Scottish Government
Riaghaltas na h-Alba

Adult lifetime skills: a literature review

CHILDREN, EDUCATION AND SKILLS

social research

Contents

Executive Summary

This report presents the results from a literature review that was carried out to inform the Scottish Government's development of a lifetime skills offer. Following the anticipated scope of the lifetime skills offer, the focus of the literature review is on adult work-based learning and retraining opportunities for those already in work.

The aims of the literature review include:

- to review the available published academic literature and policy / practice evidence on adult upskilling and retraining opportunities in Scotland;
- to gain an understanding of how Scotland's approach to lifelong learning compares to that taken in other countries, focusing on lessons that Scotland can learn;
- to understand the role skills and training play in alleviating poverty, and specifically child poverty, in Scotland; and
- assess what we know about the impact of current skills provision in Scotland on equalities.

The literature review, carried out between September and November 2022, yielded a sample of over 200 sources. From this the 92 most relevant reports and papers were reviewed in full (determined by a review of the document abstract, summary or introduction). A thematic analysis was carried out, identifying key themes from the literature and drawing these together to write this report.

The review found that while literature on the benefits of, and barriers to lifelong learning is plentiful, evidence on the strengths and weaknesses of the Scottish skills system is less forthcoming. The OECD (Organisation for Economic Co-operation and Development) provides some helpful evidence on lessons learned from outside Scotland and in the international context. Less literature was found on the impact of the skills system on poverty and equalities, including Scottish specific evidence.

The key findings from the literature review are:

Benefits of lifelong learning

- Literature on the benefits of lifelong learning was plentiful, with the evidence showing that there are economic and social benefits of lifelong learning, as well as wellbeing benefits for the individual.
- The economic benefits of lifelong learning are cited as including higher earnings and positive labour market outcomes, while wellbeing and social benefits include increased self-confidence and increased social capital.

Barriers to lifelong learning

- Literature on the barriers to lifelong learning was also forthcoming.
- Barriers are highlighted as dispositional (where an individual's attitudes and expectations limit participation); situational (where an individual's personal circumstances limit participation, being unable to afford training for example); and institutional (where structural and organisational factors limit access to training).

Strengths and weaknesses of the Scottish skills system

- Only limited evidence on the strengths and weaknesses of the Scottish skills system was found during the literature search.
- While literature on the strengths of the Scottish skills system is limited, flexibility is cited as a strength, including a flexible further education system which allows colleges to respond to the demands of their local labour market. The apprenticeship system in Scotland is also highlighted as a strength in the literature.
- Again, literature on the weaknesses of the Scottish skills system is limited. Where this does exist it tends to focus on Scotland's low productivity, as well highlighting a skills system that has an emphasis on young people and experiences wider challenges such as automation and an ageing population.

International literature

- Individual learning accounts, career guidance and digital learning were highlighted as areas in which some other countries do well. The evidence on micro-credentials is still emerging and tends to be more mixed.
- The international literature also provides some general lessons for lifetime skills, work-based learning, upskilling and retraining. These include: the importance of awareness raising and accessible opportunities; the need for stakeholder engagement and for government, employers, training providers and stakeholders to work in partnership; the importance of overcoming barriers to learning; and the need to ensure quality training provision.
- Specific examples of workplace training are provided for the following countries: Singapore, Denmark, Finland, Estonia and New Zealand. However, the country search did not find any evaluations that provide robust evidence of impact or what works combined with a clear analysis of why.

Poverty and child poverty

- Limited evidence was found on the role of skills and training in alleviating poverty and child poverty, including any Scottish specific evidence. Where literature was found, this tends to focus on in-work poverty.

- Employers in a small-scale qualitative research study, identified training and in-work progression as a means of providing a route to better jobs for employees and a route out of poverty (Findlay et al, 2019).
- Through secondary data analysis of two large-scale British longitudinal datasets (the British Household Panel Survey / Understanding Society and Longitudinal Education Outcomes), the Social Mobility Commission (2020) find that one of the key factors that had a significant influence on pay progression was the total days of training.
- The literature search found only sparse literature on skills and child poverty. One example is provided by the Learning and Work Institute (2016) who cite evidence which shows the intergenerational importance of skills and find that if parents participate in learning and improve their skills, this can help their children to achieve better outcomes. In Scottish-specific qualitative research on in-work progression and training, overcoming childcare barriers is highlighted as one way to help alleviate child poverty (Yaqoob and Shahnaz, 2021).

Equalities

- The literature relating to the impact of current skills provision on equalities is sparse. The majority of studies found are small scale and qualitative in nature or secondary analysis on large-scale datasets. Only one Scottish specific example was found, focusing on older workers and drawing on statistical analysis of the Annual Population Survey and Labour Force Survey data for Scotland.
- Where literature was found this was often focused on the barriers to lifelong learning or adult education and training that different equalities group face. For example, digital barriers and barriers to online learning were cited in the literature.
- Looking at the evidence on sex in particular, affordable childcare is seen to be a potential barrier for women's participation in work, study or training. Occupational segregation is one theme that emerges in the literature around skills and sex.
- Where literature was found on age, this tends to focus on older workers. Workplace flexibility and targeted training opportunities are highlighted as key strategies by which to achieve success in upskilling older workers.
- No specific research was found on the impact of skills provision on race / ethnicity, and the research evidence on disability was similarly sparse.

Potential policy implications from the literature review include:

- Lifetime skills is an important policy area for Scotland, as shown through the benefits of lifelong learning cited in the literature. The flexibility of the current system is an important strength and should be maintained.

- As part of ongoing policy development, it may be helpful to consider how to increase awareness and use of skills related initiatives amongst employers, and explore with employers what works best / less well.
- Similarly, ensuring that people know what training and lifelong learning is available, the value it can bring, how they can access it and any costs / financial support to take part, would help to increase awareness of training amongst employees.
- The international literature highlights the importance of working in partnership across government, employers, training providers and stakeholders. This suggests that working collaboratively with employers and stakeholders to explore how best to encourage employer investment in upskilling and retraining would be beneficial.
- The importance of high quality and flexible training support also emerged as themes in the literature. While the provision of high quality training is important for all, flexible training support could be particularly beneficial for people facing childcare barriers or older workers, for example.
- A key gap in the literature is the experiences of different equalities groups of the skills system in Scotland. An understanding of the different segments of the Scottish workforce was largely absent from the literature search, which could be the subject of further research and analysis.
- While the evidence on microcredentials is still emerging and at this early stage is mixed, it does highlight the importance of ensuring a framework that is consistent and is of a high quality standard.

Introduction

This paper presents the findings from a literature review that was carried out to inform the Scottish Government's development of a lifetime skills offer. The aim of the Scottish Government review is to simplify and strengthen skills support for working age adults in Scotland. This is in the context of the National Strategy for Economic Transformation (NSET) which sets out the priorities for Scotland's economy and the actions needed for Scotland to become a thriving, inclusive and entrepreneurial country. The NSET aims to ensure that Scotland's people have the skills that they need at every stage of life to have rewarding careers that meet the demands of an ever changing economy and society. On lifelong learning, the NSET commits to support and incentivise people, and their employers, to invest in skills and training throughout their working lives.

It is within this context that the Scottish Government is committed to reviewing the overall strategic approach to adult upskilling and retraining in Scoland, evaluating the impact and outcomes of their current interventions and investments, and building an evidence base to develop options for an enhanced system of adult lifelong learning support targeted at those who need it most.

This literature review is one part of the evidence base. Its focus is on adult work-based learning and retraining opportunities for those already in work or at risk of redundancy.

The aims of the literature review are to:

- review the available published academic literature and policy / practice evidence on adult upskilling and retraining opportunities in Scotland.
- gain an understanding of how Scotland's approach to lifelong learning compares to that elsewhere.
- focus on the Scottish workforce, its different segments and barriers these segments may be experiencing in accessing and participating in adult upskilling / retraining opportunities.
- review available published literature and data on the role of skills and training in alleviating poverty, in particular child poverty and tackling inequality.

The research questions addressed by the review are:

- What are the strengths and weaknesses of the current adult skills system in Scotland?
- How does Scotland's approach to work-based lifelong learning or upskilling and retraining compare to elsewhere?
- What role do skills and training play in alleviating poverty, and specifically child poverty, in Scotland?

- What do we know about the impact of current skills provision in Scotland on equalities?

The literature search was carried out using the search terms listed in Annex A. The search parameters included literature published in the last five years and in the English language. All working-age adults in work were in scope. Schools, formal further education, formal higher education and the unemployed were out of scope. This ensured a clear focus on those in work as prioritised by work to progress a lifetime skills offer. This also complements the Scottish Funding Council Terteriary Education Review of Coherent Provision and Sustainability, the recommendations of which are currently being taken forward. This approach was agreed with policy colleagues at the start of the project.

Annex A provides further detail on the method including databases and websites searched. The search yielded a sample of over 200 sources. The abstract, summary or introduction of each source was reviewed for relevance and the sample was reduced to 92. The 92 reports / papers were reviewed in full, including compiling an assessment of the methodology and making summary notes on the key findings. A thematic analysis was carried out, identifying key themes from the literature and drawing these together to write the report.

The paper is structured as follows:

1. What are the benefits of, and barriers to, lifelong learning?

2. What are the strengths and weaknesses of the current adult skills system in Scotland?

3. What can Scotland learn from the approach to work-based learning or upskilling and retraining elsewhere?

4. What role do skills and training play in alleviating poverty and child poverty? Is there any Scottish specific evidence?

5. What do we know about the impact of current skills provision on equalities? Is there any Scottish specific evidence?

What are the benefits of, and barriers to, lifelong learning?

Key points

- Literature on the benefits of lifelong learning was plentiful, with the evidence showing that there are economic and social benefits of lifelong learning, as well as wellbeing benefits for the individual.
- The economic benefits of lifelong learning are cited as including higher earnings and positive labour market outcomes, while wellbeing and social benefits include increased self-confidence and increased social capital.
- Literature on the barriers to lifelong learning was also forthcoming. Barriers are highlighted as dispositional (where an individual's attitudes and expectations limit participation); situational (where an individual's personal circumstances limit participation, being unable to afford training for example); and institutional (where structural and organisational factors limit access to training).

Introduction

This section presents findings from the literature on the benefits of, and barriers to, lifelong learning. Before exploring the benefits and barriers, it is worth defining lifelong lifelong learning according to the literature.

Definition of lifelong learning

The OECD (2021) state that lifelong learning starts in childhood and youth, and continues throughout adulthood and old age. It encompasses formal learning in settings such as training centres, as well as informal and non-formal learning gained from colleagues, for example. This is echoed by Kanwar et al (2019), who states that lifelong learning covers learning "from the cradle to the grave".

In the literature, lifelong learning is often used interchangably with adult learning, adult education and lifetime skills.

Benefits of lifelong learning

The review found plentiful literature on the benefits of lifelong learning. The literature highlights lifelong learning as part of the solution to a range of pressing issues such as net zero climate change policies, recovery from the COVID-19 pandemic, and supporting retraining needs in the context of artificial intelligence and rapidly changing economies and labour markets (Pember et al, 2021). The literature also finds that there are economic, wellbeing and social benefits of lifelong learning.

There is a considerable literature on the economic benefits of lifelong learning, with benefits including higher earnings, increased productivity, positive labour market outcomes and motivation of the workforce (see for example, Parliamentary Office of

Science and Technology, 2021; ICF Consulting, 2015). A UK Government commissioned evidence review on the benefits of learning across the life course, cites evidence that adult learning leads to gains in productivity, as well as lower staff turnover. The review documents evidence showing that learning across the life course increases employment levels, tax revenues and leads to greater acceptance of innovation (Schuller, 2017). Desjardins (2019) echoes these findings, concluding that adult education has a positive impact on several labour market outcomes, including enhancement of employment and career prospects, of performance and earnings, of job satisfaction and commitment to work, and of innovative capabilities.

There is also some evidence of the health and wellbeing benefits of lifelong learning. Schuller (2017) cites evidence from the early 2000s that adult learning is linked to a range of health benefits including smoking cessation, uptake of cervical screening and life satisfaction. Through secondary data analysis of the Understanding Society dataset, a longitudinal survey of a nationally representative sample of UK residents age 16 and above, Tregaskis and Nandi (2018) find that the intensity of job-related training makes a difference to life satisfaction. They found that high intensity job-related training had positive effects on life satisfaction for those who were employed, for young people, and for those living in highly deprived areas. They also cite literature which shows that participation in workplace learning and adult learning can lead to increases in learners' wellbeing.

The 2021 Adult Participation in Learning Survey reiterates the wellbeing benefits of lifelong learning for the individual. A survey of just over 5,000 adults aged 17 and over in the UK finds that the benefits of learning include increased self-confidence and improved health and wellbeing (Hall et al, 2021).

The social benefits of lifelong learning are also evident in the literature, including increased social capital, social cohesion, civic and democratic participation (Schuller, 2017). (Social capital is "the networks of relationships among people who live and work in a particular society, enabling that society to function effectively" (Oxford Dictionary Online). Social cohesion is "where people from different communities feel free and happy to mix together" (Oxford Reference Online) and civic and democratic participation is "a process in which people take collective action to address issues of public concern" (Wikipedia).) Schuller (2017) cites evidence to show that the education of adults positively influences the educational achievement of their children and their children's health. The review notes that adults who participate in learning are more likely to engage with their children's education and improve their outcomes.

