They provide a hierarchical classification of qualifications, with each qualification assigned to NQF levels based on learning outcomes (Cedefop, 2017_[29]; European Training Foundation, 2017_[30]). More than 150 countries around the world have developed and implemented qualifications frameworks (Cedefop, 2017_[29]). NQFs based on learning outcomes and competences facilitate learner mobility by allowing learners to move between institutions, levels, and programmes (Martin and Godonoga, 2020_[31]). NQF systems based on learning outcomes also help to facilitate the RPL process by enabling institutions to identify where in the qualifications hierarchy a student's prior learning can be placed. NQFs need to be quality assured to ensure that stakeholders have confidence in the framework, and regularly updated to keep pace with changing skills needs (European Training Foundation, 2017_[30]).

Box 6. International experiences with qualification frameworks

Europe

Frameworks can be devised both at the national and at the cross-national level. The European Qualifications Framework (EQF) is a cross-national level framework which encourages the development and review of national frameworks within Europe. It acts as a common reference point for comparing qualifications across providers and countries, improving transparency, and supporting cross-border mobility of learners and workers. As of 2020, 38 countries had linked or referenced their own NQF to the EQF, helping to establish a clear relationship between national and cross-national frameworks. As noted above, 36 countries following the EQF are currently working to incorporate non-formal qualifications into their national frameworks.

New Zealand

New Zealand's NQF comprises ten qualification levels of increasing complexity, from level 1 certificates to level 10 doctoral degrees. Each level is defined by a set of learning outcomes and credit requirements. The credit requirements indicate how many credit points are required to achieve a qualification. For example, a bachelor's degree requires a minimum of 360 credits from levels 5 to 7, with a minimum of 72 credits from level 7 or above. The framework also indicates how qualifications relate to each other (e.g., which qualifications can provide entry to another qualification).

New Zealand's framework recognises that learning can take place in a variety of ways and through RPL qualifications can be achieved in a variety of ways. Bodies that deliver RPL can recognise learning that has been gained formally, non-formally or informally. These bodies assess prior learning against the learning outcomes set out in the NQF, allowing for consistent assessments across providers. In addition, micro-credentials are listed on the New Zealand NQF, with each short course assigned a level and credit value, allowing comparability with other qualifications on the framework.

Source: Cedefop (2020), *National qualifications frameworks developments in Europe 2019*, European Union Publications Office, Luxembourg, https://doi.org/10.2801/105773; Singh et al. (2013), *Linking recognition practices and national qualifications frameworks: international benchmarking of experiences and strategies on the recognition, validation and accreditation (RVA) of non-formal and informal learning, UNESCO Institute for Lifelong Learning, Hamburg; New Zealand Qualifications Authority (2016)*, *The New Zealand Qualifications Framework*, New Zealand Qualifications Authority, Wellington, https://www.nzqa.govt.nz/assets/Studying-in-NZ/New-Zealand-Qualification-Framework/requirements-nzqf.pdf.

A good qualifications framework is one that supports lifelong learning by linking different types of learning (formal, non-formal and informal) at different levels (basic skills and qualifications, vocational education and training, higher education). However, many countries do not such comprehensive qualification frameworks. Instead, they often have separate qualifications frameworks and credit transfer systems for academic and vocational education and training, which limits mobility between the two systems (Martin and Godonoga, 2020_[31]). Nevertheless, there are some examples of countries modernising their NQFs to be more flexible by recognising modern, non-formal qualifications such as microcredentials (European Training Foundation, 2017_[30]). Currently, 36 countries in Europe are working towards comprehensive NQFs covering all types and levels of qualifications (Cedefop, 2020_[32]). Some have used the credit transfer system in Europe (discussed in more detail in Box 6) to link non-formal education to formal qualifications frameworks (Harris and Wihak, 2018_[33]).

Ensuring portability through credit transfer systems

Credit transfer systems support flexible adult learning by facilitating the transfer of acquired knowledge and skills between programmes and providers. They are designed to enable the accumulation of learning outcomes achieved in formal, non-formal and informal settings, and to facilitate their transfer from one provider or programme to another. Credit transfer systems can assign credit points to the components (e.g., modules, placements, assignments) of a programme or to each learning outcome unit (Cedefop, 2014_[34]). A nationally organised credit transfer system fosters trust amongst institutions who partake in the process (Tuck, 2007_[35]). The concept of credit accumulation and transfer is strongly linked to modularisation (Cedefop, 2015_[36]).

