4 Promoting interest and participation in adult learning

This chapter presents evidence on participation in work-based adult learning and individuals' willingness to avail themselves of learning opportunities across countries and population groups. It illustrates factors at the individual, firm and system level associated with the likelihood of individuals disengaging from adult learning through a lack of participation or interest. The chapter reviews the barriers preventing willing individuals from participating in adult learning. It concludes by developing estimates of the likely learning losses workers have experienced as a result of COVID-19, with a particular emphasis on the impact of the pandemic on disparities in skill development.

Disparities in participation in adult learning

Information and communications technologies (ICTs), and advances in artificial intelligence and robotics, are transforming the way people work, communicate and live (OECD, 2019[1]). For example, OECD analysis undertaken before the COVID-19 pandemic finds that on average across the countries that participated in the Survey of Adult Skills, a product of the Programme for the International Assessment of Adult Competencies (PIAAC), about 14% of workers face a high risk that their jobs will be automated, and another 32% face significant changes in their job tasks owing to automation (OECD, 2019[2]). However, the COVID-19 pandemic has increased the pace of technological change, accelerating the processes of automation and job transformation. This acceleration of the digital transformation has had unequal impacts. Some sectors, such as retail trade; accommodation and food services; and arts, entertainment and recreation, have been unable to operate owing to mandatory shutdowns in many countries and economies during the first phase of the pandemic (corresponding to March-July 2020 in many countries). Other sectors have been able to set up remote working arrangements. Most sectors are not expected to fully resume operations until effective treatments or vaccinations have been developed and widely distributed.

The impact of the COVID-19 pandemic on skill needs in the labour market interconnects with earlier trends, such as globalisation, influencing labour markets. Expanding global value chains (GVCs) may lead to reduced demand for some skills as certain tasks and activities are offshored, exposing workers to wage moderation or decreases – or even unemployment – in the short term. On the other hand, thanks to GVCs, firms can engage in production processes they might not have been able to undertake on their own. In the long term, offshoring enables firms to reorganise production and achieve productivity gains that may lead to aggregate job creation. The evidence suggests that moving up GVCs raises demand for high-level skills that are crucial for countries wishing to specialise in the most technologically advanced industries and complex business services, negatively influencing labour-market participation and returns for low-skilled workers (OECD, 2017[3]; OECD, 2019[4]).

Declining fertility rates and increasing life expectancy are leading to population ageing in many OECD member countries. The decreasing cohort of youth entering the labour market and longer life expectancy are creating pressures for societies to prolong adults' working lives – and, by extension, to upskill and reskill the workforce over the life course.

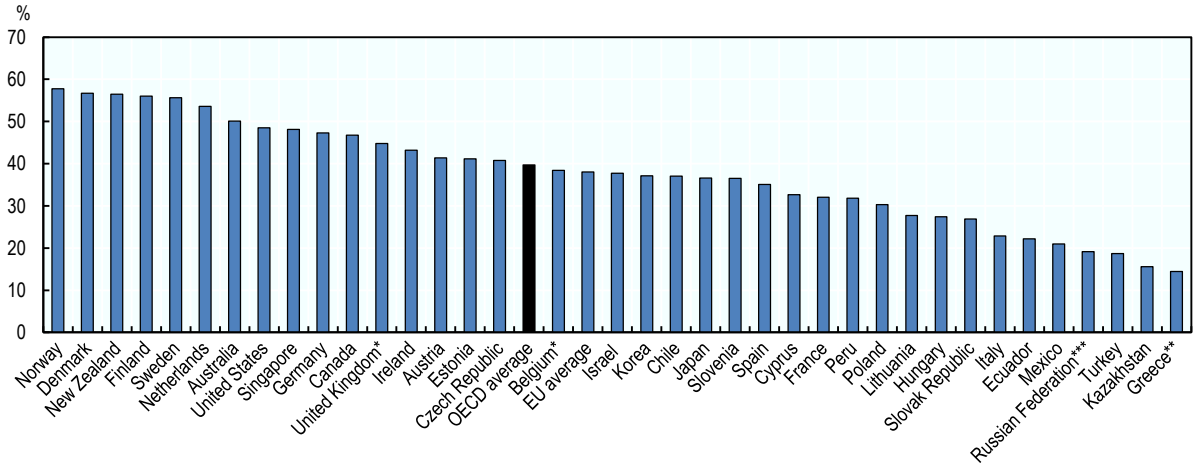
Despite increasing recognition of learning systems' key role in promoting lifelong learning, in many countries, adult learning systems are not yet able to capitalise on technological innovation to deliver effective and inclusive skill development programmes. Such programmes should be designed to reach different socio-economic groups (particularly individuals at risk of skill obsolescence) at all stages of life, to help them weather economic and social changes.

Adult learning covers learning that occurs in formal settings, such as vocational training and general education, and learning resulting from participation in formal, non-formal and informal training. It ranges from certified courses (formal training), through workshops and employer-provided training (non-formal training), to learning from others, learning by doing and learning new things at work (informal training). For analytical purposes, this chapter considers that individuals are engaged in adult learning if they participated in at least one form of either formal or non-formal job-related learning in the 12 months prior to being interviewed.

In many OECD countries, participation in adult learning remains low. Data from the Survey of Adult Skills (PIAAC) indicate that only 2 in 5 adults (40%) on average participate in job-related formal or non-formal training over the course of 12 months prior to being interviewed in PIAAC. However, participation in adult learning differs greatly across countries: fewer than 25% of adults in Greece, Italy, Mexico and Turkey reported having participated in adult learning, compared to over 55% in Denmark, Finland, New Zealand, Norway and Sweden.

Figure 4.1. Participation in adult learning, by country

Percentage of 25-65 year-olds who report having participated in adult learning



Note: Percentage of 25 to 65-year-olds who report having participated in at least one form of formal or non-formal adult learning opportunity for job-related reasons in the 12 months preceding the interview. Countries are sorted in descending order of the percentage of adults reporting to have participated in adult learning.

*Data for Belgium refer only to Flanders and data for the United Kingdom refer to England and Northern Ireland jointly.

**The data for Greece include a large number of cases (1 032) in which there are responses to the background questionnaire but where responses to the assessment are missing. Proficiency scores have been estimated for these respondents based on their responses to the background questionnaire and the population model used to estimate plausible values for responses missing by design derived from the remaining 3 893 cases.

***Note: Regarding data from the Russian Federation in the Survey of Adult Skills (PIAAC) – the sample for the Russian Federation does not include the population of the Moscow municipal area. The data published, therefore, do not represent the entire resident population aged 16-65 in the Russian Federation but rather the population of the Russian Federation excluding the population residing in the Moscow municipal area. More detailed information regarding the data from the Russian Federation as well as that of other countries can be found in the Technical Report of the Survey of Adult Skills, Third Edition (OECD, 2019[5]).

Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

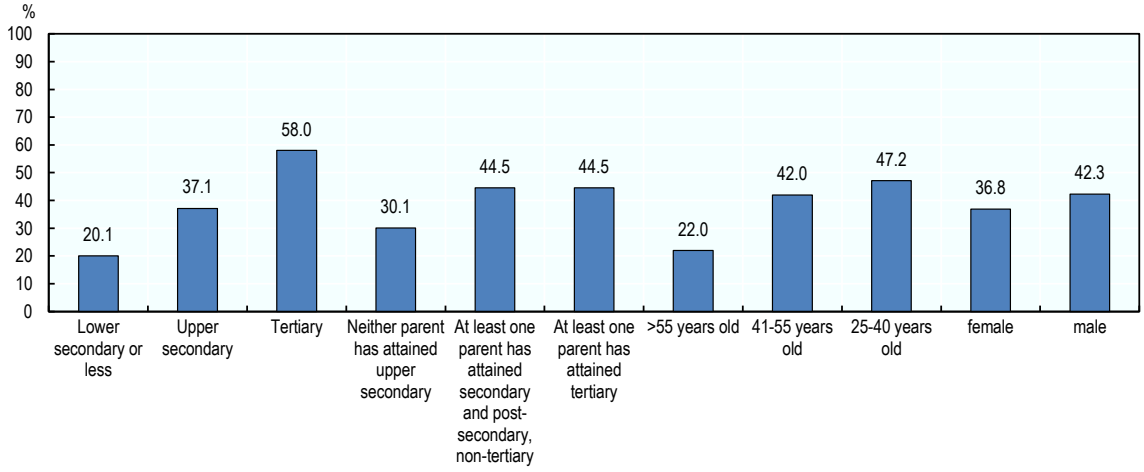
StatLink https://stat.link/g451rf

Participation was often highest among individuals who faced low barriers to participation and reap high individual returns, but whose participation yields lower social returns; these are individuals with high levels of education, young workers and those from socio-economically advantaged households. In many countries and economies, therefore, the key challenge is to include those groups that would most benefit from accessing high-quality learning opportunities, and whose participation would yield higher social returns. Financial barriers, the cost of training, as well as the relevance and quality of the training provided, appear to be the main obstacles to participation in training.

Adults with lower levels of education are much less likely than their more highly educated peers to participate in adult learning. For example, across OECD countries, adults with low levels of educational attainment (i.e. they did not obtain upper-secondary qualifications) are three times less likely to participate in adult learning than individuals with tertiary qualifications. Figure 4.2 shows that on average, only around 20% of adults without upper-secondary qualifications reported participating in at least one adult learning opportunity in the past year, compared to 58% of adults with a tertiary-qualification.

Figure 4.2. Participation in adult learning, by socio-demographic characteristics

Percentage of 25-65 year-olds who reported participating in adult learning



Note: Percentage of 25-65-year-olds who reported participating in at least one form of formal or non-formal adult learning opportunity for job-related reasons in the 12 months preceding the interview. Tertiary-level qualifications refer to International Standard Classification of Education (ISCED)-97 levels 5-6. Upper-secondary qualifications refer to ISCED-97 levels 3-4. Below upper-secondary level qualifications refer to ISCED-97 levels 1-2.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

StatLink https://stat.link/aud69x

The intergenerational transmission of educational advantages has been widely documented: individuals whose parents obtained tertiary-level qualifications are more likely to obtain a tertiary degree than individuals whose parents did not pursue tertiary education (OECD, 2017[9]). Figure 4.2 indicates that parental education is linked not only to the qualifications obtained by their children, but also with their level of participation in adult learning. On average across OECD countries, 30% of individuals whose parents did not reach upper-secondary education report engaging in adult learning, compared to 54% of individuals with at least one parent who obtained a tertiary degree, a difference of 24 percentage points.

Middle-aged (41-55 years old) – and particularly older adults (56-65 years old) – are other groups that tend to be underrepresented among participants in adult learning, even though these workers often need to upskill or reskill to operate in labour markets transformed by technological change (Paccagnella, 2016[10]). Figure 4.2 indicates that across OECD countries, 42% of 41 to 55 years-old adults but 47% of 25 to 41-year-olds reported having participated in adult learning, a difference of 5 percentage points. Participation falls even more sharply among adults over the age of 55, with only 22% reporting they had participated in adult learning over the past 12 months. Participation in adult learning also varies by gender, but differences are generally small: on average across OECD countries, 37% of women and 42% of men reported having participated in adult learning, a difference of 5 percentage points (Figure 4.2).

The key finding of the analyses presented in this section is that in many countries, large sections of the adult population do not participate in adult learning; in many cases, those who do not participate tend to be from socio-economically more disadvantaged groups. In particular, individuals with few educational qualifications or who come from households with few educational qualifications, as well as mature individuals, are less likely to pursue adult learning than other population groups. Given the important role adult learning can play in promoting economic growth and social inclusion, the OECD has undertaken an ambitious programme of work to gain a better understanding of the functioning, effectiveness and resilience of adult learning systems, as well as identify and disseminate best practices across member countries and beyond. Box 4.1 summarises key resources arising from past work conducted by the OECD.

Box 4.1. Key OECD resources to evaluate the functioning, effectiveness and resilience of adult learning systems

- The OECD dashboard on Priorities for Adult Learning supports countries in assessing and increasing the future-readiness of adult learning systems. The dashboard facilitates cross-country comparisons of relevant aspects of adult learning systems. It presents a set of internationally comparable indicators along seven dimensions: 1) urgency; 2) coverage; 3) inclusiveness; 4) flexibility and guidance; 5) alignment with skill needs; 6) perceived training impact; and 7) financing (OECD, 2019[11]).
- The report *Getting Skills Right: Future-Ready Adult Learning Systems* (OECD, 2019[2]) highlights key emerging challenges in adult learning and presents examples of policy initiatives in OECD countries. The report also features concrete policy recommendations to help OECD countries increase the future-readiness of their adult learning systems in a changing world of work. These include improving the coverage and inclusiveness of adult learning systems, and aligning the training offer with the needs of the labour market. The report also discusses the importance of monitoring the quality and effectiveness of training; ensuring the right mix of co-financing by the government, employers and individuals; and strengthening horizontal and vertical co-ordination mechanisms (OECD, 2019[2]).
- The OECD has produced the "Getting Skills Right" series on specific aspects of getting adult learning systems ready for the future, including "Engaging low-skilled adults in learning" (OECD, 2019[12]), "Creating responsive adult learning systems" (OECD, 2019[13]) and "Making adult learning work in social partnership" (OECD, 2019[14]). Designed for stakeholders involved in adult learning policies, the booklets aim to encourage engagement in adult learning; improve the design, implementation and monitoring of adult learning policies; and effectively involve social partners. Each booklet outlines seven actionable principles, providing insights on how to translate policy recommendations into practice by highlighting promising initiatives in OECD and emerging countries. The OECD is also helping individual countries address specific challenges and priorities in making their adult learning systems future-ready, adding to the evidence base on best practices that enhance the responsiveness and effectiveness of adult learning systems. Country reports in the series for Italy (OECD, 2019[15]) and Australia (OECD, 2019[16]) specifically focused on adult learning, as well as a report dedicated to successful reforms that have helped increase participation in adult learning across OECD countries (OECD, 2020[17]).

Source: OECD (2019[4]), *OECD Employment Outlook 2019: The Future of Work*, https://dx.doi.org/10.1787/9ee00155-en.

The importance of distinguishing motivation: Four learners' profiles

The previous section detailed how participation in adult learning remains low in many countries, with differences in participation across key socio-demographic groups that are generally pronounced. Recent OECD analysis (e.g. OECD (2019[18]; 2019[2]; 2019[12])) highlighted explicit barriers to participation in training, including financial and time constraints (related to work or family obligations), insufficient prerequisites for participation and lack of interest in the training on offer. However, these are not the only factors hindering participation.