At the community level, adult learning has been found to improve community cohesion (see for example, Hughes et al, 2017). One example of improved community cohesion is through reducing reoffending rates. A European Commission study of adult learning policies found that participation in adult learning reduces reoffending, with a reduction in reoffending resulting from participation in learning and improved skills and competences (ICF Consulting, 2015). For example, Gordon and Weldon (2023) in (ICF Consulting, 2015), examined the reoffending rates of adult inmates who participated in adult learning while imprisoned in West Virginia. The study found that inmates who participated in both

general education development and vocational training reported a reoffending rate of 7% while the general rate of re-offending for those inmates who did not participate in learning was 26%.

Barriers to lifelong learning

While the benefits of lifelong learning are well recognised in the literature, there are also barriers to individuals undertaking lifelong learning and workplace training. This is particularly true for specific groups as explored in the equalities section of this report. Like the benefits of lifelong learning, literature on the barriers to lifelong learning was also forthcoming.

The UK Government's Department for Education (DfE) commissioned qualitiative research to understand adults' experiences of, and decisions, about learning in England. Through in-depth interviews with 70 learners and focus groups with 16 adults currently not participating in learning, they found that difficulties with childcare, transport, course fees and equipment, and a lack of flexible working can all be barriers to learning (Kantar Public and Learning and Work Institute, 2018). An attitudinal typology emerged, with the researchers finding six types of learners based on their purpose for learning: lifelong learners, defiant learners, outcome-focussed learners, tentative learners, exhausted learners and stuck in the status quo learners. Lifelong, defiant and outcome-focussed learners had a strong and clear purpose for learning and described being more able to overcome barriers to their learning. Tentative, exhausted and stuck in the status quo learners lacked a strong and clear purpose for learning and were less able to overcome barriers.

Reporting the results of an evidence review on adult upskilling and retraining in the UK, the Parliamentary Office of Science and Technology (2021) find that barriers which may prevent participation in, and the delivery of, adult education include: dispositional barriers (where an individual's attitudes and expectations limit participation); situational barriers (where an individual's personal circumstances limit participation); and institutional barriers (where structural and organisational factors limit access to training). The occurrence of dispositional, situational and institutional barriers is echoed by Pennacchia et al (2018) and Hall et al (2021). In the Adult Participation in Learning Survey 2021, Hall et al (2021) grouped barriers experienced by learners into: situational (arising from an adult's personal and family situation, including cost / money / can't afford it; work / other pressures); dispositional (relating to attitudes, perceptions and expectations of adults, including feeling too old, an illness or disability, lack of digital skills / confidence for online learning); and institutional (difficulties or issues with learning or tutor). For adults who had not participated in learning within the last three years, the most commonly cited barrier was feeling too old, followed by cost / affordability, work or other time pressures and being put off by tests and exams.

In their qualitiative research, Pennacchia et al (2018) found that often the barriers experienced by adults are multi-layered and interrelated. Some of the key barriers highlighted in their in-depth interviews with 37 participants were cost, childcare, awareness of opportunities and employer support.

In addition to cost, further barriers highlighted in the literature include lack of time and attitudinal barriers (Government Office for Science, 2017). Attitudinal barriers, including lack of confidence, lack of interest and feeling too old to learn, were particularly apparent for individuals with no qualifications. Through an evidence review, Hughes et al (2019) echo the importance of motivational barriers, finding that motivations to learn can be intrinsic (driven by personal goals) and extrinsic (subject to social and cultural expectations).

What are the strengths and weaknesses of the current adult skills system in Scotland?

Key points

- Limited evidence on the strengths and weaknesses of the Scottish skills system was found during the literature search.
- While literature on the strengths of the Scottish skills system is limited, flexibility is cited as a strength, including a flexible further education system which allows colleges to respond to the demands of their local labour market. The apprenticeship system in Scotland is also highlighted as a strength in the literature.
- Again, literature on the weaknesses of the Scottish skills system is limited. Where this does exist it tends to focus on Scotland's low productivity, as well highlighting a skills system that has an emphasis on young people and experiences wider challenges such as automation and an ageing population.

Introduction

In a policy discussion paper, Callander et al (2018) explore what success would look like for a 21st century Scottish skills system. They suggest that the following aspects would represent success:
(1) the potential of all people in Scotland is maximised and realised;
(2) a greater number of people engaged in meaningful learning throughout their lives;
(3) the skills system can respond to automation through a system focused on developing resilience, skills and competencies amongst learners;
(4) the skills system responds to ageing by working with learners and employers to get the most out of the remaining working-age population;
(5) greater numbers of employers invest and engage in the skills system;
(6) there is a proactive and responsive skill system that reflects employer's and learner's needs at the local, regional and national level, in content, delivery and strategy;
(7) the skills system contributes to inclusive economic growth that narrows social inequalities;
(8) a skills system focused on driving increases in progression, pay and productivity rates;
(9) a more flexible skills system with learning routes from intense bursts of learning to long-term, low-intensity learning; and
(10) a coherent skills system, with reduced duplication, based on collaboration not competition.

This section looks at the strengths and weaknesses of the current adult skills system in Scotland. The terms 'strengths' and 'weaknesses' were included in the research questions and adopted as keywords during the literature search. Hence they are reported here.

Strengths

Scotland's skills system is underpinned by a number of Government programmes, including the National Strategy for Economic Transformation (NSET), as discussed in the introduction to this report, and Scotland's Future Skills Action Plan. The Future Skills Action Plan recognises that education and skills are important drivers of economic growth and productivity (Scottish Government, 2019). The recently published Adult Learning Strategy includes a vision and principles for Scotland, including that "adult learning in Scotland will develop better skilled, educated, confident and empowered people, contributing to connected and inclusive communities" (Scottish Government, 2022).

While the literature on the strengths of the Scottish skills system is limited, some strengths do emerge from the evidence available. Scotland's Future Skills Action Plan notes that flexibility is something that the Scottish skills system is seen to do well in, citing a particularly flexible further education system which allows colleges to respond to the demands of their local labour market. Through a review of the policy literature, Gallacher and Reeve (2019) echo this, finding strengths with the regional college framework which has been established in Scotland and Regional Outcome Agreements (ROAs) which are used to shape college provision and direct funding. They do, however cite that there is little clear evidence of any substantial progress towards ROA's focus on opportunities for work placements or work-based learning.

The OECD (2020) highlight the apprenticeship system in Scotland as particularly strong, finding that Scotland has made "remarkable progress", although they do note that improvements could be made to increase its responsiveness, quality and flexibility. Their report, based on a review of available evidence, finds that headline indicators for Modern Apprenticeships, including labour market outcomes and student and employer satisfaction, are positive. They find that Foundation and Graduate Apprenticeships have been successfully launched and the role of meta-skills in apprenticeships pursued. They recommend that the key principles of apprenticeships, that underpin its historic resilience, should be sustained and reinforced and that the system should build capacity to respond to change including effective lifelong learning in an adult-friendly and agile system.

In a more recent report by the OECD (2022), they reiterate their findings on the strengths of Scotland's apprenticeship system, stating that it has "become one of the most flexible and wide ranging systems in the OECD", demonstrated, for example, by both apprenticeship starts and positive outcomes for participants.

Kelly et al (2020) also find that the Graduate Apprenticeship (GA) model has achieved early success. They note that GAs have changed the ways that businesses can recruit, re-skill and upskill employees to respond to their evolving needs. Moreover, they are structured to provide a streamlined approach which ensures that academic skills either build upon existing knowledge of procedures or are developed in parallel with them.

Other strengths noted in the literature include: Scotland's energy and finance sectors; its educated workforce and its renowned group of world-leading universities (Tsoukalas, 2021).

Recent evaluations conducted on two of Scotland's skills programmes, the Flexible Workforce Development Fund (FWDF) and Individual Training Accounts (ITAs) show further strengths within specific programmes that are part of the Scottish skills system. The FWDF was established in September 2017 to provide employers with flexible workforce development opportunities. In an evaluation conducted by EKOS (2023) it was found that the Fund was largely working well and is delivering against its purpose. The Fund was considered by stakeholder groups participating in the evaluation to be a much needed and valued intervention. Employer satisfaction with their engagement with the FWDF was high, for example 92% of the 203 employers surveyed felt that the FWDF had led to a more skilled workforce. Employee respondents also reported benefits, including: increased knowledge, further development of skills and help with being more effective in current role.

The FWDF offer in Scotland is in addition to Individual Training Accounts (ITAs), which support eligible individuals to take up learning opportunities to support their skills for employment. Evidence gathered by SQW as part of an evaluation of the programme, showed that it is working well, with most participants and providers reporting satisfaction with the delivery experience and outcomes gained. Most participants said that they would not have undertaken training without the ITA funding. There was also evidence that ITAs helped people to find new and better jobs, with over half of those surveyed agreeing that their ITA had helped them find a new job and over half of those unemployed before applying for their ITA were in work after training. Two in five people surveyed, who were working full time, reported that their ITA had helped them find a better paying job (SQW, 2023).

The 2021 Scottish Employer Perspectives Survey (Scottish EPS) provides some evidence on the perceptions of employers as users of the skills system. The Scottish EPS is a large-scale telephone survey of employers in Scotland. It provides information on how employers engage with the skills system in Scotland. Commissioned by the Scottish Government, IFF Research surveyed 1,000 employers in Scotland between November and December 2021. The survey provides some notable strengths around recruitment directly from education and the preparedness for work of education leavers. 35% of employers had recruited an employee to their first job directly from education. This is an increase from 30% in 2019. Furthermore, the majority of employers find their education leavers to be 'well' or 'very well' prepared for work. That is 68% of employers said that school leavers were well or very well prepared (an increase from 58% in 2019); 78% of employers said that college leavers were well or very well prepared (increase from 74% in 2019); and 80% of employers said that university leavers were well or very well prepared (78% in 2019). There is also evidence of some strengths around apprenticeships, with 40% of employers planning to either continue offering or start offering apprenticeships in the future. This is an increase from 26% of employers reporting this in 2019 and 25% in 2016. In terms of training, 70% of employers

provided training to their staff in the preceding year, the same proportion as in 2019.

Zemanik (2022) reports the results of a YouGov survey of 1,035 workers in Scotland, which asked respondents about fair work and was weighted to be representative of Scottish working adults (aged 18 plus). They found that 55% of respondents felt that their job offers good opportunities to develop their skills. The availability of training opportunities was identified as a career progression enabler, as well as a barrier.

Weaknesses

Literature on the weaknesses of the current adult skills system in Scotland is also relatively sparse, however, some weaknesses and challenges were found. A recurring weakness reported is productivity, with some reports noting Scotland's relatively low productivity and continuing productivity challenge (Scottish Government, 2019; Tsoukalas, 2021; Kelly, 2018; Thomas and Gunson, 2017). In his evidence review, Tsoukalas (2021) notes that there are large variations in productivity at a regional level within Scotland, with Glasgow for example having lower productivity compared to Edinburgh.

Kelly et al (2018) show that Scotland's productivity challenge has a range of aspects in addition to skills, for example business investment is relatively low, as is research and development spending and Scotland has a high concentration of small, lower productivity firms. However, Kelly et al (2018) also note that workers may improve their productivity by being more highly skilled or trained, by having access to new technology or by using more efficient processes.

A recent report published by the CIPD suggests that graduate overqualification and skills mismatch in the Scottish labour market has an impact on productivity in the workplace. Zemanik (2022) analyses Labour Force Survey data from 1992 and 2022 as well as CIPD survey data from 2020, 2021 and 2022 covering 1,937 Scottish working-age respondents. The report finds that the number of graduate roles in the Scottish and UK labour markets is not increasing at the same rate as the number of graduates entering the job market. Therefore, many graduates are ending up in non-graduate roles. The data examined also suggests that the job quality experiences of those graduates who feel overqualified for their roles are poorer than for those graduates who feel their qualifications match their roles. This has an impact on job satisfaction, performance and individual wellbeing, which, in turn, is linked to organisational productivity. Zemanik (2022) offer a number of recommendations including employers investing more in learning and development as well as providing sufficient time and training for people managers to manage employees well.

Further criticisms of the current adult skills system in Scotland highlighted in the literature include:

- It is not clear what progress has been made on the ground level establishing relationships between employers and colleges (Gallacher and Reeve, 2019).

- There has been a lack of provision for lifelong learning, with a recent focus on young people, and an argument that more attention should be given to adults (OECD, 2020; Callander et al, 2018).
- A lack of awareness by employers of upskilling initiatives (Scottish EPS 2021, CIPD, 2022a).

In their evidence review, Callander et al (2018) find that the main challenges facing Scotland's skills system are improving the quality of work, automation, artificial intelligence, new advances in analytics and technological change, and an ageing population. They argue that Scotland's lifelong learning offer should have fully flexible provision, from "intense bursts of learning to very part-time learning, modular and tailered specifically to learner choices and employer needs… placing learners at the heart of the new lifelong learning provision".