In an ideal system, credit transfer systems and qualification frameworks are linked. NQFs should classify all types of qualifications into levels and assign credit values to each qualification level. Policy makers can define the levels of the qualification hierarchy at which the credit transfer is possible. They can make the transfer process clearer by also describing how different qualifications relate to each other, and whether progression between qualifications is possible.

Box 7. International experiences with credit transfer systems

Scotland

Under the Scottish Credit and Qualifications Framework (SCQF), all types of qualifications, including vocational programmes and micro-credentials, are recognisable. Any learning programme entered into the SCQF database is assigned a level and credit value. The level of a qualification indicates its difficulty (from 1 to 12), and the number of credit points indicates the length of time it takes to complete the programme, with one SCQF credit point representing an average of 10 hours of learning time. By using two measures, the framework helps individuals, employers and educators understand and compare various Scottish qualifications. Students can use this credit point system to progress to other more advanced programs. Ultimately, learning providers themselves conduct the credit transfer process, but use the SCQF as a guide when deciding how many credit points can be transferred. The framework also supports the RPL process as validating bodies can compare different qualifications based on their credit value and where they sit on the framework. The SCQF provides online support on how to use the framework for RPL purposes. It even provides free workshops for educators on how to conduct RPL, including how to map non-formal and informal learning to the SCQF levels.

Korea

Korea is acknowledged as an example of good practice for its national system of recognising credits obtained from both formal and non-formal learning. Developed in 1997, the Korean Academic Credit Bank System (ACBS) allows students to obtain a degree by combining credits from different sources, including both formal and non-formal education. Credits can be transferred across higher education institutions, or accredited non-formal education and training providers. One of the main goals of the system is to provide equal learning opportunities and to foster a lifelong learning society. Through the ACBS, people with a secondary school or vocational level education who were not able to attend tertiary education for personal, financial, or other reasons, can earn credits and eventually obtain a university level degree.

Source: Harris, J. and C. Wihak (2018), "The recognition of non-formal education in higher education: Where are we now, and are we learning from experience?", International Journal of E-Learning & Distance Education, Vol. 33/1, pp. 1-19, https://www.ijede.ca/index.php/jde/article/view/1058; Park, H. et al. (2019), "The Academic Credit Bank System in the Republic of Korea: An effective medium for lifelong learning in higher education?", International Review of Education, Vol. 65, pp. 975-990, https://doi.org/10.1007/S11159-019-09814-0; see Scotland's system here: https://scqf.org.uk/; see Korea's system here: https://www.cb.or.kr/creditbank/info/nlnfo7 1.do.

Credit transfer is currently difficult to do when qualifications outside the formal education system are not yet allocated to levels on NQFs (Ulicna, Messerer and Auzinger, 2016_[37]). It is also difficult to have an effective credit system without a good process for recognising and validating prior learning. A good NQF is one that either (i) assigns a credit value to all types of learning (formal, non-formal and informal), so that validating bodies can carry out RPL procedures transparently, or (ii) is defined by learning outcomes, so that validating bodies themselves decide through the RPL process whether an individual meets the criteria to be awarded a formal qualification.

Ideally, credit transfer systems should be integrated across all education and training sectors. However, many countries have separate credit transfer systems for higher education and vocational education and training, which makes it difficult to transfer from vocational to higher education. At the transnational level, Europe has both the European Credit Transfer and Accumulation System (ECTS) – for higher education – and the European Credit System for Vocational Education and Training (ECVET) – for vocational education and training. However, as noted in Box 7, some countries are leading the way in integrating credit systems.

Providing transparency through regularly updated national qualification standards

National qualification standards outline the basic competences or learning outcomes required to achieve a specific formal qualification. These learning outcomes or competences describe what a learner should know, understand and be able to do after completing their learning (Cedefop, 2017_[38]). Outcomes help to clarify programme expectations for both learners and educators. Standards are most common in formal education. National standards form a shared understanding of competences, provide a reference point for validation bodies, and increase the transparency of the RPL process across providers (Cedefop, 2017_[38]). Standards provide a more detailed picture of a qualification than the information used in NQFs.