Figure 4.3 illustrates that on average across OECD countries, one in two 25 to 65-year-old workers (50%) does not participate in adult learning and is not willing to participate in the currently available training for job related reasons. These adults are "disengaged" (see Box 4.2). Rather than being prevented from

participating owing to financial, personal or other constraints, they lack willingness or the opportunity to engage in available learning opportunities readily available. Figure 4.3 shows considerable variability across countries in the prevalence of different learner profiles. In the OECD region, Turkey has the largest share (79%) of individuals disengaged from available training, more than double the share of New Zealand (28%) or Denmark (32%). It is important to note that data refer to the OECD Survey of adult Skills (PIAAC) and are therefore not the latest available source of information for some countries and the situation may have evolved in some countries. For example, for the European region the 2016 Adult Education Survey (AES) is available. However, PIAAC remains the study that allows for the widest cross-country comparison across OECD countries. Direct comparisons between AES and PIAAC are not straightforward because of differences in question working and response options. Similarly, Labour Force Surveys allow to monitor participation in adult learning but do not generally contain information on interest in and barriers to participation.

On average across OECD countries, only 26% of 25 to 65-year-olds are engaged in adult learning and satisfied with their level of participation (the "active and satisfied"). Figure 4.3 reveals a large variability across countries: in Norway and the Netherlands, 39% and 37% of 25 to 65-year-olds respectively are engaged in adult learning and satisfied with their current participation levels compared to only 10% of the adult population in Greece.

An additional one in ten 25 to 65-year-olds (10%) reports being motivated to participate in available training, but being unable to do so because of different barriers (the "inactive but motivated"). Figure 4.3 indicates that among OECD countries, Korea has the largest share (18%) of adults who do not participate in adult learning but are willing to train.

Finally, 14% of 25 to 65-year-olds adults report they participate in adult learning, but are willing to train more (the "active and seeking more"), although they mention various barriers that leave them dissatisfied with the amount of training that is currently available. In New Zealand, for example, 24% of adults are engaged in adult learning, but express an interest in pursuing additional training.

Each of the four groups above represents a unique "learner's profile" (described in detail in Box 4.2), with different needs, propensity and interest towards adult learning. Throughout this chapter, the term "willingness to train" is used to refer to individuals' inclination towards training, rather than their actual participation level. As such, adults are considered "willing to train" if they belong to one of the three categories – "active and satisfied", "active seeking more" and "inactive but motivated".

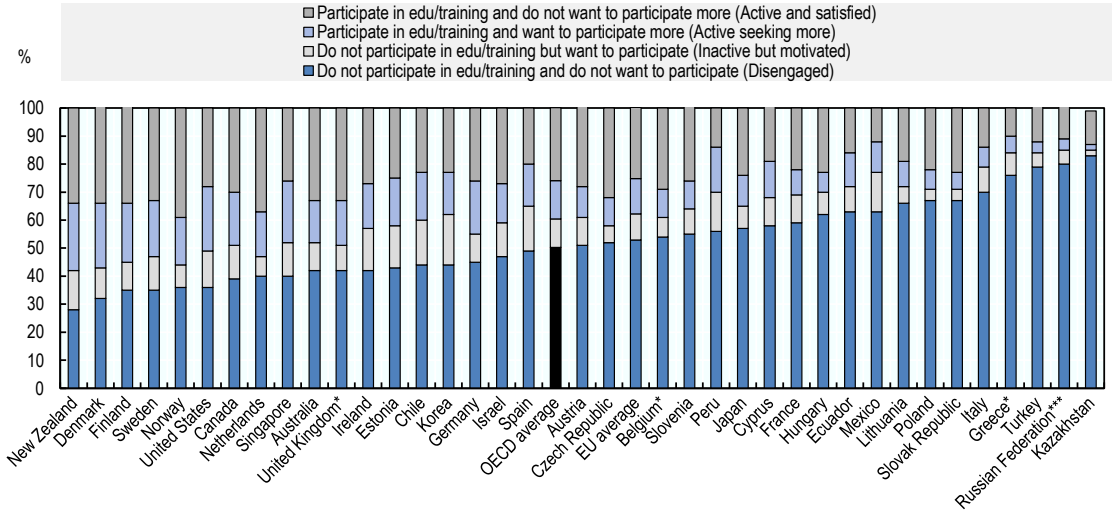
Box 4.2. Four lifelong learner profiles

This chapter distinguishes four groups of adults, based on their willingness to participate and their level of participation in adult learning opportunities that are currently available to them.

- **Inactive and disengaged** – adults who do not participate in adult learning available through their work and declare no interest and availability in participating in such training.
- **Inactive but motivated – not in training, but express a desire to learn** – adults who declare a willingness to engage in training currently available to them, but do not currently participate in training.
- **Active and seeking more – in training, but would like to learn more** – adults who participate in existing training opportunities, but declare they are willing to undertake more training than what they are currently receiving.
- **Active and satisfied – in training, and satisfied with the amount of their learning** – adults who participate in training and are satisfied with the quantity of training (are not looking to participate more).

Figure 4.3. Learner's profiles characterising willingness to train and participation in adult learning, by country

Percentage of 25-65 year-olds who completed initial education



Note: Participation relates to formal and non-formal job-related adult learning over the 12 previous months. Countries are sorted by the share of the "disengaged" group in a given country. Countries are ranked in ascending order of the percentage of 25-65 year-olds having completed initial education who are in the "disengaged" group.
*For Belgium, Greece, the Russian Federation and the United Kingdom, see notes under Figure 4.1.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

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Factors affecting workers' willingness to participate in training

Previous studies (AONTAS, 2013[19]; Mooney and O'Rourke, 2017[20]; Health, 2015[21]; OECD, 2019[18]; OECD, 2019[2]; OECD, 2019[12]; Pennacchia, Jones and Aldridge, 2018[22]) have identified the barriers hindering participation in training activities, generally involving material or contextual factors, such as the excessive cost of training or a lack of time owing to family or other obligations. Different sets of factors may eventually result in adults being unwilling to participate in available training opportunities. Data constraints do not allow determining whether the lack of willingness to train arises from supply constraints, i.e. a lack of opportunities that are aligned with individuals' preferences and interests. Indeed, the results presented in Figure 4.3 suggest that a sizeable share of adults are not willing to avail themselves of existing training provisions. This section examines the factors associated with individuals' disengagement from available training, by identifying the characteristics of disengaged workers,[1] i.e. workers who reported not participating in available training and not being willing to do so when interviewed in the context of the Survey of Adults Skills (PIAAC). It considers three sets of factors in relation to workers' willingness to participate in available adult learning:

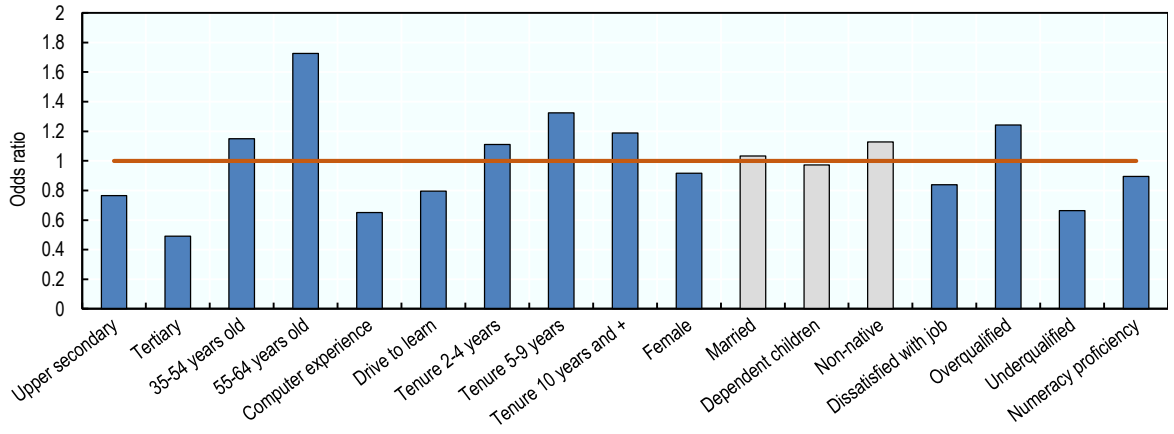
i. **Worker's characteristics,** including gender, age, educational attainment, numeracy proficiency, experience with computers and ICT, marital status, care responsibilities for dependent children, language background, job satisfaction, tenure, being over- or underqualified for the job and learning attitudes (measured by their reported "drive to learn"[2]).
ii. **Job characteristics**, such as part-time employment, working on an atypical contract,[3] supervising others at work, experience required to perform the job and risk of automation.
iii. **Employer characteristics**, including the firm's size, whether it is growing and whether it operates in the private sector; and use of high-performance work practices (HPWP) and performance-based pay.

Personal factors related to workers' willingness to participate in adult learning

This section identifies personal characteristics associated with the likelihood that workers will be disengaged from learning or on the contrary, will be willing to participate in available learning opportunities. Figure 4.4 summarises associations across OECD countries. The supplementary online tables to Chapter 4 illustrate country-specific results (see Annex Table 4.A.1).

Figure 4.4. Personal factors related to workers' likelihood of being disengaged from available adult learning

Logit regression odds ratios



Note: The results presented refer to odds ratios derived from a logit regression model pooled across OECD countries that includes 25-65 year-old workers. The dependent variable "willingness to train" is constructed to take value 1 if the respondent reports being willing to participate in job-related training (whether or not the individual is currently participating in training or is satisfied with the amount of training currently being received), and value 0 if the individual reports no interest in participating in training. The regression includes additional controls for individual, job and employer characteristics. For categorical variables, odds ratios refer to a discrete change from the base level (respectively: holding lower-secondary education or below, 25-34 year-olds, without computer experience, 0-2 year tenure, male, unmarried, without dependent children, native). Grey columns indicate results that are not statistically significant at the 95% confidence level. The supplementary online tables for Chapter 4 present country-specific results.See Annex Table 4.A.1.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

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Educational attainment: The role of prior learning

Individuals with low educational qualifications are more likely to have relatively low skill proficiency and to be employed in occupations that are at high risk of being offshored or automated (OECD, 2019[12]). Despite strong implicit incentives for workers with low qualification levels to develop their skills by participating in adult learning, Figure 4.4 indicates that across the OECD region, less-educated workers are less willing to participate in available adult learning and training. Workers are often caught in a "low skills trap", employed in low-quality jobs with weak career prospects, and few opportunities and incentives to engage in learning. The lack of perceived prospects for career progression can discourage workers from participating in training – all the more so as the limited potential long-term gain does not outweigh the short-term cost (i.e. workers are reluctant to signal their unhappiness with their current position to their employer by searching for training opportunities that enhance their employability).

Figure 4.4 indicates that across countries participating in the Survey of Adult Skills (PIAAC), people who had completed tertiary education were half as likely to become disengaged from adult learning than people holding qualifications below the upper-secondary level. Country-specific regression results indicate that

other things being equal, differences across countries in individuals' willingness to participate in adult learning according to their educational level are the widest in Lithuania.

The results presented in Figure 4.4 are consistent with data from the 2016 Adult Education Survey indicating that low-skilled adults are considerably less interested in upskilling or training opportunities than other adults. According to the survey, only around one in ten adults with low educational attainment searched for learning opportunities, compared to over one in three adults with high educational attainment (OECD, 2019[12]).

One reason for this lack of willingness to train may be that the expected returns vary across individuals with different levels of education – and in fact, the returns for non-formal and informal learning are highest for tertiary-educated workers (Fialho, Quintini and Vandeweyer, 2019[23]). Workers are likely to internalise this evidence when deciding whether (and how much) to participate in training.

Linking wages more closely to productivity is one possible way of providing adequate economic incentives for workers to develop and use their skills in jobs that fully utilise their human capital. However, this link is seldom evident in jobs requiring low skills.[4] Lower expected returns for low-skilled workers translate into low motivation to participate in available learning activities, as attending training costs both time and money. Some countries have striven to strengthen the link between training and career progression, and to boost virtuous incentives to participate in learning. However, much more remains to be done to generalise these approaches and create an inclusive culture of learning (Box 4.3).

Box 4.3. Linking wages to productivity: A case of best practice

System-level policy interventions

Italy. Among the recent policy interventions to link wages to productivity, the new Budget Bill for 2017 (*Legge di Stabilitá*) allows firms to benefit from a substantial tax reduction on the "productivity bonuses" (*premi di produttivitá*) paid to their most productive workers. However, the use of "productivity contracts", which explicitly foresee productivity bonuses, is very uneven across the country, and should be strengthened in Italy's central and southern regions as a tool to spur better skills match.

Firm-level interventions

During the renewal of the collective agreement in 2010, Italy's Tesmec Group vowed to design a long-term project to enhance its workforce's professional development. Similarly, trade unions proposed that Tesmec introduce an individual productivity bonus based on objective evaluation procedures and closely tied to workers' professional performance. In the collective agreement signed in February 2011, these intentions were finally reflected in the New Resource Development project, which established training programmes to meet individual workers' needs and fill firm's skill gaps. Tesmec management and the trade unions agreed on a mechanism to link workers' skills and professionalism to explicit wage incentives and training programmes under a well-defined scheme to evaluate workers' performances. Such evaluations were to take place annually, with the criteria set collaboratively by managers and employees, supported by the human resources office. Thus, skill assessments are based on shared evaluation parameters, broken down into two main categories (i.e. flexibility and distinctive elements of the performance) and further fragmented into eight evaluation factors, with different weights.

Source: OECD (2017[24]), *Getting Skills Right: Italy*, https://dx.doi.org/10.1787/9789264278639-en; Mosca, D. and P. Tomassetti (2016[25]), *La valorizzazione economica della professionalità nella contrattazione aziendale in Diritto delle Relazioni Industria.*

A second reason why individuals with low educational qualifications are less willing to pursue available learning opportunities is their lack of awareness of the direct and indirect benefits of learning: as a result many fail to recognise their own learning needs and hence do not seek training opportunities (e.g. (Windisch, 2015[26])). Targeted career guidance that supports the low-skilled in identifying their skill gaps and available training, and directs them to the most suitable training opportunities, can make training more accessible and provide incentives to participate. Awareness campaigns focusing on the low-educated and low-skilled in particular can be an important means to engage these groups in training.

However, traditional awareness-raising initiatives, such as communication campaigns disseminated through public websites, are largely ineffective (OECD, 2019[12]; European Commission, 2015[27]). Some countries have sought innovative ways to increase individuals' willingness to engage in adult learning, with a particular emphasis on interventions targeting those with low or no educational qualifications. Such interventions have often aspired to develop lifelong engagement in learning, given the importance of creating strong learning attitudes from an early age. Such initiatives generally aim to reach individuals in places they attend regularly, such as workplaces and schools (OECD, 2019[4]). Box 4.4 illustrates several examples of proactive initiatives undertaken in OECD countries to encourage low-skilled adults to participate in adult learning.