Callender et al (2018) also highlight a lack of provision for mid-career learning. Echoing Callender et al's (2018) criticisms of a lack of provision for mid-career progress is Thomas and Gunson (2017) who, in their evidence review, find that Scotland has relatively low rates of in-work progression, with much of the skills system focussing on early or pre-career learning. Further challenges noted by Thomas and Gunson (2017) are tecnological changes, such as automation, which will mean that some traditional jobs will become deskilled as new jobs emerge; demographic change, which will see an increase in the number of older people in the population and a shrinking in the working age population; and decarbonisation which is likely to affect Scotland's oil and gas industry in particular. In their evidence review, Thomas and Gunson (2017) find that workers with the lowest levels of skills are less likely to see investment from employers than more highly skilled workers. They also suggest that a key weakness of the current skills system is insufficient flexibility and transferability of learning, which is required as people now experience multiple employers and different types of jobs. A final criticisim cited in their review is overlaps, duplications and inefficiencies in the skills system, which can be confusing for employers and employees / learners.

Once again, the Scottish EPS 2021 provides some insight into employers use of the skills system and where there are challenges in engagement with external workplace training specifically. The Scottish EPS 2021 found that while 62% of employers had provided internal training in the past 12 months, similar to levels in 2019 (60%) and 2016 (63%); in contrast, 44% had provided external training over the past 12 months, a decrease on 2019 levels (49%) (Scottish Government, 2021).

The Scottish EPS 2021 also found some challenges around awareness and use of skills schemes or initiatives. Prompted initiatives that employers were most familiar with were ITAs and the Partnership Action for Continuing Employment (PACE), 17% and 16% were aware respectively. Around one in ten (11%) of employers were aware of the FWDF. Use was lower than awareness levels. Use of the FWDF (2% of employers) and ITAs (2% of employers) was the most common, followed by PACE (1% of employers had used PACE).

The Scottish Employer Skills Survey (Scottish ESS) 2020 is a large-scale telephone survey and provides some evidence on the skills challenges faced by employers in

Scotland. The 2020 survey had a sample of 3,497 employers in Scotland. Of particular relevance here are results on upskilling, which is defined as “the anticipated need among employers that staff will need to acquire new skills over the next twelve months”. Overall, just under three-quarters (74%) of employers had any upskilling needs among their workforce. The proportion of employers needing to upskill any staff was higher in 2020 (74%) than in 2017 (69%). Changing workplace practices as a result of COVID-19 was the most common reason for a need for upskilling. This was followed by new legislative or regulatory requirements and the introduction of new technologies or equipment.

What can Scotland learn from the approach to work-based learning or upskilling and retraining elsewhere?

Key points

- Individual learning accounts, career guidance and digital learning were highlighted as areas in which some other countries do well. The evidence on micro-credentials is still emerging and tends to be more mixed.
- The international literature also provides some general lessons for lifetime skills, work-based learning, upskilling and retraining. These include: the importance of awareness raising and accessible opportunities; the need for stakeholder engagement and for government, employers, training providers and stakeholders to work in partnership; the importance of overcoming barriers to learning; and the need to ensure quality training provision.
- Specific examples of workplace training are provided for the following countries: Singapore, Denmark, Finland, Estonia and New Zealand. However, the country search did not find any evaluations that provide robust evidence of impact or what works combined with a clear analysis of why.

Introduction

This section explores what Scotland can learn from the approach to work-based learning, upskilling and retraining from elsewhere, in an international context. It starts by looking at some best practice and general lessons from the international literature before moving on to focus on five case studies: Singapore, Denmark, Estonia, New Zealand and Finland.

The case studies were chosen as they emerged as potential countries of interest during the literature search and were identified by policy colleagues as being important to include.

Best practice

The international literature tends to provide examples in the following areas when exploring ‘best practice’: individual learning accounts, career guidance, digital learning, and micro-credentials.

The OECD (2019) report the findings from a literature review and case studies that review Individual Learning Accounts (ILAs) in OECD countries. The report takes a wide approach, looking at Individual Learning Accounts (virtual, individual accounts in which training rights are accumulated over time); Individual Savings Accounts (real physical accounts in which individuals accumulate resources over time for the purpose of training); and vouchers (which provide individuals with direct subsidies for training purposes, often with co-financing from the individual). They find that Individual Learning Schemes present attractive features including boosting

individual's choice and responsibility towards training and increasing competition among training providers and thus the quality and relevance of training provision. Their ability to make training rights 'portable' from one job to another is also seen as an attractive feature. Some of the key lessons emerging from the review are:

- targeting individual learning schemes can be beneficial;
- individual learning schemes should be kept simple in order to maximise participation;
- individual learning schemes need to be accompanied by other measures to boost participation among under-represented groups; and
- training quality should be guaranteed, the main instrument for this is the certification of training providers.

In their evidence review, Hughes et al (2019), note that Individual Learning Accounts (ILAs) provide individuals with the resources they can use to take up further training at their own initiative. They state that by linking training rights to individuals rather than specific jobs, ILAs can be used throughout an individual's career. However, the authors found no research evidence of impact within their review.

Hughes et al (2019) also find that career guidance and career learning, particularly those that encourage self reflection, show emerging promise in the development of career adaptability skills. However, they found a lack of evidence as to what works to motivate learners to develop digital career adaptability skills.

The benefits of digital learning are also discussed by Rickard and Brown (2021) in their literature review. They note that good quality digital learning can be just as effective as traditional in-person / classroom learning, with the majority of studies in their review finding little or no significant difference in the learning outcomes achieved. They identify the following success factors linked to digital learning:

(1) the design of online learning programmes (for example, providing an easy to use digital platform);

(2) the level and nature of support provided within online programmes (for example, peer support, senior management support); and

(3) actions linked to boosting learner engagement (such as promoting the benefits of online learning, establishing achievable goals and personalising content).

One way in which digital learning can be encouraged is through micro-credentials, with the OECD (2021) noting that digital learning platforms are becoming increasingly important for the delivery of micro-credential programmes and that the COVID-19 pandemic has further strengthened their position.

Micro-credentials are an emerging area in the literature, with Desmarchelier and Cary (2022) noting that it is still "early days". They are seen as a way of meeting

upskilling requirements for individuals looking to advance their career as well as to provide a skilled workforce to rapidly changing industries in an ever changing world of work. Oliver (2022) notes that acceptance and recognition of micro-credentials by employers is hampered because there is no universally recognised definition that clearly communicates to learners and employers what micro-credentials are. Following a consultation with 47 experts worldwide, they propose a definition of micro-credentials, that is:

“a micro-credential is a record of focused learning achievement verifying what the learner knows, understands or can do; includes assessment based on clearly defined standards and is awarded by a trusted provider; has standalone value and may also contribute or complement other micro-credentials or macro-credentials, including through recognition of prior learning; meeting the standards required by relevant quality assurance” (Oliver, 2022).

Micro-credentials, then, indicate smaller units of study, which are usually shorter than traditional forms of accredited learning and courses which lead to conventional qualifications such as degrees (Brown et al, 2021).

In their review of the international literature, Brown et al (2021) conclude that micro-credentials are likely to become more established over the next five years. They note that the New Zealand Qualifications Authority (NZQA) conducted three micro-credential pilots in July 2017 to July 2018. As a result of the pilots, the NZQA has now released a micro-credential system that aligns with their National Qualification Framework. The New Zealand Tertiary Education Committee also introduced a public funding system for micro-credentials which means that New Zealand Higher Education institutions are eligible to apply for the funding that will help them deliver micro-credential programmes.

From an Australian perspective, Desmarchelier and Cary (2022) examine the literature on the potential of micro-credentials. They state that micro-credentials should be assessed, quality assured, transferable and provide an understandable credit.

In their literature review of micro-credential innovations in higher education, the OECD (2021) explore evidence on the economic impact of accumulating micro-credentials over time. While they note that the evidence is limited, they find some evidence from North America which suggests that accumulating short-term credentials improves learners’ labour market performance. They cite evidence from the United States, which shows that individuals who obtained multiple credentials within the same field of study between 2000 and 2019 are four percentage points more likely to be employed and earn USD 570 more in quarterly wages than those who only completed one credential during the same period. The OECD (2021) also find that learners who take part in micro-credential programmes provided by higher education institutions tend to be more educated, more skilled and have greater levels of financial and social support from employers.

One final journal article worthy of note in regards to micro-credentials is a literature review by Moodie and Wheelahan (2022). They are critical of micro-credentials and

find that, from the little evidence available, that micro-credentials have only weak employment outcomes. They cite evidence from the USA which found “only weak positive and inconsistent gains” from micro-credentials. Completing a certificate of up to a year’s duration increased graduates’ chances of being employed, but not their median salary compared with non-completers. They cite a further study which finds that micro-credentials impacts on labour market outcomes are considerably smaller than the impacts of other factors such as past work experience. It seems, then, that there is mixed evidence on micro-credentials in the literature.

Lessons learned

The international literature also provides some general lessons for lifetime skills, work-based learning, upskilling and retraining. While it is hoped that some will be transferable in a Scottish context, it is worth noting that any international comparisons are weakened by the different contexts and cultures in which policy development takes place (for example, different skills system, different populations and so on). As noted by the Scottish Government (2019), a “one size fits all option may not exist” and as the OECD (2020) state, “there is no magic bullet”.

Despite these caveats, there are some general lessons from the literature outside of Scotland. These include: awareness raising and accessible opportunities; stakeholder engagement and working in partnership; overcoming barriers to learning; and quality of training provision.

Awareness raising and accessible opportunities

Pennacchia et al (2018) conducted 37 in-depth interviews with learners and non-learners. They conclude that learning as an adult is predominately a voluntary activity and that opportunities need to be visible and accessible, and accompanied by good quality information (Pennacchia et al, 2018). Hughes et al (2019) reiterate such findings, with their evidence review highlighting the importance of raising awareness and promoting the benefits of training.

In a study of data sources across 37 European countries, the European Commission / Eurydice (2021) find that although public initiatives and campaigns for raising awareness of adult learning opportunities are widespread across Europe, increased efforts may be needed to reach out to adults with low skills and qualifications.

Stakeholder engagement and working in partnership

A number of articles suggest that lifelong learning should be implemented in partnership and systematically across government, beyond the responsibility of education departments, with strong co-ordination needed to support learners (for example Pember et al, 2021; OECD, 2021).

The OECD (2020) similarly find that stakeholder involvement is crucial in both the development of adult learning policies and in their implementation. Through an evidence review and 58 expert interviews with government stakeholders, social partners, adult education providers, non-government organisations, academics and other relevant stakeholders, the OECD (2020) also find that reforms to increase

adults' participation in learning "do not have to come with a high price tag". They cite education and training reforms estimated to cost from around EUR 200 to EUR 2,500 per participant. They also promote the importance of monitoring and evaluation to achieve a programme's objectives. OECD (2020) conclude that " to enable more adults to reap the benefits of participating in learning activities, policy-makers must not only focus on participation rates, but also on training quality, participants' subsequent labour market outcomes, and the alignment of programmes with individual and labour market needs".

Cedefop (2020) conducted a literature review and stakeholder consultations with policy representatives from across the EU. Again, they highlight the importance of stakeholder involvement when developing upskilling and retraining pathways, providing examples at decision-making, support and implementation levels. At the decision-making level this includes a shared vision, grounded in political commitment and characterised by strategically allocated and / or earmarked funding. At the support level, this includes the integration of appropriate strategies to reach out, motivate, engage and support particularly low-skilled adults to navigate upskilling pathways and opportunities. At the implementation level, this includes flexible, adaptable and tailored pathways building on prior learning, tailored learning and training opportunities, and stakeholder engagement, co-operation and trust.

Overcoming barriers to learning

A further lesson in the literature is the importance of addressing barriers to learning. In their evidence review, Hughes et al (2019) recommend that countries incentivise or fund training for workers employed in non-traditional forms of work who are more likely to face barriers to learning (for example, on casual contracts, fixed term contracts and the self employed).

In their study of adult learning systems, the OECD (2019) find that the coverage and inclusiveness of adult learning must be improved by helping adults to make informed choices, tackling barriers to participation and encouraging employers to offer training.

Similarly, flexibilty in training provision is seen to be important to help overcome barriers to participating in adult education and training (European Commission / Eurydice, 2021).

Quality of training provision

The OECD (2019) recommend that training content should be strongly aligned with the skills needs of the labour market, as well as assuring quality of training by using only high quality training providers. The OECD (2021) reiterate the importance of quality training provision to ensure successful outcomes for participants.

Further lessons in the international literature

Andriescu et al (2019) review 28 country reports about adult learning policy and provision as well as issuing a questionnaire to "country experts". They find that the

main types of adult education and training programmes across the EU are measures aimed at:
(1) helping adults achieve a recognised qualification;
(2) helping adults develop other knowledge and skills, not for vocational purposes;
(3) facilitating transition to the labour market for the unemployed;
(4) opening up Higher Education to adults; and
(5) enabling adult employees to develop their work-related skills.

For work-related skills, the country reports highlight work-related skills training measures that are funded by public institutions as well as employers and other private organisations.

