

Does Scotland need a digital wallet for skills?

From imagination to action series

Discussion paper by
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Context

A workforce, with individuals keeping their knowledge and skills up to date throughout their lives, is critical for the economy to thrive. In 2021 the OECD identified the challenge of lifelong learning as a structural reform priority for the UK economy.¹

The training and skills landscape is complex. This paper does not analyse the whole education and skills landscape in detail but looks at key areas relevant to a digital wallet for skills and the potential impact on productivity and skills investment.

This paper discusses the size and nature of the skills challenge. Analysis shows failing to fill skills shortage vacancies and not supporting workers to become fully proficient in their roles could be costing Scotland over £527m a year.

In its simplest form a digital wallet for skills is a collection of digitalised training certificates and qualification accreditation held by individuals in the form of a digital token.

This paper explores if a digital wallet for skills is critical missing infrastructure for both employers and individuals, saving both time and money - ultimately helping the economy to thrive.

The skills challenge

Skills development drives a thriving economy. The Scottish Government's National Strategy for Economic Transformation (NSET) states "a skilled population is fundamental to business productivity and economic prosperity".²

In 2019, Scotland had the highest proportion of the workforce completing tertiary education in EU+ states.³ However, many employers experience skill-shortages, recruitment difficulties and skills gaps in the workplace, alongside training and workforce development challenges.⁴

For individuals, a clear sense of their own transferable skills and what skills are in demand is crucial. This could assist employability, confidence, job seeking and has potential to increase job satisfaction and career progression. As the NSET notes, "skills enable people to more effectively participate and progress in the labour market and lead fulfilling lives".⁵

The 2022-23 Scottish Budget allocated £271.9m to skills and training of which 83% goes to Skills Development Scotland with the remaining, £46.3m under the budget heading employability and skills going on programmes such as "No One Left behind".⁶

The Scottish Government has produced several recent documents in relation to skills and their broader place within the economy:

- Climate Emergency Skills Action Plan 2020 - 2025 (December 2020)⁸
- Future skills: action plan (March 2021)⁹
- National Strategy for Economic Transformation (March 2022)¹⁰
- Skills: shared outcomes framework (March 2022)¹¹
- Adult learning strategy 2022 to 2027 (March 2022)¹²

An independent review of the skills delivery landscape also began in September 2022 and the independent advisor is expected to report to ministers with recommendations in Spring 2023.

Under the 2014-2020 European funding programme, Scotland benefited from over £780m through the European Regional Development Fund and the European Social Fund which included work on skills and employability.¹³ The UK Government has introduced the UK Shared Prosperity Fund (UKSPF) to replace EU funding. New initiatives, such as £559 million funding for the Multiply adult numeracy programme, are a UK wide investment rather than a decision which produces Barnett consequential.¹⁴

Employers also invest in skills and training for employees. In the last year for which the relevant financial data is available, 2017, employers in Scotland spent £3.7bn on skills and training.¹⁵ This was the equivalent of £1.5k per employee. However, in 2020, only 1 in 2 employees (55%) received training - or 1.3 million workers. Only 59% of employers had provided any training to staff in the previous year and 50% of this was on the job training.¹⁶ Both of these measures are down considerably compared to 2015 and 2017.

“I have done training and have been developing my skills but I cannot collate it all easily in one place. I could be better organised but I just get so busy dealing with the day to day that I forget. There is data on my training in multiple places and that just makes being organised even harder.”

Anna, employee

Building knowledge and skills in the workplace improves productivity and drives a healthy economy.¹⁷ Skills developed in people’s personal lives can then help them in work. However, through our research on The Great Risk Transfer and Understanding Scotland: Economy, we know that increasing numbers of people are living with severe financial stress and large numbers of people are losing sleep. This undoubtedly affects people’s capacity to take on formal training or skills development outside of employment.

Some employers require evidence of accredited training for regulatory and/or health and safety reasons, such as Gas Safe Registered (formerly CORGI) gas engineers. Other essential “Meta-skills” - timeless, higher order skills such as critical thinking - are also in high demand and can be developed in different spheres of life, including through voluntary work.¹⁸

The scale and nature of the skills challenge

There are job vacancies and skills shortages the length and breadth of Scotland. The Scottish Employer Skills Survey states that Scotland has twin skills challenges; external and internal. The external skills challenge refers to recruitment and skills shortage vacancies, whilst the internal skills challenge refers to skills gaps, under-utilisation of skills and the need for upskilling.¹⁹

Figure 1 shows the impact of skills shortages on the rest of the workforce. 83% of respondents in the employer skills survey highlighted the increased workload for other staff. One in two state they are having difficulty meeting customer service objectives.