Countries that include non-formal qualifications in their NQF are better able to establish baseline standards in the non-formal learning space. For countries that are not able to do this (which is the case for the majority of countries), most RPL

procedures allow non-formal and informal learning to be compared with the learning outcomes set out for formal qualifications in qualifications frameworks.

In addition to standards based on learning outcomes, countries can also set other types of national standards relevant to adult learning – for example, occupational standards that describe the tasks, activities and competencies of occupations (Cedefop, 2017_[38]). In addition, providers themselves can set their own standards for each programme, providing more detailed descriptions of learning outcomes than the NQF (such as information on curricula and assessments) (Cedefop, 2017_[38]).

Box 8. The Spanish experience with national standard setting

The Spanish vocational sector is a good example of the integration of educational and occupational standards. Qualifications in the vocational sector are modularised – each vocational qualification has several training modules, each of which is based on educational standards (as defined by learning outcomes). Each training module is also associated with a competence unit, which is in turn based on occupational standards (as defined by descriptions of professional performance and context). In this way, learning modules are linked to occupational criteria, setting out clearly the link between educational outcomes and jobs in the labour market. The framework is highly developed – there are around 680 occupational standards in the National Catalogue of Professional Qualifications (Catálogo Nacional de Cualificaciones Profesionales – CNCP) which is continually updated. Learners can receive certification of a set of competence units following assessment criteria specified in the training modules, which can ultimately be used to achieve a full qualification. It is also possible to obtain certification for single competence units.

Source: Cedefop (2009), *The dynamics of qualifications: defining and renewing occupational and educational standards*, European Union Publications Office, Luxembourg, https://www.cedefop.europa.eu/files/5195 en.pdf; Cedefop (2021), *European inventory of NQFs 2020 – Spain*, European Union Publications Office, Luxembourg, https://www.cedefop.europa.eu/files/spain - european inventory on ngf 2020.pdf.

Assuring the quality of education and training

Appropriate quality assurance procedures are essential to ensure that education and training deliver the desired outcomes for individuals, enterprises, education, and society. Regular quality assurance also provides the basis for updating adult learning provision and ensuring that it remains relevant to the changing skills needs of the labour market. However, definitions of quality in adult learning remain fragmented (OECD, 2021[39]). While formal adult learning generally has well-established quality assurance processes, quality assurance in the non-formal sector varies from country to country (OECD, 2021[39]).

In the formal education subsector, most countries assure the quality of their education and training system either through the accreditation of education and training providers or through the accreditation of specific learning offers/qualifications. Accreditation of education and training providers means that providers are recognised institutions that are approved to teach and train. Accreditation typically takes place by a central or co-ordinating body, with the responsibility to quality assure qualifications remaining with each individual provider. By accrediting providers rather than individual qualifications there is a risk of inconsistency in the quality of programme delivery between providers. Governments can mitigate this risk by developing some general principles of quality assurance that providers should follow (Tuck, 2007_[35]).

In the non-formal learning subsector, three types of approaches to quality assurance can be identified: (i) the regulatory approach, which imposes minimum quality requirements that providers must meet in order to be allowed to operate or to access public funding. Providers meeting these criteria are often awarded quality certificates or labels; (ii) the consultative approach, which uses softer tools such as guidelines and examples of good practice to encourage providers to develop quality and tends to encourage (self-) evaluation of learning provision; (iii) the organic approach, which leaves it entirely to providers to define their own quality needs (OECD, 2021[39]).

Box 9. International experience with quality assurance of adult learning **Switzerland** – *accrediting providers*

Switzerland's long-standing *eduQua* certification framework gives adult learning providers a quality label if they meet some minimum standards. The *eduQua* label certifies the whole institution or provider, not its individual courses. Yearly intermediate audits are conducted, and certification lasts three years after which renewal is necessary. Institutions strongly support the *eduQua* quality label as it provides them with recognition and credibility, allowing them to remain competitive in the education market. Furthermore, providers who become certified have access to public funding.