One specific example from the international literature is Sweden where a large proportion of adults across all age groups are involved in formal and non-formal lifelong learning activities. In a Swedish data review for the European Commission, Andersson (2018) show that a key strength of the Swedish adult education system is that it has a long tradition and wide range of learning opportunities available to adults. Another strength is the level of state grants provided, including for non-formal learning activities, with a large proportion of participants in non-formal courses above 65 years of age. There is a Swedish Strategy for Lifelong Learning, which focuses on the right of everyone to a good education. Quality, accessibility and co-ordination are keywords in the strategy. Pember et al (2021) conducted an evidence review and consultation with stakeholders and policy leads and reiterate the strengths of the Swedish system. They show that Sweden uses a key statement to create a shared understanding across all government departments and find that this is a useful model as it facilitates implementation and can act as a function as the basis for further lifelong learning developments, including more government departments becoming involved in the programme.

Case studies

Case studies tend to have little by the way of an independent evidence base around a programme's effectiveness. There are very few programme evaluations that provide robust evidence on what works combined with a clear analysis of why. With these caveats in mind, this chapter concludes by exploring relevant workplace training programme examples from five case study countries: Singapore, Denmark, Finland, Estonia and New Zealand. The key points from each case study are presented here, with further information available at Annex B.

Singapore

The government of Singapore offer the SkillsFuture initiative, which aims to provide a variety of opportunities for all individuals to train, learn and develop at different stages of their lives.

One programme introduced in 2015 and administered as part of the SkillsFuture initiative is the SkillsFuture Credit (SFC). This provides every Singapore Citizen aged 25 and above, regardless of their employment status, with an opening credit of S$500 (£274) to access lifelong learning opportunities and advance their skills in an autonomous and flexible manner. Singapore Citizens aged 40 to 60 (inclusive)

can also use the Additional SkillsFuture Credit (Mid-career support) of S$500 (SSG | SkillsFuture Credit).

Lessons learned from Singapore's SkillsFuture Credit Scheme include that creating a culture of adult learning requires significant investment, the identification of training needs with government support, and subsidy (Webb et al, 2018).

Very little evidence was found on the effectiveness of the SkillsFuture programme, with the OECD (2020) noting that the reforms should be evaluated within their broader policy context.

Denmark

In their review of adult learning systems, the OECD (2019) note that Denmark has a well-financed adult learning system that is inclusive, flexible and aligned with labour market need. In their data review of adult education and adult skills in Denmark, Rasmussen (2018) find that the strengths of the Danish system are: (1) vocational education through the AMU courses has strong links to social partners; (2) the adult education and learning system is versatile and offers relevant types of education and learning for different purposes and different groups; and, as such, (3) there are high levels of participation in adult education.

Again, no evidence was found on the impact of labour market training courses in Denmark.

Finland

Two Finnish skills programmes worthy of note are the NOSTE programme and the Finnish Workplace Development Programme (FWDP).

The NOSTE programme is a Finnish basic skills training programme for adults, implemented by the Ministry of Education and Culture between 2003 and 2009. It aimed to raise the educational attainment of adults without secondary education who were already in the labour market. An important project feature was to link education to the work environment. Participation was free of charge apart from examination fees and the total budget was EUR 124.5 million. The programme was delivered in the form of 59 regional projects provided by a network of various education institutions including vocational adult centres, schools and job centres. While the NOSTE programme was found to improve self esteem and work motivation, there was no evidence that it improved labour market outcomes (for example, higher wages or new positions) (OECD, 2020).

The Finnish Workplace Development Programme (FWDP) was launched in 1996 and ran until 2009. It was a government-funded programme that aimed to improve productivity and the quality of working life in Finnish workplaces. Its focus was on innovation and the use of skills in the workplace. It used an application based system to fund the use of external experts in workplace development projects (Payne, 2004). Evaluations of the programme are limited, with Payne (2004) arguing that there is very little evidence available to answer the question as to how effective the programme has been in delivering "the better job".

Estonia

The Estonian Lifelong Learning Strategy has been cited by the OECD and others as an example of a comprehensive strategy that is used to set priorities, guide funding decisions and faciliate collaborative working to deliver lifelong learning (OECD, 2020; Andriescu et al, 2019).

To implement the Estonian Lifelong Learning Strategy, the Ministry of Education and Research has adopted nine programmes, including the Adult Education Programme 2017 to 2029. The main goal of which is to motivate adults to learn and to create flexible and high quality learning opportunities that are based on the needs and developments of the labour market (Haaristo, 2018). However, evidence on the outcomes or impact of the Estonian Adult Learning Programme was not found during the literature search.

New Zealand

The New Zealand Workplace Literacy and Numeracy Fund supports the provision of literacy and numeracy programmes for employees to increase their literacy and numeracy skills and contribute to workplace productivity (TEO-led Workplace Literacy and Numeracy Fund | Tertiary Education Commission (tec.govt.nz)). Gray and Sutton (2007) conducted interviews with a sample of employers and providers that applied to the Fund in 2006. Employers and providers identified the following factors for a programme to be successful: making the programme a priority; quality teaching by a tutor who "fits" the company; programmes that meet employer needs; and good employer-provider relationships. However, as noted by Guy and Harvey (2013), there is a lack of evidence on the outcomes of Fund delivery.

New Zealand has also been "one of the front-runners in national policy making around micro-credentials" (OECD, 2021). The New Zealand Qualifications Authority (NZQA) created a quality assurance system for micro-credentials in 2018, defining them in specific regulations and quality standards. The New Zealand Tertiary Education Commission started providing funding to higher education providers for the development and delivery of micro-credential programmes in 2019. Providers of micro-credentials must demonstrate that their programmes do no duplicate existing higher education programmes and address unmet skills needs. The providers are also required to prove their capacity to deliver quality education. In their 2021 report, the OECD state that there are currently about 150 NZQA-approved micro-credential programmes offered by higher education institutions and other training providers. However, OECD (2021) does not report on any evaluations of the programmes and as such programme outcomes are not apparent.

In general, the country case study search did not find any evaluations that provide robust evidence of impact or what works combined with a clear analysis of why.

What role do skills and training play in alleviating poverty and child poverty? Is there any Scottish specific evidence?

Key points

- Limited evidence was found on the role of skills and training in alleviating poverty and child poverty, including any Scottish specific evidence. Where literature was found, this tends to focus on in-work poverty.
- Employers in a small-scale qualitative research study, identified training and in-work progression as a means of providing a route to better jobs for employees and a route out of poverty (Findlay et al, 2019).
- Through secondary data analysis of two large-scale British longitudinal datasets (the British Household Panel Survey / Understanding Society and Longitudinal Education Outcomes), the Social Mobility Commission (2020) find that one of the key factors that had a significant influence on pay progression was the total days of training.
- The literature search found only sparse literature on skills and child poverty. One example is provided by the Learning and Work Institute (2016) who cite evidence which shows the intergenerational importance of skills and find that if parents participate in learning and improve their skills, this can help their children to achieve better outcomes. In Scottish-specific qualitative research on in-work progression and training, overcoming childcare barriers is highlighted as one way to help alleviate child poverty (Yaqoob and Shahnaz, 2021).

Introduction

This section explores what the literature tells us about how skills and training contribute to alleviating (in-work) poverty, child poverty and looks at whether there is any Scottish specific evidence. Only limited evidence was found, particularly in the Scottish context.

It is worth noting, however, that poverty tends to be less prevalent with people who have higher levels of baseline formal attainment. That is, UK statistics from 2019 / 2020 (the latest available at the time of writing) show that while 20% of all working age adults were in relative poverty after housing costs, the risk was higher for those who reported they had no formal qualifications or didn't know (43%), and lower for those who reported their qualification as degree level or above (12%) (DWP HBAI report).

In-work poverty

The available literature on the role of skills and training in alleviating poverty tends to focus on in-work poverty. In-work poverty is defined as households where at

least one person is in work and the household's income after housing costs is below 60% of the median household income (Findlay et al, 2019).

Findlay et al (2019) conducted qualitative research to explore the responses of employers to in-work poverty and provide some recommendations around the ways that employers might make work a better route out of poverty. Their research methods were: a literature review, 16 key stakeholder scoping interviews, 14 case study interviews with senior management within businesses in the hospitality, facilities management, manufacturing, food production and retail sectors; and a roundtable event with 8 representatives of employers, business organisations and trade union organisations. Interviews focused on understanding employers' approaches, perceptions and experiences in relation to in-work poverty. It is a UK-based study, although detail on the geography of the sample is not provided. The qualitative and small-based nature of the study means that results cannot be generalised to the wider employer population, but nevertheless, it provides some interesting insights into employer perceptions of in-work poverty.

In the study, Findlay et al (2019) found that there was limited awareness among employers in their sample of in-work poverty and that many employers that they spoke to, took few or no explicit actions to address in-work poverty. However, the research identified practices that could make a difference to addressing in-work poverty, including ensuring that pay rates are set at the Living Wage or above and that employees have access to consistent and sufficient hours of work. Employers in their research offered a variety of other forms of support and / or benefits to tackle poverty, including discount schemes, rental deposit loan schemes, emergency financial advances and signposting to credit unions or other financial wellbeing services. Some employers in their study also pointed to training and in-work progression as a means of providing a route to better jobs for employees. Investment in training was cited by some as a way to retain staff. Findlay et al (2019) suggest some actions that employers might take, or that policy-makers might attempt to influence, to reduce in-work poverty, including: improving awareness, business support and advice around in-work poverty issues; addressing sectoral challenges collectively and collaboratively; early engagement of employers to design solutions; and stronger regulatory action. In terms of training specifically, Findlay et al (2019) found evidence of good practice in offering skills development and progression opportunities as a route out of in-work poverty and into better paid jobs. Both stakeholders and employers acknowledged the need to develop creative solutions, so that employees have opportunities for learning and career development even in workplaces where there is limited scope to progress to more senior roles.

Further evidence of the impact of training on poverty is provided by Paull and Patel (2012) in their international evidence review of skills, jobs and poverty. They note that being employed is often seen as a key way of lifting individuals and families out of poverty and argue that employment is heavily dependent on individual skill. Through examining international data sources, they find that the two most important sets of influences on skills are education (prior to labour market entry) and adult

education and training (taken after labour market entry). They also cite theoretical models which show that greater skill inequality results in greater income inequality.

Although there is limited evidence provided on the impact of training on poverty specifically, Panagiotakopoulos (2019) presents some interesting findings on employer perception of training and income levels. They conducted a qualitative study consisting of 60 interviews with 30 employers and 30 low-income employees in Greece. Panagiotakopoulos (2019) reports that two employers who invested in regular formal staff training stressed that employees now feel more satisfied about their jobs and are more optimistic about their financial situation. One employer explained, “I had two employees who were low-skilled and had been trapped during the last three years in low-paying jobs. They did not like their jobs and sometimes they were trying to find excuses to avoid coming to work. I helped them develop their skills further so they could undertake a more advanced role in the company with more tasks and responsibilities and a better salary…”.

Through secondary data analysis of two large-scale British longitudinal datasets (the British Household Panel Survey / Understanding Society and Longitudinal Education Outcomes), the Social Mobility Commission (2020) find that one of the key factors that had a significant influence on pay progression was the total days of training. They find that workers are more likely to escape low pay if they are younger, live in London, have a more privileged background, work in a professional occupation and are a white international migrant. The authors provide recommendations around considering how to encourage individuals to participate in courses that have demonstrable benefits for pay progression; provide support for other costs associated with learning; ensure there are flexible learning opportunities available; and find ways to inspire and engage low-paid workers in training. They also suggest that targeted interventions may be beneficial for groups most at risk of becoming stuck in low pay.

In a further quantitative study, Cedefop (2017) analyse data from the European Survey on Income and Living Conditions to assess the risk of poverty for adults with low and high levels of education. They find that the risk of poverty increased more for people with low levels of education than those that were highly educated, and conclude that low skilled adults are at a high (and increasing) risk of poverty.

Child poverty

As well as in-work poverty, some (though limited) literature was found on skills and child poverty.

To explore the links between skills and poverty, the Learning and Work Institute (2016) conducted a literature review, supplemented by consultation with learning and skills stakeholders in England via a roundtable. They find that there are three key channels through which learning and skills can affect poverty: work and income; social inclusion and active citizenship; and inter-generational. They cite evidence which shows the intergenerational importance of skills and find that if parents participate in learning and improve their skills, this can help their children to

achieve better outcomes. They also provide evidence which shows that in the UK there is a relatively strong link between your income as an adult and that which your parents attained: around four in ten children born to poor parents become low income adults. From this they conclude that people who grew up in poverty are more likely to live in poverty as an adult, and this is partly related to the idea that if someone's parents did not gain many qualifications, they are likely to gain relatively few as well. The Learning and Work Institute (2016) cite research from NIACE in 2013 which shows that skills can help through both learning and earning. The learning element can help to ensure that parents have sufficient skills and knowledge to support their children in their own learning (for example helping with homework) and provide positive role models for children. In terms of earning, having higher skills as a parent can open up higher waged employment opportunities, providing additional resources for their child's learning or moving to an area with higher quality schooling.