Figure 2 shows the impacts and implications of skills gaps in the workplace. 67% of employers with skills gaps reported these having an impact on performance, with 12% reporting a major impact. The most common impacts were an increased workload for other staff and higher operating costs.

Figure 1. Impact of skills shortage vacancies.²⁰

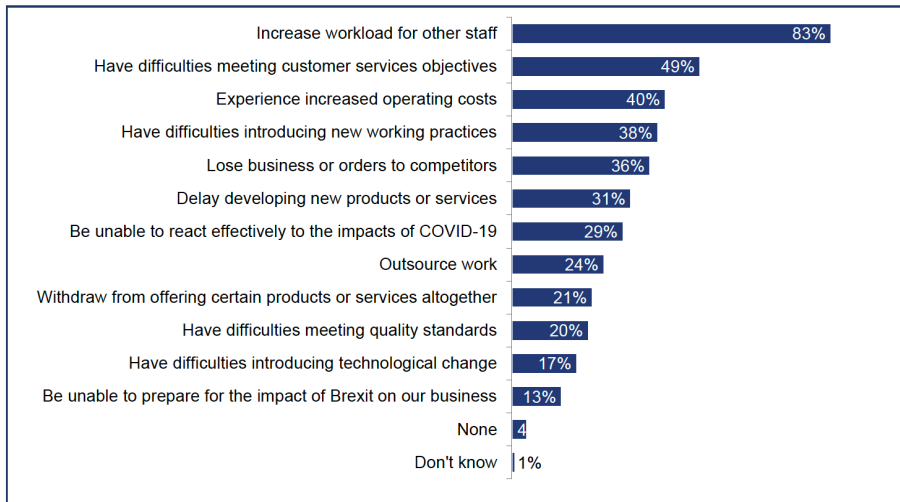


Figure 2. Impacts of skills gaps and implications of skills gaps.²¹

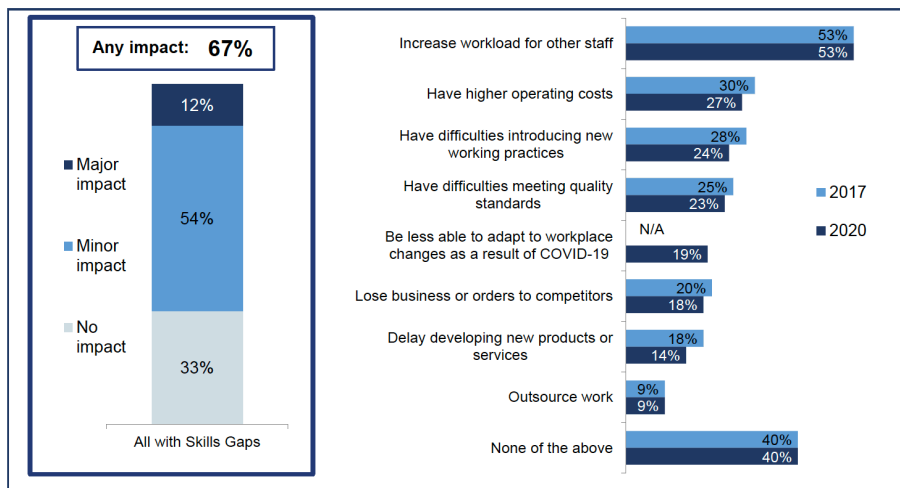


Figure 3. Skills lacking among applicants to skill shortage vacancies.²²

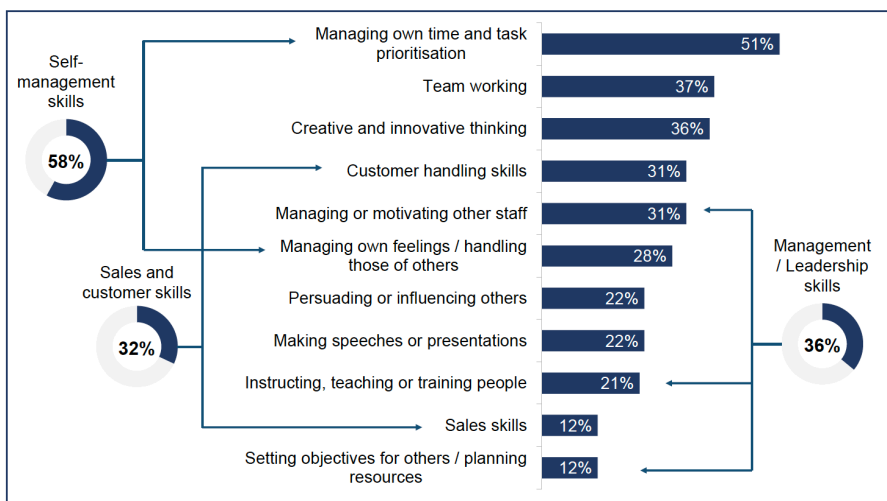
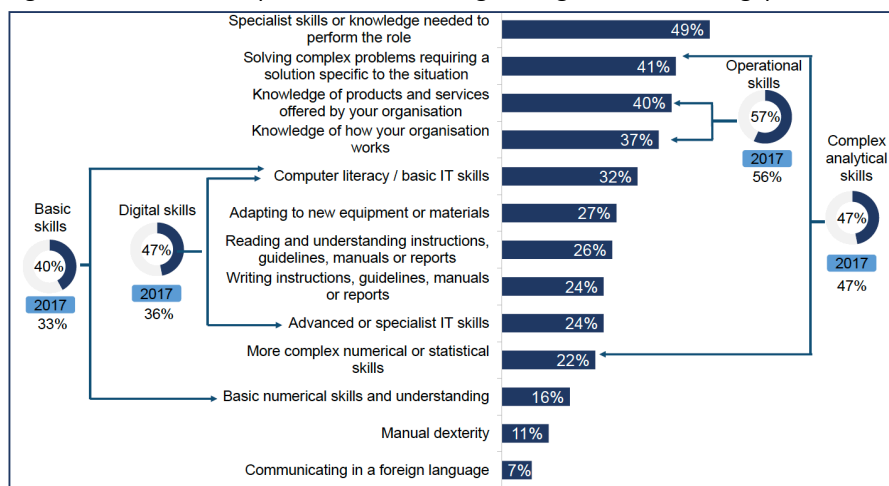


Figure 3 shows the skills lacking among applicants to skills shortage vacancies. Managing one's own time and prioritising workload are the top skills, closely followed by team working and creative thinking skills.

Figure 4 shows the technical and practical skills lacking among staff with skills gaps, broken down into operational skills, complex analytical skills, digital skills, and basic skills.

Figure 4. Technical and practical skills lacking among staff with skills gaps.²³



We analysed the eighteen skills investment plans from Skills Development Scotland, broken down by region and sector. There are four common issues which can be broadly categorised as:

- Missing skills in the labour market and barriers to up/reskilling
- A shortage of information on skills as well as a lack of communication of information which is known
- Difficulty in attracting and retaining people to work in particular sectors or regions
- A lack of coordination and collaboration between different actors in the skills landscape.