Box 4.4. Improving participation in learning

- In the United Kingdom, Unionlearn uses "union learning representatives" to encourage and support other colleagues with learning in the workplace. It provides training to about 250 000 workers every year, including many low-qualified workers (Stuart et al., 2016[28]; Stuart et al., 2013[29]).
- In Vienna (Austria), the project *Mama lernt Deutsch!* ("Mama learns German") provides courses on basic skills to mothers with low qualifications and who are not native German speakers. The courses take place in their child's educational institution (OECD, 2019[12]).
- In Brussels (Belgium), Formtruck is a mobile training information centre that engages with low-qualified jobseekers at public locations, e.g. events, parks and public squares (OECD, 2019[12]).
- In France, the following transformations of the educational are currently ongoing:
  - «Loi Avenir professionel (Loi n° 2018-771 du 5 septembre 2018)», intended to increase the number of apprentices.
  - «Loi Avenir professionel (Loi n° 2018-771 du 5 septembre 2018)», creation of training accounts.
  - «Plan d'investissement dans les compétences», which provides training to youth and job seekers.

Source: OECD (2019[4]), *OECD Employment Outlook 2019: The Future of Work*, https://dx.doi.org/10.1787/9ee00155-en.

Spurring effective and innovative teaching and learning methods is also key to encouraging participation. Low-skilled adults whose earlier experience in education has been negative often associate traditional classroom learning with failure. They are instead more likely to be motivated by training that is more practical, problem-oriented and that is delivered in ways that make the relevance for day-to-day activities very clear. Some countries have started adopting good practices to engage low-skilled workers in training that is tailored to their initial skill level, needs and experience (see Box 4.5 for examples of good practices).

Box 4.5. Creating interesting and relevant learning opportunities

- Blended learning is key to General Assembly's approach to education. General Assembly is a primarily US-based private education provider of training in today's most in-demand skills, such as coding, data design and digital marketing. While its courses typically target adults with high skill levels, its approach to blended learning is likely to be relevant for low-skilled adults as well. At General Assembly, individuals can learn a given skill in different ways, including online self-learning, expert-instructed classroom learning and small-group learning. Key to the approach is that although the best results can be achieved when individuals follow the full blended model, each learning mode is stand-alone, i.e. individuals can decide to learn using only their preferred method.
- Story-based learning lies at the core of the German eVideoTransfer project. Since 2012, the project has offered digital learning opportunities to workers with low basic skills and limited time to participate in classroom learning. This project develops industry-specific training, combining instruction on basic skills and professional knowledge. All training is web-based and takes the learner through an engaging storyline, which is conveyed through videos. Users must have a basic level of digital literacy, although a learning module about how to use a mouse and keyboard was developed to reach a wider target group. EVideoTransfer is implemented by the education provider Arbeit und Leben and funded by the Germany Ministry of Education and Research.

Source: OECD (2019[12]), "Getting Skills Right Engaging low-skilled adults in learning", https://www.oecd.org/employment/emp/engaging-low-skilled-adults-2019.pdf.

Age-related differences

As workers approach the retirement age, their willingness to invest in adult learning often decreases because of the shortening payback period associated with investments in learning (Martin, 2018[30]). In parallel, mature workers' ability to acquire new skills can deteriorate, particularly for workers whose jobs do not allow them to effectively utilise their skills (OECD, 1998[31]). Gerontological research suggests that advancing age impairs the ability to learn quickly, especially when new materials are qualitatively different from those mastered previously (Warr, 1994[32]). Firms may also prioritise younger workers, tailoring the training offer to a different demographic and in so doing, lessening older workers' interest in (and the benefits of) the available learning opportunities.

Figure 4.4 confirms that older workers are more likely to be disengaged from available learning opportunities than younger workers. On average across OECD countries, workers aged 55-65 are almost twice as likely to be disengaged than the younger cohort of workers. Data presented in the supplementary online tables for Chapter 4 suggest that age differences are especially pronounced in some countries (see Annex Table 4.A.1). In Greece, for example, workers aged 55-65 are five times more likely to be disengaged from available adult learning opportunities than 25-34 year-old workers.

These results should be considered in light of increases in life expectancy and the resulting prolongation of working lives owing to postponement of the retirement age in many OECD countries. Targeted career guidance can help mature workers make informed decisions about their investment in further skill development. In addition, financial incentives that reduce the relative cost of training older workers can encourage employers to tailor training and make it more relevant to their needs (OECD, 2019[2]). Many OECD countries have put in place policies promoting older adults' participation in training. Box 4.6 highlights good-practice examples of career advice and guidance services targeting mature workers.

Box 4.6. Policies aiming to increase training participation of older adults through targeted career advice and guidance

- Since mid-2018, Australia has been trialling the new Career Transition Assistance programme for job seekers aged 50 and above in five regions. The programme combines tailored career assistance and functional digital literacy training, using different types of technology (OECD, 2019[2]).
- In the Netherlands, workers aged 45 and more can participate in subsidised career development guidance (*ontwikkeladvies*) that help them understand the future prospects of their current job, and give them insight into their skills profile and career opportunities. Participants develop a personal development plan that describes the actions that should be taken to ensure they remain employed until retirement age (OECD, 2019[2]).
- In Korea, Job Hope Centres offer re-employment services for vulnerable individuals aged 40 and above, including counselling and guidance services for older workers who need (re)training before starting their job search and often lack the basic ICT skills needed to use online services. Almost 30 000 people benefited from this programme in 2017 (OECD, 2018[33]).
- Switzerland's *Impulsprogramm*, running from 2020 to 2022, supports older adults (50+) in their job search by providing the cantonal employment services with additional funds to implement measures such as coaching, counselling and mentoring tailored to their needs. In addition, workers aged 40+ benefit from a free location assessment service. Finally, the accreditation process for existing competencies is being improved.

Source: OECD (2019[4]), *OECD Employment Outlook 2019: The Future of Work*, https://dx.doi.org/10.1787/9ee00155-en.

Experience with technology

In parallel with the demographic changes worldwide, the fast-evolving technological landscape is exerting growing pressure on workers to upskill and reskill. Some skills can quickly become obsolete, potentially leading to job loss and even early retirement (OECD, 2017[34]). Even before the COVID-19 pandemic hit, workers in OECD countries were increasingly required to possess at least basic digital capacities. The widespread adoption of digital, remote and smart working arrangements owing to the COVID-19 crisis precipitated the need for individuals to master digital skills. And yet recent studies have shown that many mature adults lack essential digital skills (OECD, 2019[18]), which are now a precondition for accessing learning delivered on line (Centre for Ageing Better, 2020[35]). The last section of this chapter examines how the COVID-19 pandemic accelerated the digital transition, with potential additional challenges for economic and social inclusion.

Digital technologies can also be leveraged to promote participation in adult learning among individuals who are not comfortable with the usual training offerings. The use of new technologies (such as web-platforms) to deliver training allows far greater outreach, and more flexible and tailored learning paths. However, individuals with poor digital skills (or who lack internet connectivity) may not be able to take advantage of such opportunities.

Equipping vulnerable (i.e. low-skilled and older) groups with basic digital skills is a key policy priority for virtually all OECD countries as it can boost their confidence and increase their willingness to participate in further training. Figure 4.4 indicates that on average across OECD countries and other things being equal, workers who report having experience with using a computer have considerably lower odds of being disengaged from available learning opportunities, than those who do not. Country-specific results reported in the supplementary online tables for Chapter 4 indicate experience with ICT is associated with an especially strong decrease in disengagement from available adult learning in Austria and the United States, which is not the case in Greece, Italy or Lithuania. Several countries have introduced

programmes to support adults' ability to access online learning by equipping them with basic digital skills (see Annex Table 4.A.1).

Drive to learn

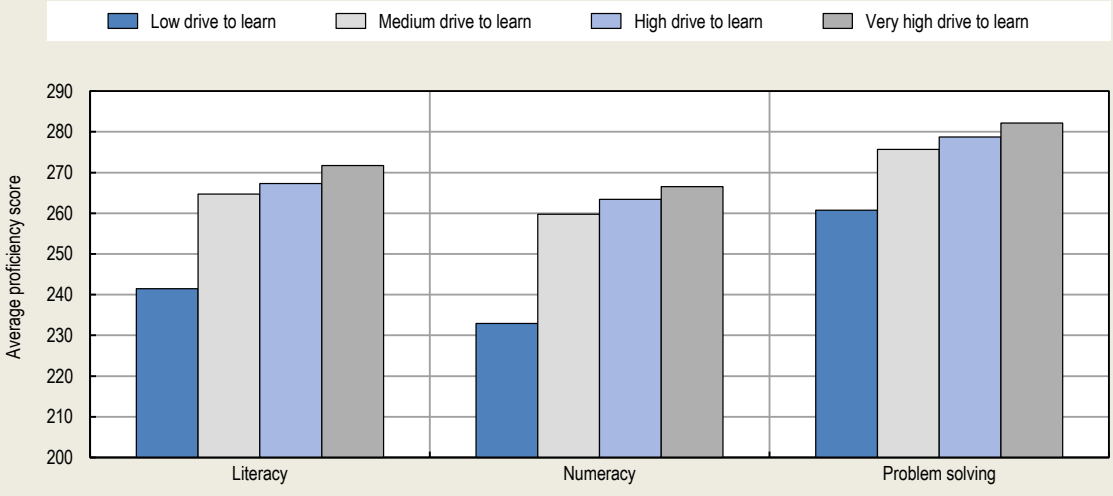
The drive to learn new things, master difficult subjects and look for additional information are individual characteristics that are not developed rapidly, and require specific contextual factors to emerge in an individual's lifelong learning journey.

Such lifelong learning attitudes are usually developed early in school. Chapter 2 provides a thorough analysis of factors (such as parental and teacher support) promoting strong lifelong learning attitudes and the predisposition to learn in young individuals, suggesting that investment in training early in life translates into better outcomes throughout the lifecycle (Cunha and Heckman, 2007[36]; Cunha and Heckman, 2008[37]; Cunha, Heckman and Schennach, 2010[38]). Strong attitudes also have positive effects on an individual's skill development and proficiency (Box 4.7), leading to higher wages (Paccagnella, 2014[39]) and higher-quality jobs (OECD, 2018[40]).

Box 4.7. The link between drive to learn and skill proficiency

Figure 4.5 indicates that a strong drive to learn is associated with higher proficiency scores across all the competencies – i.e. literacy, numeracy and problem-solving in technology-rich environments – assessed by the Survey of Adult Skills (PIAAC). The difference between the 25% most-driven and the 25% least-driven individuals corresponds to 21 score points for problem-solving in technology-rich environments, 31 points for literacy and 34 points for numeracy. Individuals who are able to develop positive learning attitudes early on build stronger skills and are on a path for receiving more education at all stages of life.

Figure 4.5. Average proficiency score in literacy, numeracy and problem-solving skills, by participants' drive to learn



Note: Low, medium, high and very high drive to learn refer to the quartiles of the PIAAC "drive to learn" index on the pooled PIAAC sample (covering all adults across all the participating countries).
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

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Strong learning attitudes developed at a young age play a key role in the willingness to learn as an adult. The results in Figure 4.5 confirm that on average across OECD countries, and other things being equal, individuals who have cultivated a strong drive to learn are considerably less likely to be disengaged from adult learning than those with a low drive to learn. Learning attitudes are a significant predictor of participation in available adult learning in most of the countries examined, highlighting the importance of early investments in developing robust learning attitudes. The association between positive learning attitudes and willingness to participate in adult learning is particularly strong in Chile, New Zealand and Japan (see the supplementary online tables for Chapter 4 in Annex Table 4.A.1).

Previous literature also shows that lifelong learning attitudes are often rooted in individuals' memories of participating in school and formal learning; they are also related to personal judgements about the lack of relevance of adult education to improve life and job prospects. Luchinskaya and Dickinson (2019[41]), for instance, argue that an individual's experiences in participating in learning activities (e.g. during initial education) can create either positive or negative feedbacks, reinforcing interest and willingness to participate in adult learning. Dispositional barriers and psychological factors (e.g. perception of reward or usefulness of participation and self-perception) may also reduce an individual's desire to participate in training. These barriers are particularly prevalent among the poor, people with weak literacy skills and elderly populations. Although dispositional barriers are socio-psychological, they are often interwoven and interact with institutional and situational barriers (Desjardins, 2009[42]).

Job tenure

Another factor that can drive interest in training is the novelty of a job (and its tasks) to a worker. Previous literature suggests that employees with low tenure are motivated to invest in their human capital to improve their career prospects and wage progression. As tenure increases, employees' desire to keep learning and training may weaken as they only need to maintain their current human capital so that they do not lose the gained benefits (Renaud, Lakhdari and Morin, 2004[43]). Similarly, human capital theory suggests that as knowledge and skill increase with greater tenure, job performance improves as well (Ng and Feldman, 2013[44]), potentially leading to lower interest in training opportunities.

Figure 4.4 indicates that newly employed workers – i.e. individuals whose tenure does not exceed two years – are most likely to be willing to participate in available adult learning, and that willingness to participate in adult learning opportunities tends to be the lowest among individuals with a tenure of five to ten years.[5] The results presented in Figure 4.4 suggest that workers starting a new job tend to respond to skill demands and incentives by engaging in learning and upgrading their skills. However, it is troubling that workers' willingness to updating their skills appears to diminish over time. Given the rapidly changing labour-market conditions and the quick depreciation of skills that are not put to use, too many workers may be prematurely disengaging from adult learning, only to realise too late that they need to reskill or upskill. This can pose significant risks, especially for those who are unexpectedly made redundant during economic crises.

Countries have different options to minimise the effects of economic crises on workers by supporting their income and strengthening incentives to reskill and, ultimately, transition to a new job. Box 4.8 outlines two Canadian programmes combining income-support and skill development policies to address the needs of long-tenured displaced workers.

Box 4.8. Increasing training participation of long-tenured displaced workers in Canada

- In Canada, legislative responsibility for education is granted to provinces in *The Constitution Act, 1867*; similar responsibilities are delegated to territories by the federal government. As a result, there is no federal ministry of education and no single pan-Canadian approach to adult education and learning. Each province and territory is responsible for planning, implementing, and evaluating policies for adult learning and education (ALE). The provision of ALE programs responding to these needs varies across provinces and territories, depending on the sector and community. Each province and territory adapts its programs based on its specific needs and those of the populations it serves. The Government of Canada also plays an integral role in supporting the skills development of Canadians by investing in postsecondary education, training, and literacy in the form of transfers to provinces and territories, research and infrastructure funding, and direct support to learners.
- The Canadian Career Transition Assistance programme temporarily extended the duration of employment insurance benefits during the 2008 economic crisis to two years for eligible long-tenured displaced workers who participated in longer-term training. Moreover, earlier access to employment insurance benefits was guaranteed for displaced workers who invested in their own training, using all or part of their severance package (OECD, 2015[45]). As of the third quarter of 2018, eligible employment insurance claimants in Canada who have lost their jobs after several years in the workforce will have more opportunities to continue to receive employment insurance benefits while pursuing self-funded full-time training.
- In Canada, federal funding is used to provide training and employment supports to individuals across Canada through bilateral Labour Market Transfer Agreements with provinces and territories. Training and supports, which are in part funded by these transfers, are designed and delivered by and in provinces and territories to respond to local labour market conditions and to provide better targeted supports to Canadians. For example, in the Canadian province of Ontario, the Second Career programme was introduced in 2015 to provide training assistance to older or long-tenured workers affected by economic restructuring, with the aim of helping them train for new careers in high-demand fields (OECD, 2015[45]).