Through conducting secondary data analysis on a large-scale UK household survey dataset, the Family Resources Survey (FRS), Barnes and Lord (2013) also find that there are links between skills and poverty. They find that a higher concentration of families with children in poverty have either one or both parents out of work. However, they also show that work does not offer a guaranteed route out of poverty as a large proportion of households in poverty or at risk of poverty contain working people, especially where households contain children. They suggest that employer-driven training is likely to be the best option to help individuals with low and no skills to progress in work and increase their earnings, but such training would have to overcome barriers such as the availability of childcare.

Scotland specific literature

Yaqoob and Shahnaz (2021) reiterate Barnes and Lord's finding on the importance of overcoming childcare barriers to alleviate child poverty, and also provide some Scottish specific evidence on in-work poverty. They undertook primarily qualitative research in Scotland, with focus groups and interviews conducted during March and April 2021. The focus of the research was on single parent families and their experience of child poverty and as such 26 single parents participated in focus groups and 12 one-to-one parent interviews took place. Participants were from across Scotland (Dundee, Glasgow, Edinburgh, Lanarkshire and Fife). A further focus group was also conducted with staff from One Parent Scotland Families Scotland, who support single parents and their labour market journey. A survey was also issued to 40 single parents, of which 98% were female and most (78%) were white and Scottish.

In their research, Yaqoob and Shahnaz (2021) found that childcare was the central issue in every focus group and interview. For example, concerns were expressed around a lack of affordable and wrap-around childcare which meets the needs of children under three and those with disabilities. In relation to skills, participants said that employers often overlooked their skills related to being a single parent; time-keeping, budget management and multi-tasking. With regards to training, some reported that while induction training was helpful, once the initial employment

period was over they were left feeling “adrift” with the presumption that they no longer required any further support. Single parents in the study also expressed a lack of progression opportunities in their work and spoke highly of the benefits of training opportunities. The authors provide some recommendations around investing in single parent / carer specific employability programmes, delivered alongside employers that combine flexibility, high quality paid work and in-work training.

A second Scotland-based study of potential interest is provided by Richards and Sang (2015). Whilst this is a small-scale qualitative study, it does provide some helpful insights into the experiences of in-work poverty in Scotland. Richards and Sang (2015) undertook semi-structured life history interviews with 44 individuals experiencing in-work poverty. Participants were employed across a range of industries, covering the public, private and third sector. The research found that if employers provide their staff with access to training as well as affordable credit (for example, emergency loans to cover immediate expenses), this can help to over-come the burden of in-work poverty. The authors conclude by suggesting ways in which to address in-work poverty, including by empowering the least paid employees in organisations through personal and development reviews, which lead to training, development and career plans.

Overall, however, the literature search returned very limited Scottish specific evidence on the impact of skills and training on alleviating poverty.

What do we know about the impact of current skills provision on equalities? Is there any Scottish specific evidence?

Key points

- The literature relating to the impact of current skills provision on equalities is sparse. The majority of studies found are small scale and qualitative in nature or secondary analysis on large-scale datasets. Only one Scottish specific example was found, focusing on older workers.
- Where literature was found this was often focused on the barriers to lifelong learning or adult education and training that different equalities group face. For example, digital barriers and barriers to online learning were cited in the literature.
- Looking at the evidence on sex in particular, affordable childcare is seen to be a potential barrier for women's participation in work, study or training. Occupational segregation is one theme that emerges in the literature around skills and sex.
- Where literature was found on age, this tends to focus on older workers. Workplace flexibility and targeted training opportunities are highlighted as key strategies by which to achieve success in upskilling older workers.
- No specific research was found on the impact of skills provision on race / ethnicity, and the research evidence on disability was similarly sparse.

Introduction

This section explores what the literature tells us about the impact of current skills provision on equalities. It highlights barriers to training and lifelong learning as the key equalities theme in the literature before looking at whether there is any specific literature on: sex; age; race; disability; and any Scottish-specific literature.

Barriers to training and lifelong learning for equalities groups

In general, only limited literature was found on the impact of current skills provision on equalities. Where literature was found this was often concerned with the barriers to lifelong learning or adult education and training that different equalities groups face.

Hall et al's (2021) adult participation in learning survey 2021 provides some results on the barriers to learning for different equalities groups. It is an online survey, partly funded by the Department of Education, which has a nationally representative sample of 5,054 adults aged 17 and over across the UK (Scotland specific results were not available). The survey found that:

- You are 1.5 times more likely to take part in learning if you are from a higher socio-economic grade than a lower grade.

- People who completed their education at age 21 or above are twice as likely to participate in learning than those who left education age 16 or lower.
- Younger people are more likely to participate in learning than older people.

Hall et al (2021) group the barriers to learning as situational and dispositional barriers. Situational barriers, such as cost / money, childcare, work / other time pressures, lack of digital equipment, are more likely to be raised than women than by men (44 per cent compared to 35 per cent). Respondents from Black, Asian and Minority Ethnic (BAME) backgrounds are also particularly likely to experience situational barriers (49 per cent compared to 39 per cent from white backgrounds). By social grade, those in the AB group (upper and upper-middle classes and middle classes) are less likely to experience situational barriers when compared to all other categories.

Dispositional barriers, such as awareness, motivation and confidence, are also more likely to be raised by women than men (54 per cent compared to 50 per cent). They are also more likely to be raised by those in the DE social grade (semi-skilled and unskilled working class and the unemployed) (60 per cent compared to 49 per cent across all other social grades).

In addition to this quantitative evidence on the barriers to learning that different equalities group face, Pennacchia et al (2018)'s qualitative research also highlights some differences by equality group. Through their 37 in-depth interviews with learners and non-learners they found whilst all participants were able to discuss at least one barrier they faced to taking up learning, the most disadvantaged learners were more likely to describe multiple barriers to learning (such as cost, time and childcare, as well as confidence and motivation). These groups included: people in receipt of benefits, disabled people and people with health conditions, single parents, and participants whose first language is not English.

One barrier cited in the literature that is faced particularly by different equalities groups is digital barriers such as barriers to online learning (Eynon, 2021; Kanwar et al, 2019; and Hughes et al, 2019). For example, Eynon and Malmberg (2021) used results from the Oxford Internet Survey (a nationally representative sample of 1,818 people aged 18 and over in Great Britain, conducted face-to-face in people's homes in Spring 2019) to examine patterns in the uptake of lifelong learning via the Internet. They found that social structure (measured by age, gender, socio-economic status, education and where a person lives) remains an important factor in understanding patterns of uptake and outcomes of online learning. Their analysis found that: those who are younger, from higher socio-economic groups and who are more educated report higher levels of digital skills and take up more online learning activities. FutureLearn (2022), in their survey of 2,000 UK adults aged 16 and over, find that a third of respondents would choose online platforms to learn new skills, with barriers to learning cited in the research as including disability, socio-economic background, race, gender identity and sexuality.

One equalities type which is cited in the literature as facing multiple barriers to lifelong learning is by socio-economic status. For example, in their evidence review,

the Government Office for Science (2017) finds that socio-economic status is a powerful predictor of participation in later life education, with those in poorer or less educated groups less likely to participate. Higher socio-economic groups are more likely to engage in informal and formal learning, partly because of prior experience of learning but also because individuals with no qualifications are more likely to cite attitudinal barriers such as lack of confidence, lack of interest and feeling too old to learn, as well as barriers to learning relating to cost and time.

Sex

This section looks at whether any specific literature was found on skills provision and sex. The literature search derived very limited specific results but one theme emerging from the literature on skills, workplace learning and sex / gender was occupational segregation.

For example, Close the Gap (2016) provide a briefing paper on gender and the workplace, arguing that occupational segregation is a labour market challenge which requires early intervention strategies around providing, for example, affordable childcare, so that women can work, study or train. Occupational segregation is defined as horizontal segregation, which clusters men and women into different types of education, training and work; and vertical segregation or “the glass ceiling”, where men and women do different levels of work.

Webb et al (2018) also highlight occupational segregation as a challenge in their evidence review on job progression in low pay sectors. They find that women predominate within low-paid occupations, often exhibiting few opportunities for training and progression, with a gender pay gap that favours men. They recommend that employers encourage job shadowing and secondments as one way in which to facilitate horizontal movement which could ultimately lead to higher paid work.

Another theme in the limited literature around skills provision and sex is the benefits and barriers to training for men and women. Massing and Gauly (2017) use data from the Programme for the International Assessment of Adult Competencies (PIAAC) to investigate gender differences in training across 12 countries. They find that in all countries, except Belgium and the Nordic countries, men are more likely than women to participate in training. They also find that in almost all countries, women compared with men have a higher probability to report family responsibilities and a lower probably to report high workload than financial reasons as barriers to training. Having young children is related to less participation in training across all countries, excluding the United States.

Age

Like sex, the literature search returned limited evidence on the impact of skills provision on age. Where literature was found this tends to focus on older workers.

For example, the OECD (2018) examines the best ways in which the United States can promote the employability of workers throughout their working lives, including how employers can be supported to retain and hire older workers. Examining

evidence from across OECD reviews, they find that the skills of older workers in the United States is relatively good (compared with other OECD countries). While older workers tend to perform less well on information-processing tasks, they have interpersonal skills that are called upon to plan, supervise and influence others. They recommend that firms employing older workers should accommodate older workers' needs, with workplace flexibility and targeted training opportunities key strategies by which to achieve success in upskilling older workers.

Desjardins et al (2019) reiterate that a flexible approach is helpful in motivating people to engage in learning and to develop and maintain literacy skills into older age. They analyse data from the Programme for the International Assessment of Adult Competencies (PIAAC) and find that adults who attain higher levels of qualifications in mid to later life are associated with a greater probability of being employed, participating in continued learning and scoring higher on the PIAAC literacy scale when they are older.

Narushima et al (2018) conducted a small scale study of 416 adults aged 60 years and over in Canada, looking at the benefits of lifelong learning for older adults. Although a small scale study, it provides some interesting insights into lifelong learning and wellbeing for older adults. Their results indicate that older adults' participation in lifelong learning is independently and positively associated with their psychological wellbeing.

DWP also commissioned a small scale study to investigate the attitudes and behaviours of employers around the recruitment, retention and retraining of older workers. Adams et al (2017) conducted qualitative research (interviews) with 50 employers in the UK, including 2 interviews in Scotland. They found that employers in their study valued the benefits of a mixed-age workforce and generally stated that they already have one. Employers typically described older workers as loyal, reliable, committed and conscientious, with valuable business and life experience to offer the organisation. With regards to training, employers in the sample said that they offered equal training opportunities and did not target any training specifically at older workers. Some said that older workers were potentially harder to train and the impact of training was potentially smaller. Some employers in the sample also expressed the opinion that older workers were less likely to need and request training. Adams et al (2017) present some policy implications as a result of their research, including that: employers may be open to communications that focus on how to ensure that their flexible working policies meet the needs of older workers; and both employers and older workers would benefit from more employers sharing best practice examples of the advantages of a mixed age workforce and the benefits that older workers can bring to the workplace.

With regards to policy implications for older workers, the OECD 2021 "Skills Outlook" publication provides some interesting examples of policies that encourage employers to train older workers. They note that:

- in Luxembourg, private-sector companies can receive training aid totaling 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.
- 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 the upskilling of older (over 45) workers. Capacity-building workshops are organised to build the skills of human resource managers and chief executives in managing an ageing workforce (OECD, 2021).

The OECD (2021) also highlight an example of a policy aimed at increasing training participation of older adults through targeted career advice and guidance:

- in the Netherlands, workers aged 45 years and over can participate in subsidised career development guidance that helps them to understand the future prospects of their current job and give them insight into their skills profiles 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.

Race / Ethnicity

No specific research was found on the impact of skills provision on race / ethnicity. However, it is worth re-iterating Hall et al's (2021) analysis (discussed in the barriers section above), which found that people from Black, Asian and Minority Ethnic (BAME) backgrounds were particularly likely to experience situational barriers such as cost and money. Despite this, Hall et al (2021) also found that white people are less likely to take part in learning than people from BAME backgrounds.

Statistics on the attainment of school leavers are worth highlighting here, showing that, in 2020/21, 94.7% of Asian-Chinese school leavers had one or more pass at SCQF Level 6 (Higher) or better. This compares to 66.0% for all school leavers (Scottish Government, 2022). Meanwhile, labour market statistics for Scotland by ethnicity show that in January to December 2021, when compared to the white groups, minority ethnic groups were more likely to be:

- self-employed and other
- not in contractually secure work
- underemployed (Scottish Government, 2022).

Disability

The literature found on the impact of skills provision on disability was similarly sparse. Leonard Christie (2019) conducted in-depth telephone interviews with seven working age disabled people, as well as a small quantitative survey with 503 UK employers. Although there are limitations due to this small sample size, meaning that the results cannot be generalised to the wider population, their research provides some insights into the challenges and barriers facing disabled people throughout their working lives. Around two thirds of employers in their survey said that the costs of workplace adjustments are a barrier to employing a

disabled person. Their research also found that working more flexibly is a central element of retaining disabled people in the labour market who would otherwise be forced to leave their job due to their disability. Addressing digital skills gaps and having access to innovative technology were also highlighted as ways in which to develop inclusive workplaces. They suggest that better awareness of artificial technology among employers would be helpful, including its capacity to enhance independent working for disabled people. The authors recommend artificial technology training as a core training component for employers.