The system is well-trusted and managed by a central Swiss body who defines the criteria that evaluating bodies use to measure quality of providers. Standards are in a publicly available manual which defines in detail why the standard has been selected, indicators that can be used to evaluate the standard, and any documents needed for certification processes or audits. These evaluation guidelines are clear, transparent, and detailed – they allow different certification agencies to use the same standards to evaluate providers. The evaluation guidelines are subject to revision often, ensuring it remains relevant to new trends in adult learning.

Slovakia – accrediting programmes

Slovakia serves as an example of a country which goes beyond institutional accreditation with its system of accrediting non-formal qualifications. Under this system, providers can decide whether to accredit a programme as a whole or by module. According to the accreditation requirements of the Education Ministry, modules are designed as independent educational units, some of which meet the criteria for awarding micro-credentials. Providers that are interested in accreditation are advised to follow qualification standards as set out in the NQF and are required to submit certain documents when applying for programme certification. Accredited and quality-checked programmes are added to a publicly available register of accredited programmes, improving visibility, and understanding of credible programmes. Furthermore, a new lifelong learning and counselling strategy adopted in 2021 aims to include accredited qualifications into the NQF as micro-qualifications.

Source: OECD (2021), Improving the Quality of Non-Formal Adult Learning: Learning from European Best Practices on Quality Assurance, OECD Publishing, Paris, https://doi.org/10.1787/f1b450e1-en; Cedefop (2023), Micro-credentials for labour market education and training: micro-credentials and evolving qualifications systems, European Union Publications Office, Luxembourg,

https://doi.org/10.2801/566352; see more information about Slovakia's quality assurance system here: https://eurydice.eacea.ec.europa.eu/national-education-systems/slovakia/quality-assurance-adult-education-and-training.

Countries should aim to strike a balance between quality assurance and over-regulation of their adult learning systems to ensure that they remain flexible. Over-regulation of adult learning systems could stifle innovation and flexibility. There is also a risk of delays in the provision of training if institutional accreditation becomes a requirement for any provider of a qualification to enter the market – which could be particularly problematic in the non-formal or private sector. Some stakeholders even believe that non-formal qualifications, such as micro-credentials, can be left entirely outside the formal system in order to avoid over-regulation and to ensure that courses remain adaptable to changing skills needs (Cedefop, 2023[19]).

Additional policy considerations

In addition to the policy measures discussed above, there are two further areas that policy makers should consider when seeking to make adult learning more flexible. First, financial support can play a crucial role in enabling individuals to participate in adult learning, but it needs to be designed to enable learners to pursue flexible learning options. This should include financial support for learning opportunities delivered at different times, places, modes, and paces, and to support the recognition of prior learning. Both are discussed in more detail below. Second, as flexibility increases choice, information and guidance are essential to help learners navigate the range of learning options available to them.

1) Adapting financial incentives to support flexible learning

As highlighted above, financial support is crucial to enabling individuals to participate in adult learning. Cost considerations are an important factor for both individuals and employers, with a third of firms in OECD countries reporting high

costs as a limiting factor for providing training options (OECD, 2019_[2]). Providing affordable learning options is even more important to encourage low-skilled adults, who often face higher barriers to participation, to train (OECD, 2019_[20]). In the European Union, around one in five adults with low levels of educational attainment cited distance and lack of suitable learning provision as significant obstacles to their participation (European Commission, 2021_[10]).

Box 10. International experiences with Individual Learning Accounts

An Individual Learning Account (ILA) system provides an entitlement to lifelong learning attached to individuals. These savings-like accounts award individuals with the right to education and allow them to undertake continuous training throughout their working lives. These accounts can also include paid days of leave that can be used for learning purposes. They should also ideally allow individuals to accumulate and preserve their entitlements over time.

ILAs support flexible learning systems by providing individuals with increased funding and access to learning programmes. Individuals retain the flexibility of choosing how and when to use their learning credits. ILAs are an innovative funding option to support lifelong re-training while promoting equality and inclusiveness in the non-formal education system. Training can be targeted to the individuals most in need of re- or up-skilling, or to the sectors with the greatest skill shortages, by providing a higher training quota to these groups.