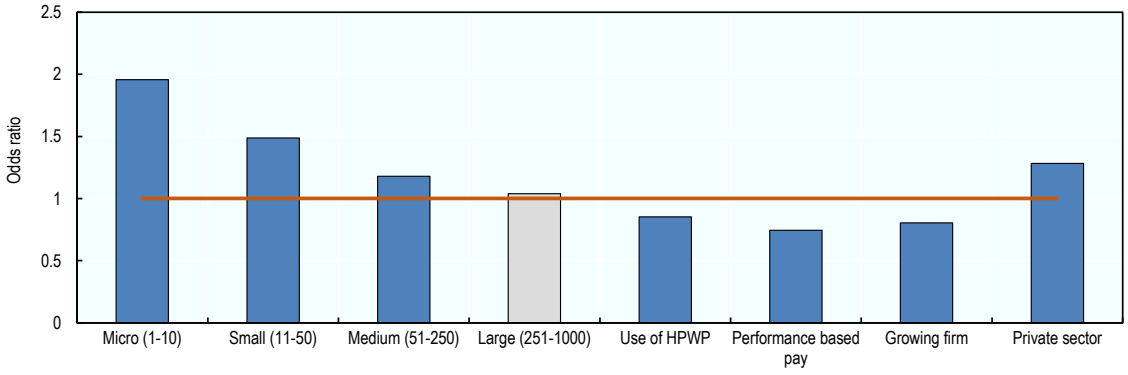
Source: OECD (2019[4]), *OECD Employment Outlook 2019: The Future of Work*, https://dx.doi.org/10.1787/9ee00155-en.

Employer characteristics

This section identifies employer characteristics that are associated with the likelihood that workers will be either disengaged from available learning opportunities. Figure 4.6 summarises associations across OECD countries; the supplementary online tables for Chapter 4 illustrate country-specific results (see Annex Table 4.A.1).

Figure 4.6. Employer characteristics related to workers' likelihood of being disengaged from available adult learning

Logit regression odds ratios



Note: The results presented refer to odds ratios derived from a logit regression model pooled across OECD countries that includes 25-65 year-old workers. The dependent variable "willingness to train" is constructed to take a value of 1 if the respondent reports being willing to participate in job-related training (irrespective of whether the respondent is currently participating in training and is satisfied with the amount of training currently being received), and 0 if the respondent reports not being interested in training. The regression includes additional controls for individual, job and employer characteristics. For categorical variables, odds ratios refer to a discrete change from the base level (respectively: very large firms (>1 000 employees), firms that do not apply HPWP, firms that do not apply performance-based pay, firms that have not grown in size over the 12 months preceding the survey and non-private-sector firms). The grey column indicates results that are not statistically significant at the 95% confidence level. The supplementary online tables for Chapter 4 present country-specific results. See Annex Table 4.A.1.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

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Firm size

A wide catalogue of high-quality training courses can certainly spur workers' interest in adult learning. However, not all firms are able to offer a large range of relevant learning options. For instance, small firms generally have fewer resources and fewer employers who need similar training opportunities, so that achieving economies of scale in training opportunities is inherently more difficult. They may also struggle to find temporary replacements for workers engaged in training and have less experience in identifying skill needs. Moreover, because they have smaller (or non-existent) human resources teams, they are generally less capable of producing effective skill development plans (Green and Martinez-Solano, 2011[46]).

Data from the European Continuing Vocational Training Survey indicate that the share of firms that provide continuing vocational training increases with firm size, suggesting a direct relationship between a firm's resources and its ability to provide training. The data show that over 90% of large firms (with over 250 employees) provide training opportunities to their employees, compared to 76% of medium-size firms (with between 51 and 250 employees) and only 57% of small firms (with 11 to 50 employees).[6]

If resources in smaller firms are scarce and their skill development is poorly planned, workers may perceive the training offer as inadequate and unappealing, eventually losing interest in adult learning. Figure 4.6 indicates that, other things being equal, workers employed in small and medium-sized enterprises (SMEs) are generally more likely to report being disengaged from adult learning than similar individuals who work in larger firms. On average across OECD countries participating in the Survey of Adult Skills (PIAAC),

workers employed in micro firms had twice the odds of being disengaged from available adult learning compared to workers in very large companies (defined as enterprises employing over 1 000 workers). Among OECD countries, workers' motivation to engage in adult learning is more robustly associated with firm size in Turkey and the Slovak Republic (see the supplementary online tables for Chapter 4 in Annex Table 4.A.1).

Growing firm

Results from the Survey of Adult Skills (PIAAC) also indicate that fast-growing firms, i.e. firms that are highly productive and active, are more often able to boost their workers' interest and participation in training. On average across OECD countries, workers employed in firms that are growing in size are less likely to report being disengaged from available adult learning than their counterparts in stable or shrinking companies. This is particularly true of workers in Spain and the Slovak Republic.

Different factors could explain the association between firm growth and workers' willingness to participate in adult learning. On the one hand, growing firms may put more effort into conceiving effective skill development plans, identifying skills gaps in their workforce and providing suitable incentives for their workers to fill those gaps. On the other hand, workers may feel that pursuing skills training in a growing firm may increase their career prospects, as well as help them compete effectively with new hires in a highly dynamic work environment.

Since participation in adult learning does not benefit solely workers and their employers, but also contributes to aggregate productivity, all stakeholders (including the government) should support the effective delivery of training – especially in firms that struggle to provide learning opportunities owing to institutional or contextual constraints. Box 4.9 illustrates a good-practice example of a programme that supports training provision among SMEs, ensuring the inclusion of disadvantaged groups.

Box 4.9. Strengthening on-the-job training in SMEs

France: *Formation en Situation de Travail* (FEST) is an on-the-job training programme targeted to SMEs and promoted by the French Ministry of Labour and social partners since 2014. In order to formalise FEST, the French Ministry of Labour launched a call for training funds (*opérateurs de Compétences*) to develop FEST experiments. In total, 24 projects from 13 organisations were selected to pilot different experiments. These experiments had a few common characteristics: they were only applied in firms with fewer than 300 employees; they prioritised low-skilled individuals and diverse participant profiles, including new hires, experienced workers and unemployed persons. Training included normal work activities and "learning elements" (e.g. moments of reflection). One characteristic of the programme was that small firms with fewer than 50 employees were reimbursed by their training fund for implementing FEST. A recent evaluation of the programme showed that the project was successful in helping participants develop relevant skills, with both learners and managers indicating that the skills acquired were useful for the employee's current professional activity. The project also had positive indirect effects on participants' confidence and autonomy in completing tasks, and helped consolidate their working relations with managers (Case and Freundlieb, 2018[47]).

Source: OECD (2020[48]), *Enhancing Training Opportunities in SMEs in Korea*, https://dx.doi.org/10.1787/7aa1c1db-en; OECD (2017[49]), *Getting Skills Right: France*, https://dx.doi.org/10.1787/9789264284456-en.; Case, F. and I. Freundlieb (2018[47]), *Expérimentation AFEST. Action de Formation En Situation de Travail*, https://www.anact.fr/experimentation-afest-action-de-formation-en-situation-de-travail.

High-performance work practices

HPWP cover a wide range of workplace practices, including work flexibility and autonomy; teamwork and information sharing; training and development; and benefits, career progression and performance management (Fialho, Quintini and Vandeweyer, 2019[23]). OECD research indicates that workers who are frequently exposed to HPWP receive more formal, non-formal and informal training than their counterparts who work in more traditional contexts. Moreover, when workplaces implement HPWP, the wage returns to non-formal and informal training are higher. For example, individuals who work in establishments that use HPWP can expect a 12% higher wage premium from engaging in non-formal training and a 9% higher wage premium from engaging in informal training than their counterparts who work in establishments where such practices are not widespread (Fialho, Quintini and Vandeweyer, 2019[23]).

The positive and significant wage returns accruing to individuals participating in adult learning in workplaces characterised by strong adoption of HPWP suggest that good work practices enable workers to put their learning to effective use. Such employees have more flexibility and autonomy in their daily tasks, leading to more effective use of their skills and higher individual (wage) returns. Several countries have recently supported innovation at work and the adoption of HPWP to boost growth and productivity (Box 4.10).

Box 4.10. Initiatives supporting HPWP

- **High-Performance Working Initiative, New Zealand.** In its pursuit of workplace innovation, New Zealand has focused on improving productivity performance and has singled out the poor use of skills in workplaces as a key policy issue. The High-Performance Working Initiative helps SMEs streamline work practices and improve performance, while also increasing employee engagement and satisfaction. Business improvement consultants work with the firms to improve their productivity. The programme is funded in equal parts by the government agency Callaghan Innovation and the firm.
- **Australian examples of increasing innovation and productivity in firms.** In Australia, policy engagement with HPWP has been driven by a perceived need to increase innovation and productivity. Several Australian initiatives have sought to promote best practice in this area. Among the precursors was the Best Practice Demonstration Programme in the early 1990s. More recently, the Partners at Work Grants Programme in Victoria offers competitive grants to support workplace changes benefitting all stakeholders, including the development of co-operative workplace practices. The programme provides funding to support the hiring of consultants to work with organisations and relevant training investments.

Source: OECD/ILO (2017[50]), *Better Use of Skills in the Workplace: Why It Matters for Productivity and Local Jobs*, https://dx.doi.org/10.1787/9789264281394-en; OECD (2019[51]), *OECD Skills Strategy Poland: Assessment and Recommendations*, https://dx.doi.org/10.1787/b377fbcc-en.

Not only do HPWP produce immediate benefits for both firms and workers, they also offer potentially long-term benefits: when individuals work in firms that rely strongly on HPWP, they are generally more willing to invest/participate in further adult learning and skill development. The results presented in Figure 4.6 illustrate that on average across OECD countries, individuals working in firms characterised by widespread use of HPWP had lower odds of being disengaged from available adult learning opportunities than their counterparts employed in firms that did not rely on such practices.

Performance-based pay

Among the different options employers can use to stimulate engagement in adult learning is performance-based pay (i.e. bonuses). Such measures tie workers' productivity to their career progression and remuneration, by providing positive incentives for them to develop relevant skills that will increase their individual productivity and performance. The results in Figure 4.6 show that workers whose pay is linked to their performance are less likely to be disengaged from adult learning than workers whose pay is not linked to their performance. However, results from the Survey of Adult Skills (PIAAC) reveal widespread heterogeneity across countries in the relationship between performance-based pay increases and workers' motivation to participate in adult learning; the relationship is strongest in Poland and Slovenia, and weakest in Austria and the Czech Republic (see the supplementary online tables for Chapter 4 in Annex Table 4.A.1).

What are the challenges for motivated learners who are unable to meet their training goals?

Addressing the lack of willingness to participate in available learning opportunities is a key policy challenge for many countries. It requires policy interventions focusing on a diverse set of factors, including age, educational attainment, and the different characteristics of firms with different practices and incentive systems. More generally, it requires influencing the culture of learning among all adults. However, countries face two additional challenges to promoting adult learning:

- They must provide sufficient training opportunities to those who would like to receive more training.
- They must remove the barriers preventing those who are willing to participate in existing training, but have failed to do so.

On the one hand, data from the Survey of Adult Skills (PIAAC) indicate that across OECD countries, a significant share of individuals report they had participated in training, but would have engaged in more training given the choice. These individuals are *active learners seeking more training* and represent a considerable portion of the workforce (15% of workers on average across the OECD, and up to 24% of workers in New Zealand). Finding suitable ways to meet their learning goals and provide them with further training opportunities is a major challenge for countries, because it implies understanding and overcoming a range of barriers to participation specific to this group.

On the other hand, the Survey of Adult Skills (PIAAC) also shows that approximately 11% of workers in OECD countries reported they wanted to participate in training, but have not been able to do so. The *inactive but motivated* are a group of individuals whose challenge is not a lack of willingness to train, but rather a lack of access to training options. Many countries struggle to provide sufficient support to these individuals.

The prevalence of each one of these groups varies across countries. As shown in Figure 4.3, the share of active learners seeking more training is above the OECD average in New Zealand, the United States, Denmark and Singapore, where over 20% of those who have been able to access training reported wishing to participate in more learning to fulfil their goals. In Turkey, Greece and the Slovak Republic, on the other hand, only around 5% of individuals interviewed in the Survey of Adult Skills (PIAAC) reported a desire to receive more training.

Korea (18%) and Spain (16%) report the largest shares of *inactive but motivated* individuals (compared to 11% on average in OECD countries) who were unable to access learning opportunities despite their willingness to train, suggesting the existence of substantial barriers to accessing training for motivated individuals.

What are the individual characteristics defining those who are inactive but motivated, and active learners seeking more training?

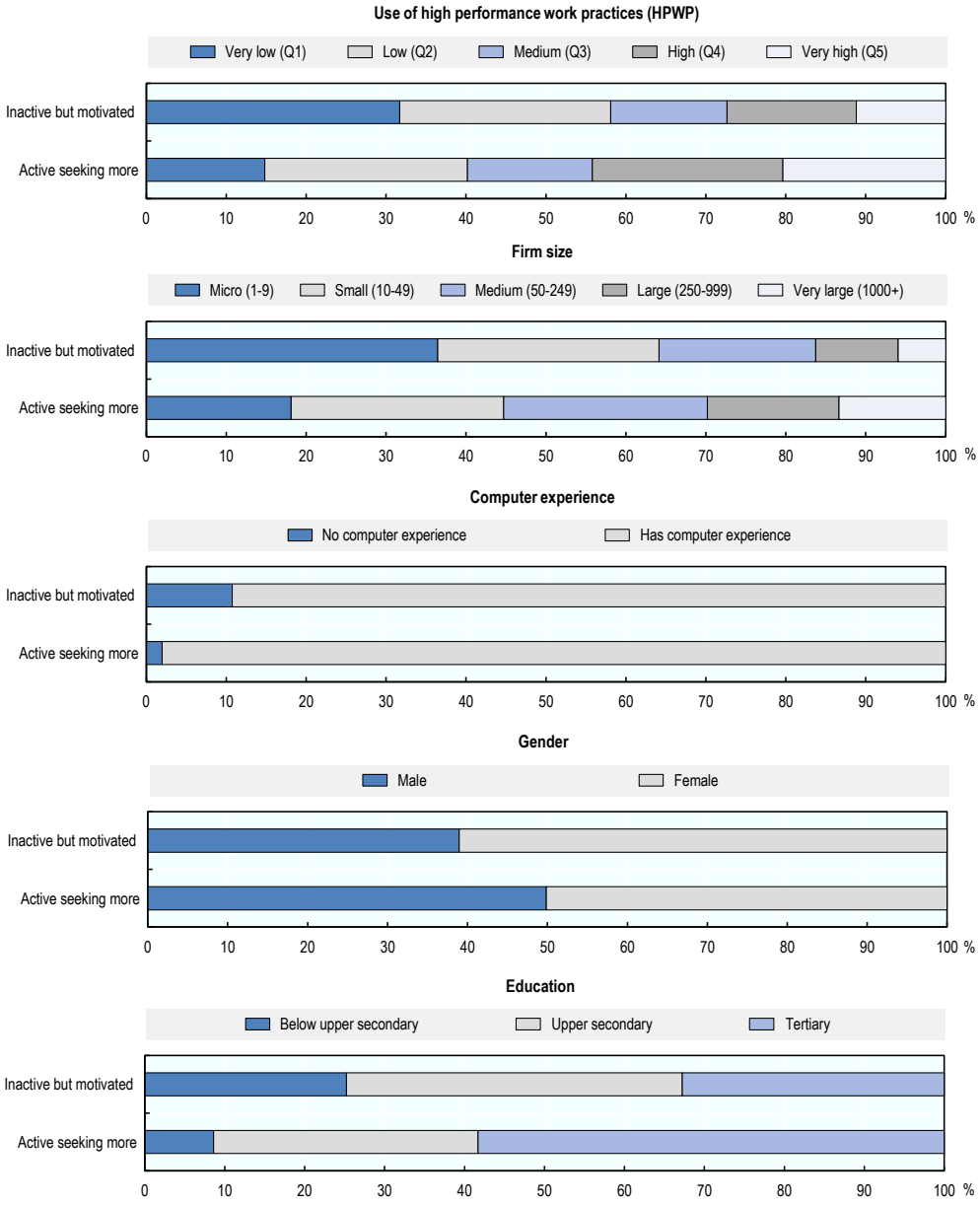
Both the *active seeking more* and the *inactive but motivated* learners share a common dissatisfaction concerning the ability of their country's training systems to fulfil their personal learning goals. However, the reasons for such dissatisfaction, and the type of policy intervention required to address those challenges; are radically different.