Scotland specific literature

The literature search returned only one specific Scottish example for skills provision and equalities, focused on older workers. This was a report by the Chartered Institute of Personnel and Development (CIPD, 2022b) while aimed to help employers improve their understanding of older workers (defined as those aged 50 plus), enabling them to create better jobs and more fulfilling working lives. The report draws upon statistical analysis of the Annual Population Survey and Labour Force Survey, presenting UK data and Scottish data where sample size allows. The CIPD (2022b) note that one challenge for Scotland is that its population and workforce is ageing and as a consequence employers will need to improve how they attract, manage and develop workers as they get older. They report findings from the Labour Force Survey (LFS) which shows that there is a clear relationship between perception of career progression opportunities and age, with 22% of the oldest employees strongly disagreeing that their job offers good opportunities for career progression (based on UK data, APS January to December 2020). They use LFS UK data to show that older workers participate in less off-the-job training than younger workers and argue that skills investment needs rebalancing, with lifelong learning given more prominence. They also recommend using Individual Learning Accounts for older workers, which they say offer flexibility and individualisation, supporting learners throughout their working lives.

Conclusion

This report has explored the available published academic literature and policy / practice evidence on adult upskilling and retraining opportunities in Scotland and in the international context. It has looked at:

- What are the benefits of, and barriers to, lifelong learning?
- What are the strengths and weaknesses of the current adult skills system in Scotland?
- What can Scotland learn from the approach to work-based learning or upskilling and retraining elsewhere?
- What role do skills and training play in alleviating poverty and child poverty? Is there any Scottish specific evidence?
- What do we know about the impact of current skills provision on equalities? Is there any Scottish specific evidence?

Key findings

The review found that while literature on the benefits of, and barriers to lifelong learning is plentiful, evidence on the strengths and weaknesses of the Scottish skills system is less forthcoming. The OECD provides some evidence on lessons learned from outside Scotland and in the international context. Less literature was found on the impact of the skills system on poverty and equalities, including Scottish specific evidence.

The key findings from the literature review are:

Benefits of lifelong learning

- Literature on the benefits of lifelong learning was plentiful, with the evidence showing that there are economic and social benefits of lifelong learning, as well as wellbeing benefits for the individual.
- The economic benefits of lifelong learning are cited as including higher earnings and positive labour market outcomes, while wellbeing and social benefits include increased self-confidence and increased social capital.

Barriers to lifelong learning

- Literature on the barriers to lifelong learning was also forthcoming. Barriers are highlighted as dispositional (where an individual's attitudes and expectations limit participation); situational (where an individual's personal circumstances limit participation, being unable to afford training for example); and institutional (where structural and organisational factors limit access to training).

Strengths and weaknesses of the Scottish skills system

- Only limited evidence on the strengths and weaknesses of the Scottish skills system was found during the literature search.

- While literature on the strengths of the Scottish skills system is limited, flexibility is cited as a strength, including a flexible further education system which allows colleges to respond to the demands of their local labour market. The apprenticeship system is Scotland is also highlighted as a strength in the literature.
- Again, literature on the weaknesses of the Scottish skills system is limited. Where this does exist it tends to focus on Scotland's low productivity, as well highlighting a skills system that has an emphasis on young people and experiences wider challenges such as automation and an ageing population.

International literature

- Individual learning accounts, career guidance and digital learning were highlighted as areas in which some other countries do well. The evidence on micro-credentials, particularly at the international level, is still emerging and tends to be more mixed.
- The international literature also provides some general lessons for lifetime skills, work-based learning, upskilling and retraining. These include: the importance of awareness raising and accessible opportunities; the need for stakeholder engagement and for government, employers, training providers and stakeholders to work in partnership; the importance of overcoming barriers to learning; and the need to ensure quality training provision.
- Specific examples of workplace training are provided for the following countries: Singapore, Denmark, Finland, Estonia and New Zealand. However, the country search did not find any evaluations that provide robust evidence of impact or what works combined with a clear analysis of why.

Poverty and child poverty

- Limited evidence was found on the role of skills and training in alleviating poverty and child poverty, including any Scottish specific evidence. Where literature was found, this tends to focus on in-work poverty.
- Employers in a small-scale qualitative research study, identified training and in-work progression as a means of providing a route to better jobs for employees and a route out of poverty (Findlay et al, 2019).
- Through secondary data analysis of two large-scale British longitudinal datasets (the British Household Panel Survey / Understanding Society and Longitudinal Education Outcomes), the Social Mobility Commission (2020) find that one of the key factors that had a significant influence on pay progression was the total days of training.
- The literature search found only sparse literature on skills and child poverty. One example is provided by the Learning and Work Institute (2016) who cite evidence which shows the intergenerational importance of skills and find that if parents participate in learning and improve their skills, this can help their children to achieve better outcomes. In Scottish-specific qualitative research

on in-work progression and training, overcoming childcare barriers is highlighted as one way to help alleviate child poverty (Yaqoob and Shahnaz, 2021).

Equalities

- The literature relating to the impact of current skills provision on equalities is sparse. The majority of studies found are small scale and qualitative in nature or secondary analysis on large-scale datasets. Only one Scottish specific example was found, focusing on older workers.
- Where literature was found this was often focused on the barriers to lifelong learning or adult education and training that different equalities group face. For example, digital barriers and barriers to online learning were cited in the literature.
- Looking at the evidence on sex in particular, affordable childcare is seen to be a potential barrier for women's participation in work, study or training. Occupational segregation is one theme that emerges in the literature around skills and sex.
- Where literature was found on age, this tends to focus on older workers. Workplace flexibility and targeted training opportunities are highlighted as key strategies by which to achieve success in upskilling older workers.
- No specific research was found on the impact of skills provision on race / ethnicity, and the research evidence on disability was similarly sparse.

Policy implications

This literature review informs a wider review of the overall strategic approach to adult upskilling and retraining in Scotland, which will evaluate the impact and outcomes of current interventions and investments, and build an evidence base to develop options for an enhanced system of adult lifelong learning support targeted at those who need it most. The focus of the lifetime skills offer is likely to be on upskilling and retraining opportunities for working-age adults who are already in work and / or at risk of redundancy. The focus of the literature review has therefore been on adult work-based learning and retraining opportunities for those already in work.

Considering and reflecting on the evidence base presented in this paper, there are some areas for potential consideration / policy development. These are:

- Lifetime skills is an important policy area for Scotland, as shown through the benefits of lifelong learning cited in the literature. The flexibility of the current system is an important strength and should be maintained.
- As part of ongoing policy development, it may be helpful to consider how to increase awareness and use of skills related initiatives amongst employers, and explore with employers what works best / less well.
- Similarly, ensuring that people know what training and lifelong learning is available, the value it can bring, how they can access it and any costs /

financial support to take part, would help to increase awareness of training amongst employees.

- The international literature highlights the importance of working in partnership across government, employers, training providers and stakeholders. This suggests that working collaboratively with employers and stakeholders to explore how best to encourage employer investment in upskilling and retraining would be beneficial.
- The importance of high quality and flexible training support also emerged as themes in the literature. While the provision of high quality training is important for all, flexible training support could be particularly beneficial for people facing childcare barriers or older workers, for example.
- A key gap in the literature is the experiences of different equalities groups of the skills system in Scotland. An understanding of the different segments of the Scottish workforce was largely absent from the literature search, which could be the subject of further research and analysis.
- While the evidence on microcredentials is still emerging and at this early stage is mixed, it does highlight the importance of ensuring a framework that is consistent and is of a high quality standard.

Annex A: Methods

This report is based on a review of the literature carried out between September and November 2022. The focus of the literature review is on adult work-based learning and retraining opportunities for those already in work or at risk of redundancy.

The following search terms were used to find relevant literature:

- Adult and “lifelong skills” or “lifetime skills”
- Adult and “lifelong learning”
- “Adult education”
- Adult and “lifelong training”
- Adult and “training programmes”
- Scotland and Adult and training and workplace
- Scotland and work* and training
- Scotland and work* and skills
- Scotland and skills and (economy or “labour market” or productivity)
- Scotland and work* and learning
- Scotland and Adult and “training programmes”
- Scotland and Adult and (“lifelong skills” or “lifetime skills”)
- Scotland and Adult and “lifelong learning”
- Scotland and “adult education”
- Scotland and apprenticeship* and skills and (strengths or weaknesses)
- Scotland and apprenticeship* and training
- Scotland and (upskilling or reskilling or retraining)
- Scotland and (workforce or employee*) and training and barriers
- Scotland and Adult and (upskilling or reskilling or training or learning) and barriers
- Adult and (upskilling or reskilling or retraining or training or learning) and barriers
- “Work-based” or “workplace” and (skills or “lifelong learning” or training)
- Poverty and (skills or training)
- “Child poverty” and (skills or training)
- “In-work poverty” and (skills or training)
- Training and (awareness or promotion)
- Training and equalit* and barrier*
- (Upskilling or retraining) and equalit* and barrier*

- “Skills system” and international (or specific country) and “best practice”
- “Skills system” and international (or specific country) and “lessons learned”
- Scotland and (micro-credentials or micro-credentials)
- Benefits and limitations and (micro-credentials or micro-credentials)
- Scotland and “green skills”
- Strengths and “skills system” and Scotland
- Strengths and “skills initiatives “and Scotland
- Strengths and “skills programmes” and Scotland
- Strengths and “lifelong learning” and Scotland
- Strengths and (“lifelong skills” or “lifetime skills”) and Scotland
- Weaknesses and “skills system” and Scotland
- Weaknesses and “skills initiatives” and Scotland
- Weaknesses and “skills programmes” and Scotland
- Weaknesses and “lifelong learning” and Scotland
- Weaknesses and (“lifelong skills” or “lifetime skills”) and Scotland
- Training and (equalit* or sex or gender or race or age or “older workers” or disability) and Scotland
- Lifelong learning and (equalit* or sex or gender or race or age or disability) and Scotland
- Adult and lifelong learning and (equalit* or sex or gender or race or age or disability) and Scotland
- “Skills provision” and (equalit* or sex or gender or race or age or disability) and Scotland
- “Skills system” and (equalit* or sex or gender or race or age or disability) and Scotland
- “occupational segregation” and Scotland
- “older workers” and Scotland

The search was limited to English language texts published in the last 5 years. All working-age adults in work were in scope. Schools, formal further education, formal higher education and the unemployed were out of scope.

The following databases and websites were used to search for available literature:

- Idox
- Knowledge and Evidence: EBSCO Host
- Policy Commons
- ProQuest

- Google Advanced Search
- Google Custom Search
- OECD website
- European Commission website
- UNESCO “skills for work and life” website
- Government websites for specific countries of interest

The search yielded a sample of over 200 sources. The sources were collated and abstracts / introductions / summaries reviewed for relevance by Scottish Government Advanced Learning and Skills Analysis. From this 92 reports / papers were identified to review in full. Key findings from the literature were identified and organised into themes. It is this thematic analysis that forms the basis of the report.

Annex B: Case Studies

Singapore

The government of Singapore offers a variety of programmes targeted at working adults in the early stages of their careers, working adults at their mid-career stage and onwards, as well as at employers. This is mainly done through the SkillsFuture initiative, which aims to provide a variety of opportunities for all individuals to train, learn and develop at different stages of their lives.

SkillsFuture has four key objectives: (1) help individuals to make well-informed choices in education, training and careers through the development of an all-age careers advice and guidance service; (2) develop an integrated, high quality system of education and training that responds to constantly evolving industry needs; (3) promote employer recognition and career development based on skills and mastery through employer involvement in designing and implementing a framework to enable employees to advance their careers through skills ladders; and (4) foster a culture that supports and celebrates lifelong learning, which will include promoting the habit of learning throughout life (SSG | AboutSkillsFuture).

One programme introduced in 2015 and administered as part of SkillsFuture is the SkillsFuture Credit (SFC). The programme provides every Singapore Citizen aged 25 and above, regardless of their employment status, with an opening credit of S$500 (£274) to access lifelong learning opportunities and advance their skills in an autonomous and flexible manner. For further reskilling and upskilling opportunities, the One-Off SkillsFuture Credit Top-Up of S$500 cn be used by all eligible individuals on all SkillsFuture eligible courses. Singapore Citizens aged 40 to 60 (inclusive) can also use the Additional SkillsFuture Credit (Mid-career support) of S$500 (SSG | SkillsFuture Credit).

Webb et al (2018) highlights some lessons learned from Singapore's SkillsFuture Credit scheme. They find that creating a culture of adult learning requires significant investment, the identification of training needs with government support, and subsidy. They also suggest that helping citizens keep up-to-date with changing working practices improves labour market adaptability and resilience. Kelly et al (2020) also praise the SkillsFuture programme, stating that "SkillsFuture has empowered tens of thousands of Singaporean workers to access and take control of their lifelong learning". They suggest that it has also increased supply of new, emerging and priority skills such as data analytics and cyber security. In their report on the future of Scotland's skills system, Kelly et al (2020) argue that a Fund with similar objectives in Scotland would be an important intervention to support and accelerate reskilling and upskilling. An example they give is a worker using the fund to finance a digital upskilling course in their early career, followed by a further or higher education qualification to develop leadership and management skills mid-career, and then access online learning to reskill in late career, perhaps in response to technological change or redundancy.