In 2022, the European Union adopted a recommendation that Member States should consider establishing ILAs. Their core suggestion is the establishment of personal accounts, giving adults an individualised budget to spend on training, and recommendation that Member States establish frameworks around ILAs. France is so far the only country to have adopted a true ILA scheme, called *Compte Personnel de Formation*.

Source: Council of the European Union (2022), *Council Recommendation on individual learning accounts*, Council of the European Union, Brussels, https://data.consilium.europa.eu/doc/document/ST-8944-2022-INIT/en/pdf; OECD (2019), *Individual Learning Accounts: Panacea or Pandora's Box?*, OECD Publishing, Paris, https://doi.org/10.1787/203b21a8-en.

To support flexible learning options, financial incentives must be designed to enable learners to pursue learning opportunities delivered at various times, places, modes, and paces. Many OECD Member States already provide a range of incentives, including tax breaks, grants, loans, vouchers, and other subsidies (OECD, 2017_[40]). However, they are not necessarily designed to support flexible learning options and may be restricted to support more traditional learning pathways, such as full-time study towards a formal qualification. In many cases, no specific funding is available to support the process of recognition of prior learning, which can be lengthy and costly for individuals. Policy makers should consider updating the available financial incentives to enable more flexibility and to prioritise funding for the development of more flexible learning opportunities.

One policy instrument that promises to support more flexible learning and has been much discussed in recent years are Individual Learning Accounts (Box 10). Individual Learning Accounts are personal, portable accounts that individuals can use to pay for their own training and education (and in some cases, cover the costs of RPL processes), with the government or employer contributing a set amount to the account (OECD, 2019_[2]).

2) Expanding career guidance services to navigate increased complexity

As adult learning systems become more flexible, they generally become increasingly complex for individuals to navigate the range of learning options available to them. Policy makers should consider how to expand and improve existing careers guidance services that can help individuals make better choices about education, training, and employment. High-quality career guidance services provide individuals with personalised advice and support to navigate complex learning and employment systems. They use skill assessments and psychometric tests to help individuals identify their strengths and interests and provide tailored advice on educational, training, and employment options. These services remain current on labour market trends and collaborate with local employers to provide jobseekers with exposure to sectors and develop relevant skills. Finally, high-quality services should be accessible to all, but especially targeted to those in greatest need of support, such as low-skilled or older jobseekers (OECD, 2021_[36]).

Box 11. Guiding migrants through the recognition of prior learning syste Germany

In addition to advising on training options and career paths, guidance providers can help adults navigate complex systems such as recognition of prior learning or credit systems. This is the case in Germany with the Integration through Qualification Network. Among other priorities, the network provides advice on the recognition of qualifications acquired abroad. Networks have been established in each of Germany's federal states with the overall aim of integrating migrant populations into the labour market. The service helps migrants to find work that matches their qualifications, regardless of the outcome of the recognition process. Through mentoring and coaching sessions, adults receive information about the German education system and are supported in choosing training that matches the qualifications they may have acquired abroad.

Source: OECD (2022), *Getting Skills Right: Career Guidance for Low-Qualified Workers in Germany*, OECD Publishing, Paris, https://doi.org/10.1787/5e6af8da-en.

Guidance is provided in a range of settings, but for adults is most commonly provided by public employment services, non-governmental organisations, local community centres and the private sector (OECD, 2021_[36]; Cedefop, 2021_[37]). Additionally, centralised online platforms have become increasingly popular in recent years as a way to provide information and support to a wider range of individuals seeking career guidance services. These platforms can offer a wealth of information on various educational, training, and employment options available, while also providing personalised recommendations based on user inputs. In addition, many online guidance services are using artificial intelligence (AI) to profile jobseekers, identify skill gaps, and match them with relevant job vacancies (OECD, 2022[38]). Some portals provide information and counselling via chatbots. Others allow users to communicate digitally in real-time with a career guidance advisor, such as in Estonia, Denmark, Finland, and Norway (OECD, 2021_[37]). While the use of AI in career guidance services has the potential to improve the quality and accessibility of guidance services, it is important to ensure that such tools are developed and implemented in an ethical and transparent manner, and that human guidance and support remains available for those who need it, notably adults with low levels of digital skills.

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