The results in Figure 4.7 indicate, for instance, that inactive but motivated individuals are more likely to be women, low-skilled workers or individuals lacking basic computer experience. These characteristics explain, at least in part, why these individuals were not able to access learning, despite their willingness to participate. As an example, while technological change is reshaping the way people live and work, the lack of basic digital skills is likely to hinder an individual's possibility of exploring the many new digital learning tools that are gaining popularity across countries. In fact, the results in Figure 4.7 show that on average across the OECD region, 11% of the inactive but motivated lack any computer experience or are low-skilled (25% attained at most a lower-secondary qualification). On average across the OECD, many also work in poor-quality jobs, and approximately 32% are employed in firms with very low HPWP. Expanding the provision of training opportunities to low-skilled individuals while helping to develop their basic digital skills are among the strategies countries could implement to engage them in adult learning.

By contrast, results in Figure 4.7 show that *active seeking more* individuals (i.e. those who have been to access some training, but reported a desire to engage in further training), are usually highly educated (comprising 58% of tertiary-educated individuals), equipped with basic digital skills (98% of them had previous computer experience) and employed in relatively larger companies relying on relatively higher use of HPWP.

Figure 4.7. The "inactive but motivated" often belong to the groups at risk of exclusion, while the "active seeking more" are more likely to be high-skilled individuals striving for additional training opportunities

Composition of the *inactive but motivated* and *active seeking more* groups, by individual, job and employer characteristics



Note: The x-axes indicate the shares of the *inactive but motivated* and *active seeking more* groups featuring specific characteristics. The use of HPWP is classified into quintiles by intensity use, where "very low" use relates to Q1, and "very high" to Q5.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

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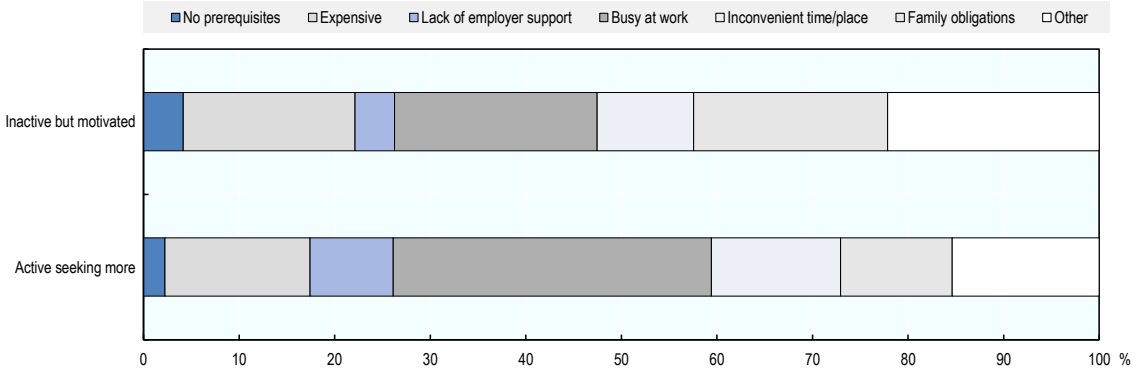
Contextual barriers hinder otherwise motivated learners from achieving their learning goals

As detailed in the previous section, individual characteristics (such as age, skill level and digital competencies) can partly explain why motivated learners are not able to meet their learning goals. Contextual barriers (such as financial constraints, time and family obligations, or even lack of employer support) are also likely to affect individuals' ability to meet their learning goals. The importance and prevalence of these barriers, however, can differ vastly depending on whether individuals aspire to receive more learning (*active seeking more*) or would simply like to access training (*inactive but motivated*). Information contained in the Survey of Adults Skills (PIAAC) provides insights into the heterogeneous association between these barriers across individuals with different learning goals.

Data from the Survey of Adult Skills (PIAAC) allow classifying barriers to participation into seven main categories: lack of prerequisites, price-related constraints, lack of employer support, lack of time related to work, family obligations, inconvenient time or place, and barriers classified as "others". The results in Figure 4.8 indicate that inactive but motivated individuals report family obligations and the cost of training as the most pressing barriers impeding their access to learning opportunities. The active seeking more group, on the other hand, often mention work-related time constraints, inconvenient time and place of the training, and the lack of employer support as barriers to participation in sufficient (further) training.

Figure 4.8. The "inactive but motivated" and "active learners seeking more training" report different contextual barriers to participation in adult learning

Percentage of the reported barriers to participation, by learner's profile, OECD countries



Note: The x-axes indicate the shares of the *inactive but motivated* and *active seeking more* group, reporting the given obstacle as the main barrier to participation.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

StatLink https://stat.link/mrk0ib

Do family obligations hinder the access to training of otherwise motivated individuals?

Figure 4.8 indicates that 20% of *inactive but motivated* adults report family obligations as an obstacle to accessing adult learning, compared to only 12% of the active seeking more. Women, young adults (25-34 years old) and parents of dependent children are particularly likely to give up on participating in training for family reasons, and to end up being *inactive but motivated*. Family obligations disproportionately affect inactive but motivated women compared to men. Up to 28% of *inactive but motivated* women mention family obligations as a barrier to participating in training, compared to only 8% of men. In the case of parents with dependent children, the gender gap reaches 23% (27% for women vs. 4% for men). The results also show that family obligations are particularly important barriers for younger cohorts aged 25-34 years old. Policies aiming to boost (young) women's participation in training should lessen such constraints by providing support to individuals caring for elderly parents or dependent children (OECD, 2019[8]).

The results in Table 4.1 suggest that a large share of motivated adult learners establish priorities between their family, work responsibilities and investments in further learning. Taking care of a family may raise distinct barriers to accessing learning, including limited flexibility (situational barrier) and the need for childcare (institutional barrier). As family obligations and task-switching interfere with the time available for independent study, they may prevent learners from developing adequate learning habits, diverting their attention from studying and decreasing the productivity of learning processes.

Table 4.1. Potential barriers to participation in adult learning

Barrier type	Definition
Situational	Result from the student's personal circumstances (e.g. employment or family responsibilities)
Dispositional	Founded on the student's beliefs, attitudes or values
Institutional	Dependent on the institutional setting

Source: Cross, K. (1981[52]), *Adults as Learners. Increasing Participation and Facilitating Learning.*

Survey data for Ireland (Mooney and O'Rourke, 2017[20]) find that regardless of whether female respondents were highly motivated to participate in training, childcare represented an overwhelming barrier to accessing learning opportunities. The study showed that the birth of a child reduced women's capacity to engage in full-time formal education. Access to cheap or free childcare is therefore key to enabling parents' participation in adult learning, and the lack of it seems to impact disproportionately young and motivated women's access to learning opportunities (see the supplementary online tables for Chapter 4 in Annex Table 4.A.1).

Relieving mothers of childcare obligations during training or independent study hours can help ensure the necessary mental space and energy to fully engage in learning. As such, providing good-quality and flexible childcare is essential, especially when adult training activities run outside of school hours and children are at home or with their parents. Childcare policies must be carefully designed so that both children and busy parents can meet their educational objectives. For instance, the loss of a free childcare subsidy when transitioning from full-time work to training inevitably discourages participation in adult learning (Pennacchia, Jones and Aldridge, 2018[22]).

When parents do not work but are still constrained by family obligations, flexible training schedules, including part-time morning courses, can encourage them to participate on an "in-demand basis", rather than sticking to predefined and overly strict training schedules. Moreover, supporting learning environments that allow parents to bring their children along can help overcome challenges related to

family obligations, while enhancing the social and relational benefits of simultaneous participation by parents and children (Pennacchia, Jones and Aldridge, 2018[22]).

Cost of training

The cost of training is reportedly one of the main barriers to participation in learning activities. Figure 4.8 shows that training costs are an especially important barrier not only for *inactive but motivated* learners, but also, to a lesser extent, for the active seeking more. The difference in the relevance of cost for the two groups is likely linked to the characteristics and employment status of those falling in the different categories: while *inactive but motivated* learners are predominantly low-skilled individuals with weak digital skills, the active seeking more are high-skilled, with a good command of digital competencies. This influences their relative employment status, as well as the available financial resources they can devote to training, with important effects on the methods policy makers may choose to target these individuals and support training supply. In fact, the results suggest that governments that put in place financial incentives to reduce the price of training should target them to training courses that reach *inactive but motivated* workers, who are mostly low-skilled and digitally illiterate.

Additional analyses based on data from the Survey of Adult Skills (PIAAC) confirm that unemployed workers' participation in adult learning is particularly affected by financial constraints, which generally impede access to training altogether, even for individuals who might be motivated to learn. Nearly one-third (31%) of the unemployed mention the cost of training as an obstacle to adult learning, compared to 18% of employed individuals belonging to the category of *inactive but motivated* learners.[7]

Being low-skilled, unemployed or in a low-quality job can create a vicious circle where workers find themselves trapped with an insufficient skill set to improve their labour-market prospects, while also being unable to fund the additional adult learning needed to move forward. Different countries have put in place several initiatives to help individuals participate in learning and improve their labour-market outcomes (Box 4.11).

As the COVID-19 health and economic crisis continues to put pressure on government budgets, finding the right way to support learning programmes and fund training activities remains a challenge. Adult learning should be financed equitably by the stakeholders expected to benefit from it, including through skill-funding pacts between governments, employers and individuals. Different support mechanisms, targeting both companies and individual citizens, are already in place in OECD countries (see also Box 4.11). These include targeted financial support, through grants, loans, subsidies or employer support to partially relieve the financial burden of training provision. Social partners can also get involved, further sharing the burden of spending among firms and workers (OECD, 2019[4]).

Education and labour-market policies should also work together to propose solutions supporting learners. In addition to providing grants or subsidies that reduce training fees, labour-market policy should ensure that prospective learners who receive allowances or benefits (e.g. a jobseeker's allowance) can retain them as they pursue training. A lack of clear guidance, or inconsistent social welfare benefits, may place participants in a precarious position, completely precluding enrolment in training (Mooney and O'Rourke, 2017[20]).

Box 4.11. Initiative for Adult Education (*Initiative Erwachsenenbildung*)

In 2012, Austria introduced a co-ordinated programme to help adults obtain basic competencies and basic educational qualifications free of charge.

The initiative aims to enable as many people as possible to gain basic skills and/or obtain a lower-secondary degree (*Pflichtschule*), to empower them to participate in social, cultural, technological and economic development. The programme has two strands: i) basic skill courses (conveying at least three competencies, among German, mathematics, digital skills, language/English and learning skills) and covering 100 to 400 teaching hours; and ii) second-chance education courses, leading to the lower-secondary certificate (*Hauptschulabschluss*) and covering 1 160 teaching hours.

Reception

According to the evaluation of the first programming period, 83% of participants were satisfied with the training offer; 93% stated they had reached their goals and their expectations had been fulfilled (Stoppacher and Edler, 2014[53]). The interviewed stakeholders consider the programme as a "leap forward" and an improvement on the existing offer, although many criticise the programme's low coverage compared to the actual need of the population.

Effectiveness

Evaluations of the two first programming periods show that the measure has exceeded its quantitative targets (Stoppacher and Edler, 2014[53]); (Steiner, 2017[54]). The 2017 evaluation found that: i) dropout rates were around 22% for both programme strands; and ii) transitions to further education or employment were difficult for older individuals and asylum seekers, and easier for employed people (based on qualitative evidence) (Steiner, 2017[54]).

Success factors

- co-operation between the federation and federal states in development and implementation
- early involvement of all stakeholders in the design of measure
- use of thorough needs assessment before designing the measure.

Source: OECD (2020[17]), *Increasing adult learning Participation: Learning from Successful Reforms*, https://dx.doi.org/10.1787/cf5d9c21-en; Steiner, M (2017[54]), *Evaluation der Initiative Erwachsenenbildung*; Stoppacher, P. and M. Edler (2014[53]), *Evaluation der ersten Periode der Initiative Erwachsenenbildung*.

Lack of prerequisites can limit access to training of otherwise motivated individuals

Regulatory barriers may discourage or impede learners who would like to participate in adult learning. "Lack of prerequisites" is reported as an important barrier preventing twice as many *inactive but motivated learners* from participating than *active seeking more* individuals (Figure 4.9).

In many cases, the lack of prerequisites is more of a "formal" barrier than a real one, as it relates more to the absence of recognition of prior learning (or informal learning) than to the actual absence of minimum prerequisites for learners who would like to participate in training. Many countries across the OECD region have developed recognition of prior learning (RPL) systems, which are essential to ensure that low-qualified but motivated adults can be engaged in training. Nevertheless, the quality and effectiveness of

RPL varies considerably across and within countries, creating additional barriers to participation in training of many motivated individuals, especially the low-skilled.

Some countries have already taken measures to address this issue by improving existing validation of prior learning. France, for instance, has made the system for the recognition and certification of skills (*validation des acquis de l'expérience*) more accessible to low-qualified individuals. Firms are obligated to inform their workers about the certification system every other year as part their mandated professional development assessment (Mathou, 2016[55]).