Very little evidence was found on the effectiveness of the SkillsFuture programme, with the OECD (2020) noting that the reforms should be evaluated within their

broader policy context. Soojin et al (2021) use a mixed-methods case study approach that includes survey data and interviews to explore experiences of the SkillsFuture Credit programme specifically. They find that while most respondents are satisfied with the programme, there are low participation rates driven by time and cost barriers. The factors driving active participation in the programme include individuals' self-interest in learning and the degree to which the courses that individuals choose match industry needs.

Denmark

Denmark provides an example of where there is an extensive system of labour market training courses focused on vocational training. These are aimed at unskilled and skilled employees in industry, commerce and public services. Termed 'AMU courses', such courses receive funding through a combination of state support and contributions from employers. The training courses are provided by labour market training centres or by vocational schools or colleges, with courses covering aspects such as basic skills training of unskilled adult employees aged 25 and over and certificated courses needed for specific jobs (Andriescu et al, 2019).

In their review of adult learning systems, the OECD (2019) note that Denmark has a well-financed adult learning system that is inclusive, flexible and aligned with labour market need. In their data review of adult education and adult skills in Denmark, Rasmussen (2018) find that the strengths of the Danish system are: (1) vocational education through the AMU courses has strong links to social partners; (2) the adult education and learning system is versatile and offers relevant types of education and learning for different purposes and different groups; and, as such, (3) there are high levels of participation in adult education.

Again, no evidence was found on the impact of labour market training courses in Denmark.

Finland

Larjanko (2017) provides an overview of the adult learning system in Finland. They note that in Finland, adult learning covers vocational training and general education as well as formal, non-formal and informal learning. An adult learner in Finland is defined as someone who is over 25. One of the stated principles of Finnish education is that everyone must have equal access to high-quality education and training and the same opportunities to education should be available to all citizens irrespective of their ethnic origin, age, wealth or where they live.

An evidence review by the OECD (2020) finds that Finland's skills development system is one of the most successful in the OECD, stating that its adult population has some of the highest levels of literacy and numeracy in the OECD (according to PIAAC, the Programme for the International Assessment of Adult Competencies). The OECD (2020) note that many continue learning over the life-course, as two in three adults participate in formal or non-formal learning activities every year. According to the OECD's assessment, the strengths of the Finnish system include its versatility and active participation. Education is free or affordable and is available flexibly. Despite this, however, Finland has one of the largest gaps in OECD

countries in learning participation between adults with low basic skills and those with higher skills levels. The OECD identifies particular development needs in the provision of short-term education and training, the alignment of education and training with labour market needs, and financial incentives.

The OECD (2020) provide detail of a Finnish basic skills training programme for adults, implemented by the Ministry of Education and Culture between 2003 and 2009. The NOSTE programme aimed to raise the educational attainment of adults without secondary education who were already in the labour market. The programme was developed by the Finnish Parliamentary Adult Education and Training Committee and its goal was to improve the labour market prospects of this group by providing an opportunitiy to: attain a vocational upper secondary qualification or specialist vocational qualifications; undertake IT training; or finish initial education. An important project feature was to link education to the work environment. Participation was free of charge apart from examination fees and the total budget was EUR 124.5 million. The programme was delivered in the form of 59 regional projects provided by a network of various education institutions including vocational adult centres, schools and job centres. Over the implementation period, the programme reached 73% of its initial target and an evaluation of the programme found that it improved self-esteem and work motivation, but failed to improve labour market outcomes (for example, higher wages or new positions). However, the programme increased awareness about the importance of adapting educational programmes to include those with low qualifications and encouraged co-operation between stakeholders (OECD, 2020).

Another programme example worthy of note is the Finnish Workplace Development Programme (FWDP), which was launched in 1996 and ran until 2009. The FWDP is a government-funded programme that aims to improve productivity and the quality of working life in Finnish workplaces. Its focus is on innovation and the use of skills in the workplace. It uses an application based system to fund the use of external experts in workplace development projects (Payne, 2004).

It was funded by central government (the Ministry of Labour) and in 2008 around 2,000 projects were funded for a total of 516 million Euros. There was a focus on SMEs, with around half of employers receiving funding employing 10 or fewer employees (OECD, 2010). Evaluations of the programme are limited, with Payne (2004) arguing that there is very little evidence available to answer the question as to how effective the programme has been in delivering “the better job”. In their evidence, Buchanan et al (2010), cite literature which found that the programme had a positive impact across a number of measures including team work, staff competence, access to training and learning and co-operation between employees and employers.

Estonia

In their evidence review of 28 country reports, Andriescu et al (2019) find that Estonia provides a good example of collabarative working to deliver lifelong learning. The Estonian Lifelong Learning Strategy encourages co-ordination between different levels and forms of learning including Government departments

and agencies responsible for education, labour markets, employment and enterprise. Together these agencies co-ordinate, plan, monitor and implement various programmes linked directly and indirectly to adult learning, with the Lifelong Learning Strategy "helping to focus their attention in a single document". Using the Strategy as their starting point, Estonia created various working groups, committees and partnership meeting as vehicles through which collaborative and joint working took place. The Lifelong Learning Strategy targets groups most in need including the low skilled and those out of work.

The OECD (2020) also highlight the Estonian Lifelong Learning Strategy as an example of a comprehensive strategy that is used to set priorities and guide funding decisions. It sets out strategic priorities for adult learning, such as increasing adult learning participation and raising adult qualification levels.

To implement the Estonian Lifelong Learning Strategy, the Ministry of Education and Research has adopted nine programmes, including the Adult Education Programme 2017 to 2029. The programme sets the national framework for adult learning policy in Estonia. The main goal of which is to motivate adults to learn and to create flexible and high quality learning opportunities that are based on the needs and developments of the labour market (Haaristo, 2018). The adult learning programme aims to: (1) help adults return to formal education; (2) strengthen on-the-job training and retraining; and (3) improve the labour market relevance of training (OECD, 2020). As Haaristo (2018) notes, the purpose of the adult learning programme is to increase access to and the quality of non-formal training and retraining (including activities such as increasing the quality, flexibility and reliability of further training; providing opportunities for further training and retraining; and developing the competencies of adult trainers); and develop the qualifications system and create and support forms of co-operation to implement the lifelong learning approach. The latter includes activities such as developing an occupational standards system, supporting co-operation between different stakeholders and developing new funding principles for further training. However, evidence on the outcomes or impact of the Estonian Adult Learning Programme was not found during the literature search.

New Zealand

New Zealand provides two interesting examples in terms of their Workplace Literacy and Numeracy Fund and their adoption of micro-credentials.

The New Zealand Workplace Literacy and Numeracy Fund supports the provision of literacy and numeracy programmes for employees to increase their literacy and numeracy skills, and contribute to workplace productivity. The aim of the Fund is to: (1) increase the literacy and numeracy skills of employees; and (2) contribute to workplace productivity through the provision and evaluation of literacy and numeracy learning in a workplace context. This is achieved by: (1) providing literacy and numeracy programmes of study or training to employees; and (2) supporting workplaces to establish sustainable workplace literacy and numeracy provision (TEO-led Workplace Literacy and Numeracy Fund | Tertiary Education Commission (tec.govt.nz)).

Guy and Harvey (2013) and Gray and Sutton (2007) discuss the New Zealand Workplace Literacy and Numeracy Fund. It is demand-led with employers applying to the New Zealand Government's Tertiary Education Commission (TEC) who administer the Fund. To be eligible for funding, the employer must be a corporate body and provide a literacy and or numeracy programme to a minimum of 20 employees or be part of a consortium agreement with other employers that delivers literacy, numeracy, or literacy and numeracy, provision to a minimum of 20 employees.

The Fund supports literacy and numeracy programmes that are relevant to the employers' workplace, delivering 40 hours of learning over a 10 to 40 week period, and providing a maximum of NZ$3,700 per employee. Eligible employees are those who: (1) cannot perform the reading, writing, numeracy or digital technology demands of the job or who have insufficient English language skills to communicate at work; (2) are New Zealand citizens or residents; (3) are employed in the paid workforce; and (4) are not full-time students or simultaneously accessing other TEC-funded programmes. Employers are expected to make a financial contribution, with the average contribution of employers approximately 30% of the total programme cost.

Gray and Sutton (2007) conducted interviews with a sample of employers and providers that applied to the Fund in 2006. Employers and providers identified the following factors for a programme to be successful: making the programme a priority; quality teaching by a tutor who "fits" the company; programmes that meet employer needs; and good employer-provider relationships. However, as noted by Guy and Harvey (2013), there is a lack of evidence on the outcomes of Fund delivery.

New Zealand also provides a more recent example on the use of micro-credentials, with the OECD (2021) stating that "New Zealand has been one of the front-runners in national policy making around micro-credentials". As the OECD (2021) note in their evidence review, the New Zealand Government views micro-credentials as a complement to traditional higher education, with micro-credential programmes viewed as a stand-alone education offering with compulsory employer involvement. The New Zealand Qualifications Authority (NZQA) created a quality assurance system for micro-credentials in 2018, defining them in specific regulations and quality standards. The New Zealand Tertiary Education Commission started providing funding to higher education providers for the development and delivery of micro-credential programmes in 2019. Providers of micro-credentials must demonstrate that their programmes do no duplicate existing higher education programmes and address unmet skills needs. The providers are also required to prove their capacity to deliver quality education. In their 2021 report, the OECD state that there are currently about 150 NZQA-approved micro-credential programmes offered by higher education institutions and other training providers. However, OECD (2021) does not report on any evaluations of the programmes and as such programme outcomes are not apparent.

In general, the country search did not find any evaluations that provide robust evidence of impact or what works combined with a clear analysis of why.

Annex C: References

Adams, Lorna; M. Winterbotham; S. Svaneas and C. Downing (2017) *Employer experiences of recruiting, retaining and retraining older workers. Qualitative research*. London, Department for Work and Pensions

Andersson, E. (2018) *Independent national experts network in the area of adult education / adult skills. Full country report - Sweden. European Commission.* Luxembourg: Publications Office of the European Union

Andriescu, M.; S. Broek; D. Dohmen; J. Molyneux and M. Ravenhall (2019) *Adult learning policy and provision in the Member states of the EU.* Brussels, European Commission

Barnes, M. and C. Lord (2013) *Poverty, economic status and skills: what are the links?* York, Joseph Rowntree Foundation

Brown, M. et al (2021) *The Global Micro-credential landscape: charting a new credential ecology for lifelong learning*. "Journal of Learning for Development", Vol.8, No.2, pp. 228-254

Buchanan, J.; L. Scott; S.Yu; H. Schutz and M. Jakubauskas (2010) *Skills demand and utilisation. An international review of approaches to measurement and policy development.* Paris, OECD Publishing

Callander, R.; R. Gunson and C. Murray (2018) *The future is coming: ready or not? Delivering a successful 21st century skills system for Northern Ireland and Scotland*. Edinburgh, IPPR Scotland

Cedefop (2020) *Empowering adults through upskilling and reskilling pathways: volume 1 - adult population with potential for upskilling and reskilling*. Luxembourg, Publications Office of the European Union

Cedefop (2020) *Empowering adults through upskilling and reskilling pathways: volume 2 – analytical framework.* Luxembourg, Publications Office of the European Union

Cedefop (2019) *Apprenticeships for adults: results of an explorative study*. European Centre for the Development of Vocational Training. Luxembourg, Publications Office of the European Union

Cedefop (2019) *Implementing a holistic approach to lifelong learning: community lifelong learning centres as a gateway to multidisciplinary support teams*. Luxembourg, Publications Office of the European Union

Cedefop (2017) *Investing in skills pays off. The economic and social cost of low-skilled adults in the EU*. "Cedefop research paper", No. 60. Luxembourg: Publications Office

CIPD (2022a) *Gaps and opportunities: employer views on skills policy in Scotland.* London, Chartered Institute of Personnel and Development.

CIPD (2022b) *Understanding older workers in Scotland: analysis and recommendations to support longer and more fulfilling working lives*. London: Chartered Institute of Personnel and Development

Close the Gap (2016) *Scottish Parliament Debate on Gender and the Workplace, June 2016.* Edinburgh, Close the Gap Briefing

Department for Work and Pensions (2021) *Households below average income: for financial years ending 1995 to 2020.* London, DWP.