Issues validating prior learning

Even when training has taken place, individuals and employers told us of difficulties in validating prior learning. In some cases this led to people repeating training they had already carried out. Duplicated training wastes both time and money. We also heard from individuals who have struggled to keep track of their own learning and development which impacts on their career progression.

“Currently, certificates are paper. They can be tatty and dirty being carried around from site to site... expiry dates or names are often partly smudged. But it is my responsibility to check and if something goes wrong the buck stops with me. I need proof that operators are qualified to climb trees and to use specific, dangerous pieces of kit. An electronic system that can easily be accessed would make my job easier – I’d be able to comply more easily and above all I’d have greater certainty around safety.”

Eoin, business owner

The cost of doing nothing

In 2020 Scotland had 47,500 vacancies, of which 10,100 were skills shortage vacancies.²⁴ In 2020 Scotland's GVA per head of working population was £26,572. Failing to fill skills shortage vacancies means Scotland is losing out on at least £268.4m per year.²⁵ On top of this, there were 97,400 workers who were not fully proficient in their roles.²⁶

Box 1: Social care case study

Scottish Care represents private sector social care providers. It would like to see greater progress on transferable skills and shared training in the social care sector. Scottish Care is also keen to see measures which enhance the status of the social care profession to help recruit and retain more social care workers.