In Portugal, Qualifica Centres target low-qualified adults (among other groups) and have embedded RPL in their overall guidance offer. A key characteristic of the programme is that low-qualified individuals receive assistance throughout the skill-recognition procedures. In 2017, 28 804 adults enrolled in recognition procedures, and 10 157 received a certificate (OECD, 2019[12]).

All in all, prior analysis shows that policy makers should aim to make RPL easy to navigate for the low-qualified and avoid complex procedures to facilitate take-up. In parallel, and to the extent possible, training providers should avoid setting excessively high eligibility requirements and create homogeneous classrooms where individuals with basic skills can feel comfortable with expressing their learning needs. Placing participants with low literacy, numeracy and computer skills in an excessively complex learning environment may result in dropout or non-achievement, especially when they feel inadequate relative to the level of the classroom (Mooney and O'Rourke, 2017[20]). A study in the United Kingdom found that widely embedding literacy and numeracy skills in the training curriculum increased retention and success rates, with many learners acquiring such foundation-level skills in addition to the vocational skills taught by the course (Casey et al., 2007[56]).

Work-related and time constraints affect motivated individuals' ability to fully reach learning goals

A busy work schedule is the most important barrier to participation for both the *active seeking more* group (38%) and the *inactive but motivated* (21%). Full-time employment, especially for ambitious individuals who often work overtime and in competitive professional environments, does not always leave enough space for other commitments, including education.

New and more flexible approaches to learning, such as modular or online training, can alleviate work pressures in situations where adults are unable to combine stressful work schedules with their desire to participate in training. Modular training, which divides a learning programme into self-contained and certified modules, allows learners to learn on their own schedule (Box 4.12).

Box 4.12. Modular training to accommodate time constraints

- In Denmark, learners can combine modules from different types of adult learning programmes (e.g. advanced management and leadership programmes; basic skills courses; higher education, vocational education and training; and non-formal liberal education programmes) to obtain a formal qualification (OECD, 2019[2]).
- In Flanders (Belgium), Centres for Adult Education (*Centra voor Volwassenonderwijs*) provide education in a wide range of skills, including technical skills and languages. The courses are fully modular: the learner receives a partial certificate after completing a module and a formal certificate recognised by the Flemish Government after completing an entire programme (OECD, 2019[57]).
- In Mexico, the Education Model for Life and Work allows low-skilled adults to gain qualifications through different modules at the initial, intermediate (primary education) and advanced (lower-secondary education) levels (OECD, 2019[12]).

Source: OECD (2019[4]), *OECD Employment Outlook 2019: The Future of Work*, https://dx.doi.org/10.1787/9ee00155-en.

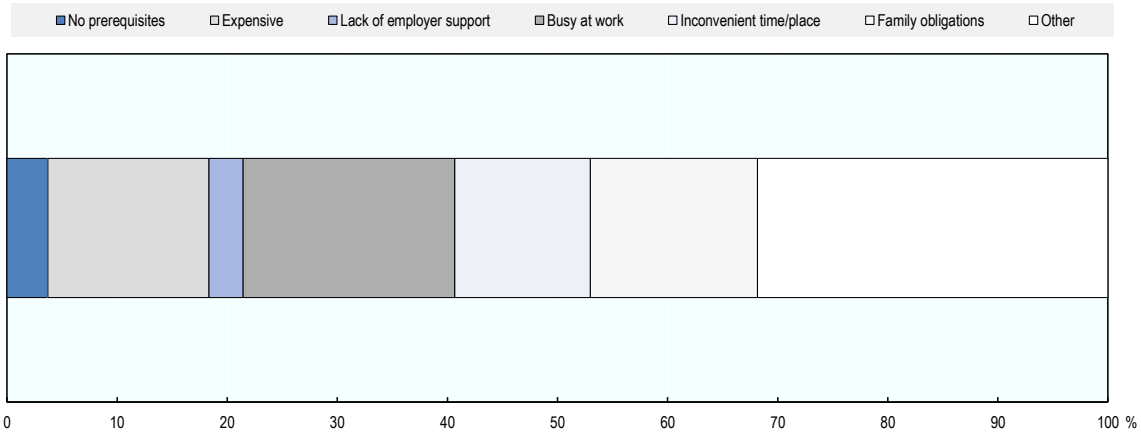
Innovation and digitalisation have allowed diversifying the training offer, expanding access channels and reaching new learners across the world. However, digital learning poses several challenges. A key concern is the need to validate virtual, remote or digital training, clearly signalling to potential employers the nature of the skills acquired by means of a certificate or credential. So-called "alternative credentials", such as digital badges, micro-credentials and professional or industrial certificates, are an increasingly important part of the adult learning landscape, but are not sufficiently widespread or widely recognised by employers. Governments, in collaboration with public and private training providers, need to strengthen the take-up and quality of digital qualifications through appropriate certification, quality assurance, and monitoring and evaluation of training outcomes.

Other barriers to participation in adult learning and ways to support older individuals engage in learning

Earlier OECD research (e.g. (OECD, 2019[2])) based on data from the Survey of Adult Skills (PIAAC) has focused on the role played by explicit barriers such as financial and time constraints or family obligations, placing far less emphasis on analysing "other" barriers hindering participation in training. Yet learners often cite "other" barriers as important obstacles to training.

Results from the Survey of Adult Skills (PIAAC) show that older workers (55-65 years old) in particular are significantly constrained by barriers "other" than those mentioned in the six main categories analysed so far. For instance, 32% of *inactive but motivated* individuals in that age range cite "others" as the main barrier to participation, comprising the highest share of responses across the different options given to respondents (Figure 4.9).[8]

Figure 4.9. Percentage of the reported barriers to participation among *inactive but motivated* adults aged 55-65, OECD countries



Note: The figure indicates the share of inactive but motivated adults aged 55-65 reporting a given obstacle as the main barrier to participation.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

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While it is difficult to pinpoint the exact aspects falling under the "other barriers" category, lack of guidance and advice, a poor training offer, motivational barriers and social norms are among factors previous literature has highlighted as inhibiting participation in training.

First, while individuals may in principle be willing to participate in training, some may lack information on ways to get involved, the most relevant opportunities and the potential outcomes in terms of career development. Well-designed information, advice and guidance services can provide prospective students with information that is easy to navigate, timely and relevant to their needs, including financial advice. Help in identifying skills gaps, and directing learners towards the most suitable training opportunities, can make training more accessible and boost take-up (OECD, 2019[4]; Pennacchia, Jones and Aldridge, 2018[22]).

Second, the lack of an adequate and tailored learning offer can represent a significant barrier, especially for older workers who may have low basic skills or struggle to adopt new digital technologies. Previous literature has stressed the importance of delivering training aligned with participants' personal dispositions. In some cases, the lack of a well-defined course structure, such as imposed deadlines, may demotivate learners from following and completing the training. Similarly, incorrectly matching learners to overly challenging courses may undermine their self-confidence and interest in further training.

Third, previous results presented in this chapter highlighted how motivation to learn is one of the strongest predictors of willingness to train. Individuals build such motivation early in life and school by developing positive attitudes towards learning: notably, it has been shown that prior schooling records do shape learners' self-esteem and confidence in their learning abilities. Thus, adults who struggled at earlier stages of their education may lack self-confidence or associate learning with negative experiences they do not want to replicate in adulthood. Similarly, a return to training may seem daunting after a long break from learning (e.g. in the case of older workers) or detachment from the labour market (e.g. among the long-term unemployed or women returning to work after an extended maternity leave). Ireland's national adult learning organisation, AONTAS, has found that many of these learners will succeed in adult education provided they have positive initial experiences, often derived from low-pressure, non-accredited courses that help them acquire soft skills and build confidence (AONTAS, 2013[19]).

Fourth, peers or family may create negative expectations about learning that may discourage the drive to learn later in life. Social norms – and the manner in which people who "go back to school" are perceived – can also discourage older workers from engaging in further training: a study conducted in Korea showed that although 75% of senior citizens did not receive the level of education they desired, it became more difficult for them to receive further education later in life because of socially conservative cultures, family dissuasion from their children or other family members and social attitudes.

In parallel, older adults may lose interest in training if it does not lead to significant gains in the labour market – which is unfortunately often the case, as employers offer little support to older workers seeking training. However, several countries are putting considerable resources into supporting firms that supply training programmes for older workers (Box 4.13).

Box 4.13. Encouraging employers to train older workers

- In Germany, the public employment agency supports training of low-skilled and older workers in SMEs through the WeGebAU programme. SMEs receive a 75% subsidy to cover the training costs of workers aged 45 and older, while micro enterprises with fewer than 10 employees receive a 100% subsidy. Evaluations of the programme have found that it helps participants increase their time spent in employment, although it has no effect on wages and the probability of future financial benefits (Dauth, 2017[58]; OECD, 2019[2]).
- In Luxembourg, private-sector companies can receive training aid totalling up to 15% of the yearly amount invested in training; 35% of salaries of trained employees are paid by subsidies for certain workers, including those aged over 45 (Luxembourg Government, 2019[59]).
- In Slovenia, the Comprehensive Support for Companies for Active Ageing of Employees Programme provides financial incentives for employers to prepare action plans and strategies to ensure better management of older (over 45) workers, as well as financial incentives for upskilling of older (over 45) workers. Capacity-building workshops are organised to build the competencies of human resource managers and CEOs in managing an ageing workforce (OECD, 2017[60]).

Source: OECD (2019[4]), *OECD Employment Outlook 2019: The Future of Work*, https://dx.doi.org/10.1787/9ee00155-en.

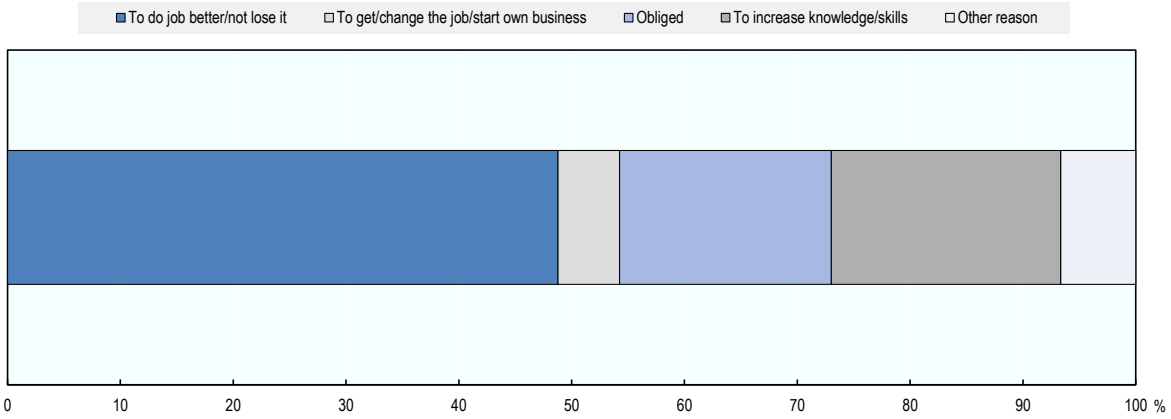
What are the drivers of participation in training for satisfied learners?

The results presented in previous sections have discussed the challenges related to the lack of motivation to train, as well as the barriers to participation of otherwise motivated learners who are not able to fulfil their learning goals. A significant share of individuals, however, does participate in training and reports being satisfied with the quantity of training received. Information contained in the Survey of Adult Skills (PIAAC) allows investigating these *satisfied learners'* motives for participating in training, shedding light on how firms can better align the training offer to recipients' desires.

Data from the Survey of Adult Skills (PIAAC) (Figure 4.10) show that almost 50% of the *satisfied learners* participate in training to excel in their job. The data also reveal that "doing one's job better" is particularly important for adults with higher educational attainment, as well as younger cohorts entering the labour market and those at the beginning of their career (25-34 year-olds); the importance of this reason seems to decrease with age. Creating a strong alignment between training content and the changing needs of the labour market is therefore key to engaging learners and fulfilling their learning goals, especially when they are at the beginning of their adult work life.

It is also notable that 20% of the *satisfied learners* interviewed reported having participated simply to increase their knowledge and skills. Thus, many individuals seek learning opportunities they can apply to a variety of activities other than their daily job tasks. This suggests that educated adults with good employment conditions are more prone to learn for self-improvement. Engaging individuals not only in technical and narrow training, but also in more horizontal and holistic learning activities, can therefore spur successful engagement in learning throughout their lives.

Figure 4.10. Half of satisfied learners participate in adult learning to excel in their jobs



Note: The figure indicates the shares of *active and satisfied* adults who indicated the respective motivations as the main reason for participating in adult learning. "To do job better/not lose it" captures respondents who indicated "to do my job better and/or improve career prospects" or "to be less likely to lose my job" as the main reason for participation. "To get/change the job/start own business" captures respondents who indicated "to increase my possibilities of getting a job, or changing jobs or profession" or "to start my own business" as the main reason for participation. "Obliged" refers to the respondents who answered: "I was obliged to participate". "To increase knowledge/skills" captures respondents who indicated "to increase my knowledge or skills on a subject that interests me" as the main reason for participation. "Other reason" captures respondents who indicated "to obtain a certificate" or "other reason" as the main reason for participation.
Source: OECD (2019[8]), Survey of Adult Skills (PIAAC) (database 2012, 2015, 2019), http://www.oecd.org/skills/piaac/publicdataandanalysis/.

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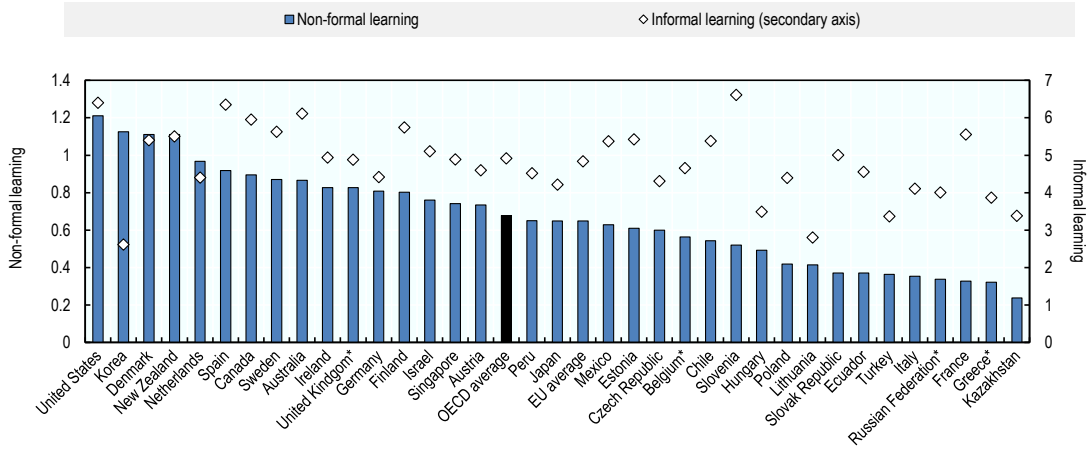
Learning losses and COVID-19: The effects of COVID-19-induced shutdowns on workers' participation in adult learning

Because of COVID-19, many employers have been unable to provide physical learning opportunities in the workplace, thus reducing participation in learning and potentially leading many workers to disengage from future learning. Although some workers have been able to exploit technology to pursue learning opportunities through digital platforms, many forms of learning (especially informal learning) have been lost owing to physical distancing and workplace closures.