Desjardins, Richard (2019) *The labour market benefits of adult education from a global perspective* "International Review of Education", Vol, 65, pp.955–973

Desjardins, R.; D.S. Olsen and T. Midtsundstad (2019) *Active ageing and older learners - skills employability and continued learning*. "European Journal of Education", Vol. 54, No. 1, pp. 1-4

Desmarchelier, R. and L.J. Cary (2022) *Toward just and equitable micro-credentials: an Australian perspective.* "International Journal of Educational Technology in Higher Education", Vol. 19, No. 25, pp. 1-12

EKOS (2023) *Evaluation: Flexible Workforce Development Fund (FWDF).* Edinburgh, The Scottish Government

EKOS (2018) *Evaluation of the first year of the Flexible Workforce Development Fund.* Edinburgh, The Scottish Government

European Commission / Eurydice (2021) *Adult education and training in Europe. Building inclusive pathways to skills and qualifications. Eurydice Report.* Luxembourg, Publications Office of the European Union

European Commission (2019) *Key Competencies for Lifelong Learning.* Luxembourg, Publications Office of the European Union

Eynon, Rebecca (2021) *Becoming digitally literate: reinstating an educational lens to digital skills policies for adults*. "British Educational Research Journal", Vol. 47, No. 1, pp.146-162

Eynon, R. and L. Malmberg (2021) *Lifelong learning and the Internet: who benefits most from learning online?* "British Journal of Educational Technology", Vol. 52, No. 2, pp. 569-583

Findlay, P.; C. Lindsay, A. Watson and D. Young (2019) *Influencing employers so more people break free from poverty through work.* York, Joseph Rowntree Foundation

Future Learn (2022) *The Future of Learning Report*. London, Future Learn

Gallacher, J. and F. Reeve (2019) *FE and skills in Scotland: the implications of a policy led and 'managed' approach*. "Journal of Education and Work", Vol. 32(3), pp. 238-250

Goglio, V. and S. Bertolini (2021) *The contribution of MOOCs to upskilling the labor force.* "Journal of Workplace Learning", Vol. 33, No. 7, pp.561-574

Government Office for Science (2017) *Future of Skills and Lifelong Learning.* London, Government Office for Science

Gray, A. and A. Sutton (2007) *The Workplace Literacy Fund. A review*. New Zealand, Department of Labour

Green, Andy (2021) *Models of Lifelong Learning and Their Outcomes: How distinctive is the 'Nordic Model' now?* "LLAKES Research Paper 70". London, Centre for Research on Learning and Life Changes

Gunson, R.; C. Murray and I. Williamson (2018) *The skills system in Northern Ireland: challenges and opportunities.* Edinburgh, IPPR Scotland

Guy, S. and S. Harvey (2013) *Going it alone: New Zealand company-sponsored language, literacy and numeracy (LLN) training in an era of government funding*. "Journal of Education and Work", Vol. 26, No. 3, pp. 309-332

Haaristo, H.S. (2018) *Independent national experts network in the area of adult education / adult skills. Full country report - Estonia. European Commission.* Luxembourg: Publications Office of the European Union

Hall, S.; E. Jones and S. Evans (2021) *Adult participation in learning survey 2021.* Leicester, National Learning and Work Institute

Hughes, D., J. Higton, A. Beard, G. Birkin, A. Corley and C. Milner (2019) *What motivates adults to learn? A rapid evidence review of what drives learning new skills in the workplace.* London, NESTA

Hughes, D. and K. Adriaanse (2017) *Adult education: important for health and wellbeing.* Warwick, Institute for Employment Research

ICF Consulting (2015) *An in-depth analysis of adult learning policies and their effectiveness in Europe.* Brussels, European Commission, Directorate General for Employment, Social Affairs and Inclusion

Innes, D. (2018) *The links between low productivity, low pay and in-work poverty*. York, Joseph Rowntree Foundation

Institute for Employment Studies (2019) *Progression in employment (IES Briefing).* Brighton, Institute for Employment Studies

Kantar Public and Learning and Work Institute (2018) *Decisions of Adult Learners.* London, Department for Education

Kanwar, A., K. Balasubramanian, and A. Carr (2019) *Changing the TVET Paradigm: New Models for Lifelong Learning.* "International Journal of Training Research", Vol. 17, pp. 54-68

Kelly, David et al (2020) *Upskilling Scotland: the future of skills and the fourth industrial revolution.* Glasgow, Scottish Council for Development and Industry

Kelly, J-F., M. Mitchell and R. Zymek (2018) *Wealth of the nation: Scotland's productivity challenge*. Edinburgh, David Hume Institute

Kuczera, M. (2017) *Striking the right balance: costs and benefits of apprenticeships.* OECD Working Papers No. 153. Paris, OECD Publishing

Larjanko, J. (2017) *Independent national experts network in the area of adult education / adult skills. Full country report - Finland*. Brussels, European Commission

Learning and Work Institute (2017) *Healthy, wealthy and wise: the impact of adult learning across the UK 2015-17.* Leicester, National Learning and Work Institute

Learning and Work Institute (2016) *Skills and poverty. Building an anti-poverty learning and skills system.* Leicester, National Learning and Work Institute

Leonard Cheshire (2019) *Reimagining the workplace: disability and inclusive employment*. London, Leonard Christie

Massing, N. and B. Gauly (2017) *Training participation and gender: analysing individual barriers across different welfare state regimes*. "Adult Education Quarterly: A Journal of Research and Theory", Vol. 67, No. 4, pp. 266-285

Moodie, G. and L. Wheelahan (2022) *Credentialing micro-credentials*. "Journal of teaching and learning for graduate employability", Vol. 12, No. 1, pp. 58-71

Mühlemann, S. (2016) *The Cost and Benefits of Work-based Learning*. "OECD Education Working Papers", No. 143. Paris, OECD Publishing

Narushima, M. L. Jian and N. Diestelkam (2018) *Lifelong learning in active ageing discourse: its conserving effect on wellbeing, health and vulnerability*. "Ageing and Society", Vol. 38, No. 4, pp. 651-675.

OECD (2022) *Future-proofing adult learning systems in cities and regions*. Paris, OECD Publishing

OECD (2022) *Strengthening Apprenticeship in Scotland, United Kingdom.* OECD Reviews of Vocational Education and Training. Paris, OECD Publishing.

OECD (2021) *Education at a Glance 2021: OECD indicators.* Paris, OECD Publishing

OECD (2021) *Improving the Quality of Non-Formal Adult Learning. Learning from European Best Practices on Quality Assurance*. Paris, OECD Publishing

OECD (2021) *Micro-credential innovations in higher education: Who, What and Why?* "OECD Education Policy Perspectives", No. 39. Paris, OECD Publishing

OECD (2021) *Quality and value of micro-credentials in higher education: Preparing for the future*. "OECD Education Policy Perspectives", No. 40. Paris, OECD Publishing

OECD (2021) *Skills Outlook 2021: learning for life*. Paris, OECD Publishing

OECD (2020) *Continuous Learning in Working Life in Finland*. Paris, OECD Publishing

OECD (2020) *Getting Skills Right. Increasing adult learning participation. Learning from successful reforms.* Paris, OECD Publishing

OECD (2020) *Strengthening Skills in Scotland: OECD review of the apprenticeship system in Scotland*. Paris, OECD Publishing

OECD (2019) *Getting Skills Right: Future-Ready Adult Learning Systems*. Paris, OECD Publishing

OECD (2019) *Individual Learning Accounts: Panacea or Pandora's Box? Paris*, OECD Publishing

OECD (2018) *Ageing and Employment Policies: United States 2018: Working Better with Age and Fighting Unequal Ageing, Ageing and Employment Policies*. Paris, OECD Publishing

OECD (2010) *Innovative workplaces: making better use of skills within organisations.* Paris, OECD Publishing

Olcott Jr., D. (2022) *Micro-credentials: a catalyst for strategic reset and change in U.S. Higher Education*. "American Journal of Distance Education", Vol. 36, No. 1, pp. 19-35

Oliver, B. (2022) *Towards a common definition of micro-credentials.* Paris, UNESCO

Panagiotakopoulos, A. (2019) *In-work poverty: reversing a trend through business commitment.* "Journal of Business Strategy", Vol. 40, Issue 5, pp. 3-11

Parliamentary Office of Science and Technology (2021) *Upskilling and retraining the adult workforce.* London, POSTnote No.659

Paull, G. and T. Patel (2012) *An international review of skills, jobs and poverty.* York, Joseph Rowntree Foundation

Payne, J. (2004) *Workplace innovation and the role of public policy: evaluating the impact of the Finnish Workplace Development Programme: limits and possibilities*. SKOPE Research Paper No. 46. Warwick, SKOPE

Pember, S.; H. Tilley; J. Price; L. Peixoto Gomes (2021) *Supporting the Welsh lifelong learning system.* Cardiff, Wales Centre for Public Policy

Pena-Casas, R.; D. Ghailani; S. Spasova; and B. Vanhercke (2019) *In-work poverty in Europe.* Brussels, European Commission

Pennacchia, J; E. Jones and F. Aldridge (2018) *Barriers to learning for disadvantaged groups: a report of qualitative findings.* London, Department for Education

Rasmussen, P. (2018) *Independent national experts network in the area of adult education / adult skills. Full country report - Denmark. European Commission.* Luxembourg: Publications Office of the European Union

Richards, J. and K. Sang (2015) *In-work poverty: lessons for employers and HR practitioners*. London, CIPD

Rickard, C. and D. Brown (2021) *Digital learning in a post-COVID-19 economy: a literature review.* London, Chartered Institute of Personnel and Development

Schuller, Tom (2017) *What are the Benefits of Learning Across the Life Course?* London, Government Office for Science

Scottish Government (2022) *Adult learning strategy 2022 to 2027.* Edinburgh, The Scottish Government

Scottish Government (2022) *Labour Market Statistics for Scotland by Ethnicity.* Statistics from the ONS Annual Population Survey, first published 14 December 2022. Edinburgh, The Scottish Government

Scottish Government (2022) *Scotland's National Strategy for Economic Transformation.* Edinburgh, The Scottish Government

Scottish Government (2022) *Summary Statistics for Attainment and Initial Leaver Destinations, No. 4: 2022 Edition. 22 February 2022.* Edinburgh, The Scottish Government

Scottish Government (2022) *National Transition Training Fund (NTTF) Year 1 Report.* Edinburgh, The Scottish Government.

Scottish Government (2022) *Persistent Poverty in Scotland 2010-2020*. Edinburgh, The Scottish Government

Scottish Government (2022) *Scottish Employer Perspectives Survey 2021*. Edinburgh, Scottish Government

Scottish Government (2022) *Workplace learning*. Edinburgh, The Scottish Government

Scottish Government (2020) *Scottish Employer Skills Survey 2020*. Edinburgh, Scottish Government

Scottish Government (2019) *Scotland's Future Skills Action Plan*. Edinburgh, the Scottish Government

Selvaratnam, R. and M. Sankey (2021) *The State of Micro-credentials implementation and practice in Australasian Higher Education*. "Open Praxis", Vol. 13, No. 2, pp. 228-238

Social Mobility Commission (2020) *Learning ladders: the role of adult training in supporting progression from low pay.* London, Social Mobility Commission

Soojin, K.; W.C. Zheng; J. Qi; A. Mussagulova (2021) *A case study of the Singapore SkillFuture Credit scheme: preliminary insights for making lifelong learning policy more effective".* "Asian Journal of Political Science", Vol. 29, No. 2, pp. 192-214

SQW (2023) *Individual Training Accounts Evaluation*. Edinburgh, The Scottish Government

Thomas, R. and R. Gunson (2017) *Scotland Skills 2030. The Future of Work and the Skills System in Scotland.* Edinburgh, IPPR Scotland

Tregaskis, O. and A. Nandi (2018) *Adult education and life satisfaction (briefing*). London, What Works Centre for Wellbeing

Tsoukalas, John (2021) *Scotland's productivity challenge: exploring the issues*. "Productivity Insights Paper No. 006". Manchester, The Productivity Institute

UNESCO (2022) *Transforming technical and vocational education and training for successful and just transitions.* Paris, UNESCO

UNESCO (2021) *Integrated Approaches to Literacy and Skills Development: Examples of Best Practice in Adult Learning Programmes.* Hamburg, UNESCO Institute for Lifelong Learning

Webb, J.; A. Parken; H. Hodges and M. Mathias (2018) *Promoting job progression in low pay sectors.* Cardiff, Wales Centre for Public Policy

Werquin, P. (2018) *Independent national experts network in the area of adult education / adult skills. Full country report - France. European Commission.* Luxembourg: Publications Office of the European Union

Yaqoob, T. and I. Shahnaz (2021) *Freeing low-income single parents from in-work poverty's grip*. York, Joseph Rowntree Foundation

Zemanik, M. (2022) *What is the scale and impact of graduate overqualification in Scotland?* London, Chartered Institute of Personnel and Development (CIPD)

Zemanik, M. (2022) *Working Lives Scotland 2022.* London Chartered Institute of Personnel and Development (CIPD)

social research

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

This document is also available from our website at www.gov.scot.
ISBN:978-1-80525-627-4

The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

Produced for
the Scottish Government
by APS Group Scotland
PPDAS1261082 (04/23)
Published by
the Scottish Government,
April 2023

GSR
GOVERNMENT SOCIAL RESEARCH
Social Science in Government

Social Research series
ISSN 2045-6964
ISBN 978-1-80525-627-4

Web Publication
www.gov.scot/socialresearch

PPDAS1261082 (04/23)