In 2020 managers reported skills gaps including infection prevention and control, digital skills, trauma informed practice and quality improvement. These are not skills and training areas unique to social care.

Registration with the Scottish Social Services Council (SSSC) is mandatory for most roles in social care and although it defines the qualifications and levels which workers must achieve to become registered and maintain their registration, it is possible to see how evidence of prior transferable skills training, in the form of a digital wallet, could be beneficial. It would enable potential recruits to see that they have the building blocks in place for a career in social care and could, with the support of the SSSC and the Care Inspectorate (the social care regulatory and inspection body in Scotland) enable employers to reduce the scope and duration, and therefore the cost, of training.

This is particularly true in the case of induction training. Scottish Care estimates this would typically take between four and 10 working days of a new recruit's time. Because there is no consistent trusted source for evidencing all relevant prior training, it is usual for all recruits to frontline care roles, whether or not they are new to the industry or have moved from other relevant registered social care roles, to take the same training.

Based on a conservative estimate that 30% of the 7,500 people who leave social care jobs annually are switching between employers rather than leaving the industry completely, we estimate the annual wage bill for avoidable training time would be in the region of £2 million. There will, of course, also be the costs of trainer time and the impacts of loss of revenue or loss of capacity to deliver adequate services when new staff are tied up in unnecessary training. Plus the opportunity costs - time spent repeating training could have been time spent on more advanced skills training.

This means that Scotland could be missing out on a further £258.8m, assuming a 10% increase in GVA if each worker was fully proficient in their role.²⁷

In total, skills shortages mean the Scottish economy is losing out on at least £527.2m a year by failing to address current skill shortages and vacancies. Neither of these calculations take into account the likelihood of productivity improving amongst other workers if skill shortage vacancies were filled and skill gaps closed. This means the likely economic benefit is greater, even without upskilling the workforce beyond current levels of required proficiency.

Learning from elsewhere

Various forms of digital identity are used across the world. In a 2022 market scan of Verifiable Credentials Wallets for Learning and Employment, Jobs for the Future analysed four areas in which a digital wallet for skills has the opportunity for significant impact.²⁸ Although these are by no means the only areas of potential impact, they each represent a principle which could underpin a digital wallet for skills in Scotland. They are:

- lifelong learning
- individual agency and control
- privacy
- universal accessibility

A digital wallet for skills organised in line with these four principles is more likely to be trusted from the outset, widely accessible and embedded in the Scottish Government's principles of a digital nation.²⁹

A digital wallet for skills should be universally accessible to ensure fairness and digital inclusion. Older people, disabled people and those on low incomes are more at risk of digital exclusion and a skills wallet should not be a further barrier to participation.³⁰

The Scottish Government's approach to inward migration in response to demographic challenges also signals a need to find ways of including skills and qualifications gained overseas.

In its simplest form a digital wallet for skills is a collection of digitalised training certificates and qualification accreditations held by individuals in the form of a digital token. This would help both individuals and employers to see learning and development acquired over time.

It could also make it easier for both workers and employers to spot skills gaps that could be filled and where upskilling might be required. At the most basic level it would enable people to view all of their training and skills in one place, to keep an organised record and show their personal history. Collecting people's skills record in one digital wallet could also enable employees and employers to break out of sector-based skills silos and clarify transferable skills across job roles.

“My employer knows that I have easily passed my essential training and that I am a trusted reliable worker. But I also have other certificates like food handling and stewarding from outside work. If there was an easy way to share this data with my employer or future employers, they would get to see all of me”

Stuart, manual worker

How could a digital wallet for skills help?

An interactive tool could enhance people’s ability to navigate career and learning opportunities. For example, connecting the wallet to wider labour market intelligence could help more closely align the supply and demand of skills in the labour market. This could make skills and training provision more responsive to the needs of employers, and enable users to better understand labour market opportunities.

To ensure trust in verifying skills and qualifications, verifiable credentials with digitally encrypted information could be used. Using an agreed set of standards would further help ensure take up and widespread usage. Decentralised identifiers could be used to create a Self-Sovereign Identity (SSI) - an emerging technological development which could support a number of privacy practices and maintain trust.³¹ Such technology would give individuals greater agency over what data is collected, what data is disclosed to third parties and when, as well as where their data is stored.³²

SSI already forms a part of the European Union's digital strategy. The EU has a SSI framework as part of the European Blockchain Services Infrastructure and provides financing for projects through the [European Self-Sovereign Identity Framework Lab](#). Compared to the EU, the UK and Scottish Governments have less developed strategies in regards to SSI. However, both Scottish Enterprise and Innovate UK have invested in a cyber security business which makes use of self-sovereign identity.³³

In December 2022, the New South Wales Government announced \$24.5million investment to introduce an “Education Wallet”. The wallet will give every student in the state an all-inclusive digital record of their skills and achievements in a Learner Profile that can be easily shared with future employers and further education providers.