As Figure 4.11 shows, informal learning was at least twice as common as non-formal learning before the pandemic, even under the most conservative assumptions. Differences in the number of hours spent in non-formal and informal learning were significant across countries.

Figure 4.11. Hours of non-formal and informal learning, by country

Average weekly hours of non-formal and informal learning, per worker



Note: The figure makes a cross-country comparison on the average weekly learning hours of non-formal and informal learning per worker.
*For Belgium, Greece, the Russian Federation and the United Kingdom, see notes under Figure 4.1.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.

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Impact of the pandemic on individual sectors

While the COVID-19 pandemic forced virtually all businesses to rethink their operations, some sectors have been more exposed than others to shutdowns of non-essential activities. Workers in the tourism and recreation sector, including those employed in civil aviation, have been particularly hard hit by economic shutdowns. Other workers, particularly in essential services such as health care, have been mobilised to assist citizens and businesses. For them, operations never ceased. The intensity of sectoral shutdowns, and the ability of firms to transfer operations on line, have been two key determinants of workers' ability to access learning provision.

Measuring precisely the intensity of sectoral shutdowns in each country, and the subsequent share of workers who have been forced to remain home, is difficult. The analyses that follow develop two distinct scenarios – a *widespread* and a *limited* sectoral shutdown – that could be used to assess the average lost hours of non-formal and informal learning workers in different sectors experienced during the pandemic. The two scenarios can be interpreted as "extremes" in terms of the pathways countries could find themselves in, depending on the restrictions in place. As the pandemic unfolded, countries have been moving across the scenarios, and may have found themselves at any point between the two scenarios.

The *widespread* scenario was developed using the assumptions developed for the OECD *Economic Outlook 2020* (OECD, 2020[61]) to assess the gross domestic product effects of sectoral shutdowns in seven heavily-hit sectors (Table 4.2). To improve sectoral coverage, the analysis added figures on three further sectors (MISE, 2020[62]). The *limited* scenario accounts for a partial easing of restrictions, assuming a progressive uptake in activity in countries where improvements in the pandemic conditions permit it. The shutdown rates were then recalculated using the index of "essentiality" of individual sectors (at the International Standard Industrial Classification of All Economic Activities [ISIC] 2-digit level [divisions], as estimated in Fana et al. (2020[63])), following the assumption that once countries can lift some of the restrictions, they begin with the most essential activities.[9] This implies that divisions classified as most

essential (index=1) move into a 0% shutdown, and the least essential divisions (index=0) remain at the level of shutdown previously estimated under the *widespread* scenario. Table 4.2 summarises the *limited* scenario shutdown rates, recalculated at the 1-digit sectoral level.

While these figures illustrate the decrease in economic activity across the OECD, they do not allow drawing up distinct scenarios for individual countries. This simplification is necessary to avoid the abundance of constantly evolving scenarios as the pandemic unfolds, but must be considered when analysing cross-country results. In the case of the sectoral estimates drawn from the MISE analysis, the extrapolation takes the opposite direction, from country-specific to generalised results; this must also be considered when interpreting the final results. Sectors that are not mentioned explicitly in Table 4.2 are assumed to be operational, although they may still be somewhat affected in many countries. As such, the aggregates of foregone learning hours should be interpreted as lower bound estimates.

Table 4.2. Sectoral shutdown (%)

Sector (ISIC, 1-digit)	Assumed percentage of the activity shutdown	
	***Widespread* scenario**	***Limited* scenario**
Mining and quarrying (VB)	100%	63%
Manufacturing (VC)	50%	35%
Construction (VF)	50%	47%
Wholesale and retail trade (VG)	75%	35%
Accommodation and food services (VI)	75%	75%
Real estate services (VL)	40%	40%
Professional service activities (VM)	50%	29%
Administrative and support service activities (VN)	100%	64%
Arts, entertainment and recreation (VR)	100%	100%
Other service activities (VS)	100%	86%

Note: The two scenarios can be interpreted as the "extremes" in terms of the pathways that countries can follow, depending on the current restrictions in place. As such, countries whose sanitary conditions allow for a progressive activity relief according to the sectors "essentiality" can assume to follow the *limited* scenario path, while a hard lockdown corresponds the *widespread* scenario path. Throughout the pandemic, countries can move across the scenarios, and find themselves at any point in-between the two scenario pathways. The sectoral data are on an ISIC rev. 4 basis in all countries. The calculations are based on an assumption of an economy-wide shutdown, rather than a shutdown confined to particular regions only.

1. The seven sectors covered by OECD (2020[61]) include: Construction (VF), Wholesale and retail trade (VG), Accommodation and food services (VI), Real estate services (VL), Professional service activities (VM), Arts, entertainment and recreation (VR), and Other service activities (VS).

2. Three additional sectors included basing on (MISE, 2020[62]) are: Mining and quarrying (VB), Manufacturing (VC), and Administrative and support service activities (VN).

3. Fana et al. (2020[63]) analyse the restrictions on activities imposed in Italy, Spain and Germany. Basing on the national confinement decrees, the authors classify all economic sectors in a scale of "essentiality". Across the countries, sectors classified as fully essential cover food and pharmaceutical production, utilities, transport and health (index=1). In the other extreme, the sectors considered non-essential (e.g. leisure, hotel and restaurant activities), are assigned the index of 0. Intermediate activities are assigned the index ranging from 0 to 1, basing on the degree to which they are required to satisfy the fundamental needs.

4. Sectors that are assumed to be operational include Agriculture, forestry and fishing (VA), Electricity, gas, steam and air conditioning supply (VD), Water supply; sewerage, waste management and remediation (VE), Transportation and storage (VH), Information and communication (VJ), Financial and insurance activities (VK), Public administration and defence; compulsory social security (VO), Education (VP), Human health and social work activities (VQ), Activities of households as employers; undifferentiated goods- and services- producing activities of households for own use (VT).

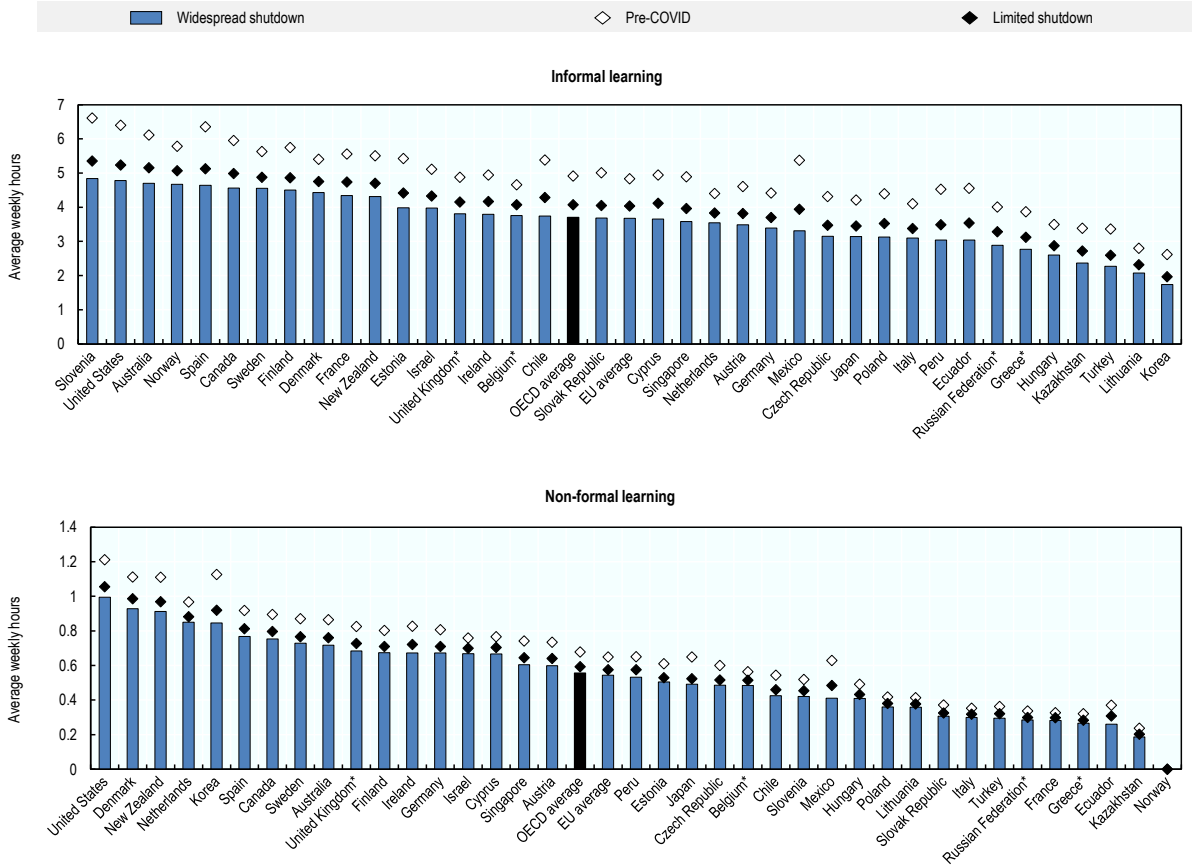
Source: OECD (2020[61]) *OECD Economic Outlook, Volume 2020 Issue 1*, https://doi.org/10.1787/0d1d1e2e-en; OECD calculations based on MISE (2020[62]), Ministero delle Infrastrutture e Sviluppo Economico, Decreto ministeriale 25 marzo 2020 – Nuovo Coronavirus. Modifiche al DPCM 22 marzo 2020, and on Fana, M. et al. (2020[63]), *The COVID confinement measures and EU labour markets COVID & Empl Working Group*, http://dx.doi.org/10.2760/079230.

The impact of COVID-19-induced shutdowns on workers' ability to train

The results illustrated in Figure 4.12 show that across OECD countries, workers' learning opportunities during widespread shutdowns could have decreased by an average of 18% in the case of non-formal learning and 25% in the case of the informal learning. These estimates take into account the partial transfer of learning activities on line, according to the country and sectoral feasibility of remote working discussed above.[10] Figure 4.12 provides a cross-country overview of the estimated impact of COVID-19-related reductions in economic activities on the number of informal and non-formal learning hours undertaken by an average worker, for each week of restrictions. The emerging cross-country differences reflect the differences in workers' average participation in learning activities in each country, as well as differences in each country's economic structure. For example, economies that are more dependent on sectors which rely on face-to-face physical presence are likely to experience greater losses in learning hours.

Figure 4.12. Estimated impact of COVID-19-related reductions in economic activity on workers' ability to learn, by country

Average weekly hours of learning per worker, pre-COVID and following the two shutdown scenarios



Note: Learning hours under the shutdown scenarios account for the feasibility of working remotely at the country level. Countries are sorted in descending order of learning hours under the widespread shutdown scenario.
*For Belgium, Greece, the Russian Federation and the United Kingdom, see notes under Figure 4.1.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.; OECD (2020[61]) *OECD Economic Outlook, Volume 2020 Issue 1*, https://doi.org/10.1787/0d1d1e2e-en; Fana, M. et al. (2020[63]), *The COVID confinement measures and EU labour markets*, http://dx.doi.org/10.2760/079230; and Espinoza, R. and L. Reznikova (2020[64]), "Who can log in? The importance of skills for the feasibility of teleworking arrangements across OECD countries", https://dx.doi.org/10.1787/3f115a10-en.

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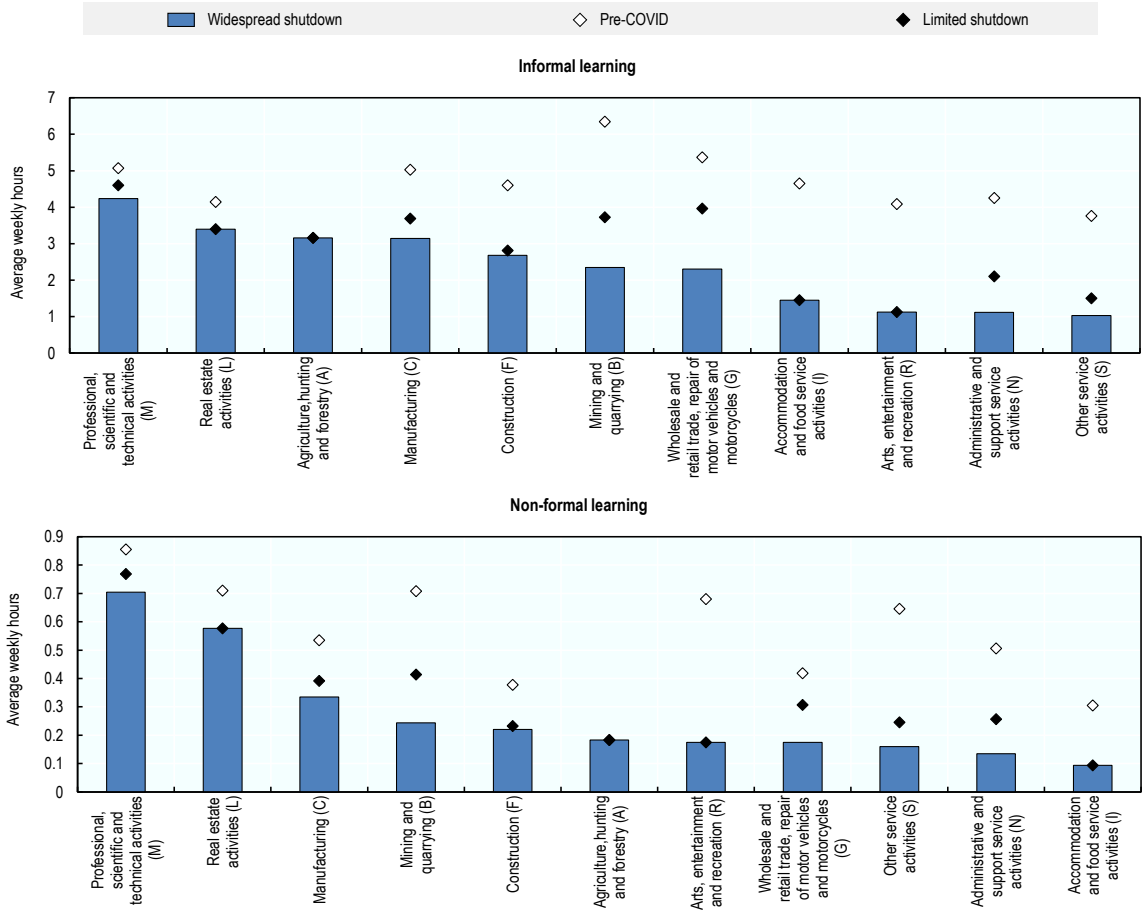
The sectoral analyses presented in Figure 4.13 indicate that under the widespread shutdown scenario, reductions in economic activities have had the strongest negative impact on informal and non-formal learning opportunities for workers employed in administrative and support service activities (N); arts, entertainment and recreation (R); and other service activities (S). On average, workers employed in these sectors lose nearly three-quarters of informal and non-formal learning opportunities compared to the pre-pandemic scenario. When the epidemiological situation improves and more economic activities begin to operate at higher levels in the limited shutdown scenario, the arts, entertainment and recreation (R) sector remains the most affected (since these activities are classified as strictly non-essential). As with the cross-country results, sectoral differences reflect variations in learning hours under a "business-as-usual" scenario, combined with the extent to which each given sector has been forced to suspend its operations (under the widespread shutdown scenario) and the sectoral "essentiality" index determining the limited shutdown scenario.

Figure 4.13. Impact of COVID-19-related reductions in economic activities on the number of learning hours, by sector

Average weekly hours of learning per worker, pre-COVID and following the two shutdown scenarios



Note: Learning hours under the shutdown scenarios take into account the feasibility of working remotely at the sectoral level. Sectors are sorted in descending order of learning hours under the widespread shutdown scenario.

Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/. OECD (2020[61]) *OECD Economic Outlook, Volume 2020 Issue 1*, https://doi.org/10.1787/0d1d1e2e-en.

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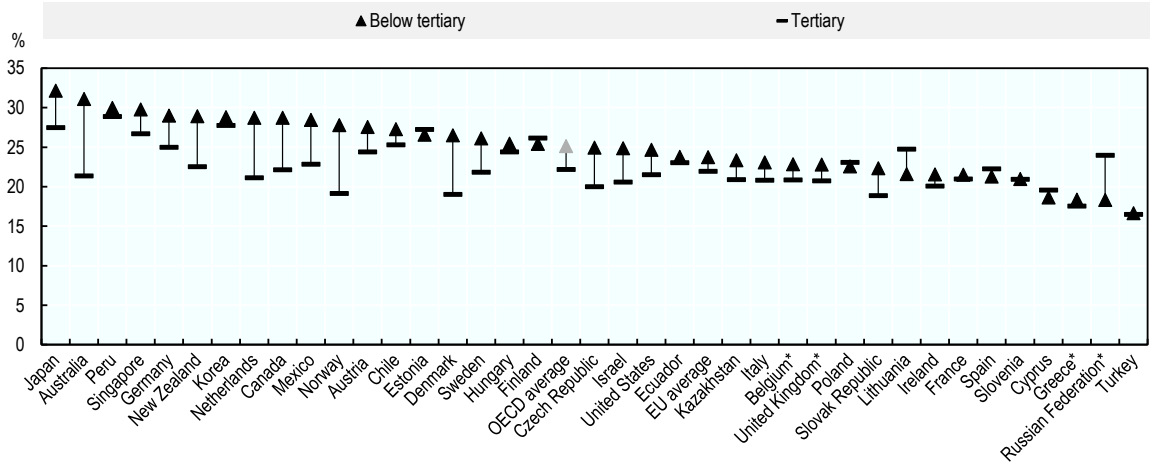
Low-skilled workers suffer the most when learning opportunities are reduced owing to economic shutdowns

Low-skilled workers tend to be overrepresented in sectors that have been hardest hit by pandemic-induced closures and had fewer opportunities to transition to digital work and remote delivery. On average across the OECD, 25% of workers without tertiary education would be affected under a widespread shutdown scenario (Figure 4.14) compared to around 22% of tertiary-educated workers, a difference of 3 percentage points. In Australia and Norway, however, the differences between tertiary-educated and non-tertiary-educated workers affected under such a scenario amount to at least 10 percentage points.

Figure 4.14. Probability of being affected by the sectoral shutdown during widespread lockdowns, by country and educational attainment

Share of workers whose economic activity has been shut down owing to COVID-19-related measures



Note: Workers affected by the shutdown are employed in sectors assumed to be partly or fully subject to the shutdown under the widespread shutdown scenario. In a sector whose activity has been cut by half, 50% of workers are affected by the shutdown. These calculations do not take into account the possibility of working remotely. Countries are sorted in descending order of the share of below-tertiary-educated workers whose economic activity has been shut down owing to COVID-19-related measures.
*For Belgium, Greece, the Russian Federation and the United Kingdom, see notes under Figure 4.1.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.; OECD (2020[61]) *OECD Economic Outlook, Volume 2020 Issue 1*, https://doi.org/10.1787/0d1d1e2e-en.

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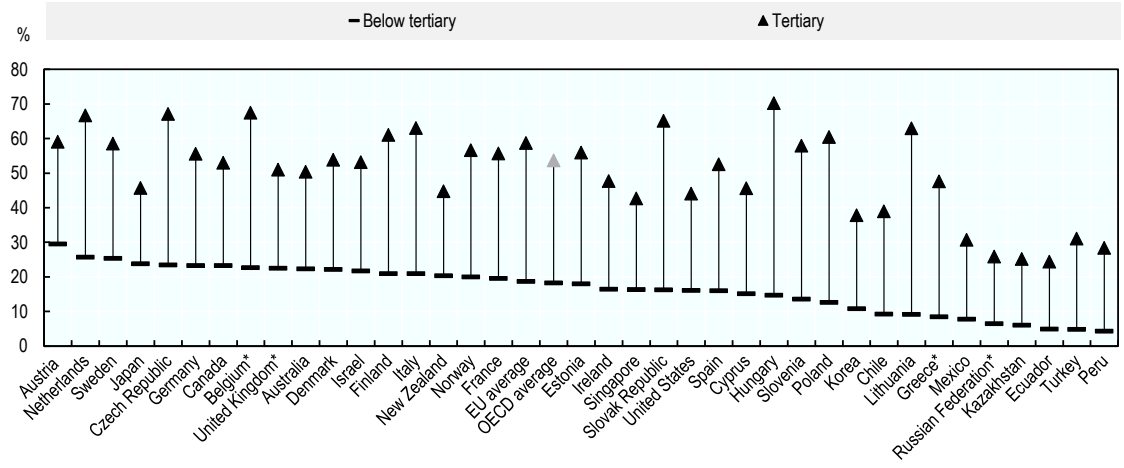
Deepening inequalities could also stem from the lack of opportunities for different workers to work remotely. Figure 4.15 suggests that low-skilled workers are more often engaged in service jobs that require physical presence: on average, 54% of tertiary-educated workers were able to work from home, compared to only 18% of workers without a tertiary degree (Espinoza and Reznikova, 2020[64]).

Figure 4.15. Feasibility of working remotely

Percentage of workers whose jobs are compatible with working remotely, by country and educational attainment



Note: Countries are sorted in descending order of the feasibility of working remotely for below-tertiary-educated workers.
*For Belgium, Greece, the Russian Federation and the United Kingdom, see notes under Figure 4.1.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.; Espinoza, R. and L. Reznikova (2020[64]), "Who can log in? The importance of skills for the feasibility of teleworking arrangements across OECD countries", https://dx.doi.org/10.1787/3f115a10-en.

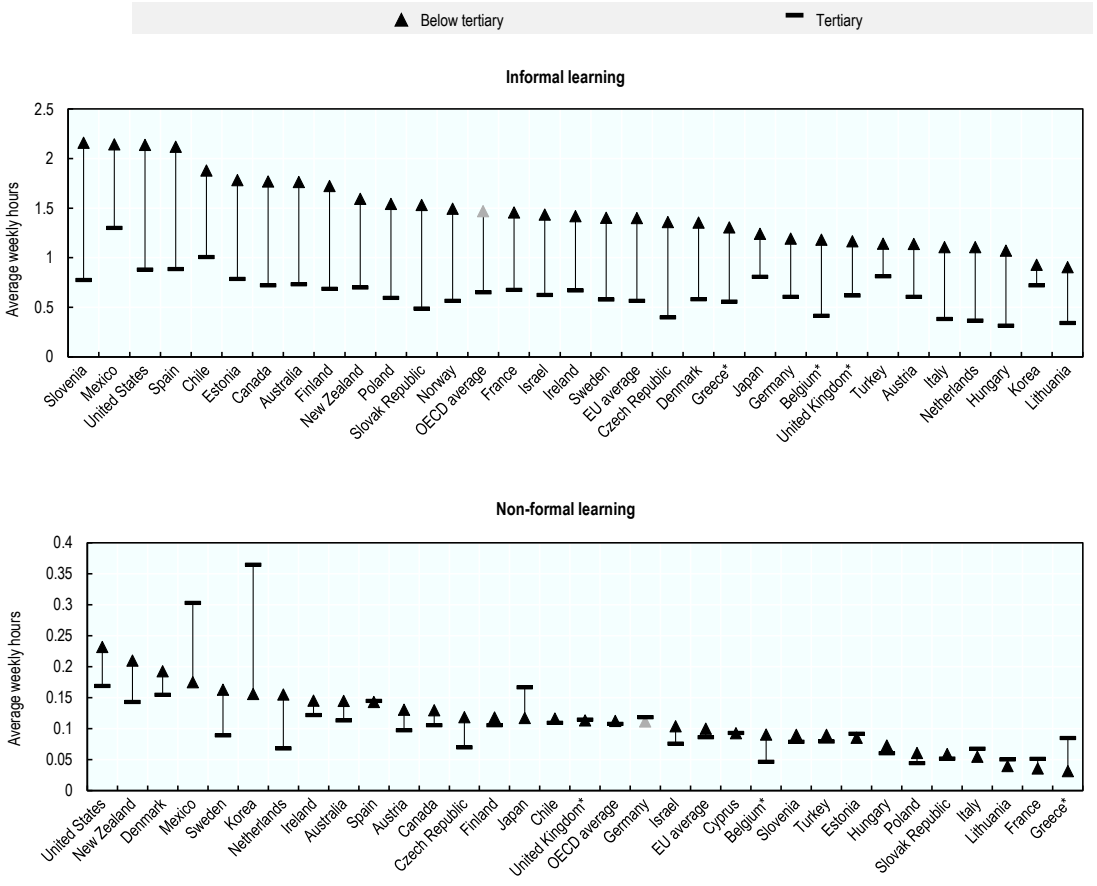
StatLink https://stat.link/dblcfs

Taken together, these two effects had led to varying "learning loss" outcomes depending on workers' educational attainment. Estimates indicate that on average, medium- and low-skilled workers may have experienced twice the reduction in informal learning opportunities than tertiary-educated adults. Under the widespread shutdown scenario, an average tertiary-educated worker is estimated to have missed just over 30 minutes of informal learning every week, while a worker with at most an upper-secondary education is estimated to have missed nearly 1.5 hours (Figure 4.16). Disparities vary across countries and are particularly pronounced in Slovenia, the Slovak Republic, Spain and the United States.

Workers who did not attain tertiary education are also more likely to miss non-formal learning opportunities. In the Netherlands, the gap is widest both in absolute and relative terms, as the impact on low-and medium-qualified workers is 2.3 times larger than for the tertiary-educated group. In Korea and Mexico, tertiary-educated workers missed a significantly larger amount of informal learning opportunities than the lower-educated workers. Figure 4.16 details specific cross-country differences.

Figure 4.16. Average weekly impact on the number of learning hours during widespread shutdowns

Weekly hours of learning foregone. Average per worker, by country and educational attainment



Note: The impact takes into account both specific sectoral shutdowns, as in OECD (2020[61]) (widespread shutdown scenario), and the feasibility of working remotely at the sectoral level.
*For Belgium, Greece and the United Kingdom, see notes under Figure 4.1.
Source: OECD (2012[6]), (2015[7]), (2019[8]), *Survey of Adult Skills (PIAAC) databases*, http://www.oecd.org/skills/piaac/publicdataandanalysis/.; OECD (2020[61]) *OECD Economic Outlook, Volume 2020 Issue 1*, https://dx.doi.org/10.1787/3f115a10-enhttps://doi.org/10.1787/16097408; and Espinoza, R. and L. Reznikova (2020[64]), "Who can log in? The importance of skills for the feasibility of teleworking arrangements across OECD countries", https://dx.doi.org/10.1787/3f115a10-en.

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Annex 4.A. Supplementary tables

Annex Table 4.A.1. List of online tables for Chapter 4

Table number	Table Title
Table 4.1	Country specific results for regressions estimating disengagement
Table 4.2	Pooled result for regressions estimating disengagement

StatLink https://stat.link/fzn9i0

Notes

[1] The analysis of the *disengaged* group focuses on adults in employment, so as to be able to capture the impact of both individual and job/employer characteristics on adults' willingness to train.

[2] The drive to learn index aggregates self-reports on how strongly they agree or disagree (5 point Likert scale, ranging from strongly disagree to strongly agree) with the following statements: "I like to learn new things", "I like to get to the bottom of difficult things" and "If I don't understand something, I look for additional information to make it clearer". The index is then rescaled to take values between 0 and 1.

[3] An "atypical" contract refers to a non-indefinite contract (i.e. a fixed term, temporary, apprenticeship or training scheme contract).

[4] Similarly, by anchoring wages to productivity, employers will have more incentives to attract the right type of skills for their vacancies (OECD, 2017[24]).

[5] Results for individuals with over ten years of tenure are generally not statistically significant.

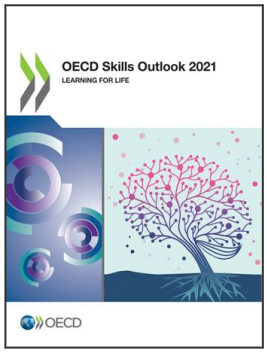
[6] The European Continuing Vocational Training Survey does not include data on micro firms (1-10 employees).

[7] A survey conducted by the British Learning and Work Institute indicated that when participants had received financial support to partially or fully cover the costs of learning, they stated this learning would not have been possible otherwise (Pennacchia, Jones and Aldridge, 2018[22]).

[8] The analysis of PIAAC data also suggests that low-skilled and unemployed individuals are especially likely to face barriers "other" than traditional financial and time constraints.

[9] Fana et al. (2020[63]) analyse the restrictions on activities imposed in Italy, Spain and Germany. Based on the national confinement decrees, the authors classify all economic sectors on a scale of "essentiality". Across countries, sectors classified as "fully essential" cover food and pharmaceutical production, utilities, transport and health and receive an index of 1. In the other extreme, sectors classified as "non-essential" (e.g. leisure, hotel and restaurant activities) are assigned the index of 0. Intermediate activities are assigned an index ranging from 0 to 1, based on the degree to which they are required to satisfy fundamental needs.

[10] If no assumptions about the feasibility of working and learning remotely are made, the average number of training hours an average worker would miss would be 26% larger. For purposes of simplification, the percentage of training maintained through working remotely is assumed to be equal for non-formal and informal training.



From:
OECD Skills Outlook 2021
Learning for Life

Access the complete publication at:
https://doi.org/10.1787/0ae365b4-en

Please cite this chapter as:

OECD (2021), "Promoting interest and participation in adult learning", in *OECD Skills Outlook 2021: Learning for Life*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/efc2570b-en