There is strong interest in the idea of a skills wallet across the political spectrum closer to home including:

- The European Union is in the process of developing the new Europass platform. It has been designed as an “online tool to help people effectively communicate their skills and qualifications and to proactively guide them to a job or learning opportunity”.³⁴ Key features include; guiding users to assess and describe their skills, suggesting relevant jobs and learning opportunities, using skills intelligence to provide information on skills trends and needs, enabling institutions to issue digital certificates and supporting automatic authentication of qualifications.³⁵
- The 2019 Liberal Democrat manifesto promised a new skills wallet for all adults in England, giving each adult £10,000 to spend on education and training throughout their lives, with

funding supplied at the ages of 25, 40 and 55.³⁶ The manifesto stated individuals would be able to choose how and when they spend their money on a range of approved courses. The wallet could also be ‘topped up’ by individuals themselves, employers or local government.

- In 2022, a report by the Labour Party’s Council of Skills Advisors recommended that “Learning and Skills Passports are created as part of an incremental and modular approach to allow people to build a record of achievement and progression”.³⁷ The Learning and Skills Passport would work alongside an Individual Learning Account and would provide funding for training with the cost split between individuals, employers and the state.

The current landscape in Scotland

The Scottish Government is working on the [Digital Identity Scotland \(DIS\)](#) programme and in 2020 commissioned Mydex CIC for a research report into [‘Smart Entitlements’](#).

Also in 2020, Skills Development Scotland and the Scottish Government published the Climate Emergency Skills Action Plan 2020-2025. This mentions both a ‘skills wallet’ and ‘skills passport’, quoting a report by Pye Tait Consulting on behalf of the Engineering Construction Industry Training Board.³⁸ They reference skills passport schemes such as Skills Assured which is already in place in the nuclear and oil and gas industries (see box 2).

Box 2: What is Skills Assured?

Skills Assured is a secure online system which was developed by the nuclear industry for the nuclear industry. It contains the agreed Competence Framework for the sector and provides an innovative tool for those working in the industry to assess, verify and record an individual’s competence, training and qualifications.

Launched in October 2014, following two years of development, it supersedes previous similar initiatives. Skills Assured provides the sector with a standardised approach to skills assessment, development and recognition. Built with flexibility in mind it can be used in part, in full and/ or it can be customised to individual requirements. Skills Assured intends to continually evolve to reflect best practice and respond to changing sector needs.

In 2021, there was wide support in the Scottish Parliament for a motion expressing the need for an offshore training passport.³⁹ There are also initiatives carried out at local level in Scotland, for example CEIS Ayrshire currently provides employability support with similar systems already in place (see box 3).

Box 3: CEIS Ayrshire

CEIS Ayrshire is part of the CEIS Group, the UK's largest social enterprise support agency. In Ayrshire they provide employability support, business services and training and skills support to residents on behalf of North and East Ayrshire councils.

CEIS Ayrshire delivers accredited training and non accredited employability workshops. They also run a 'Care Academy' which provides accredited courses to support local residents to pursue a career in the care sector.

CEIS Ayrshire operates two systems to help deliver their support; **TrainME** and **DevelopME**. TrainME is a system used to deliver a range of online accredited courses in various industries. Examples include business skills, health and social care and hospitality. DevelopME is an interactive case management and jobs portal that allows staff to help plan, develop and track clients progress. There are a range of interactive career tools all focused on improving employability outcomes. Clients have access to over 5000 career resources including e-learning, CV Builder & CV analysis tool, a regularly updated Jobs board, Interview Simulator, personality assessments, and 300 soft & IT skills courses.

Scotland already has an Individual Training Account (ITA) which offers £200 in training fees to job seekers or workers earning less than £22,000 per year. Integrating a digital skills wallet alongside access to resources for training would widen the benefits of the wallet to more of Scotland's people. ITA's have a number of benefits that could compliment a digital skills wallet, including:⁴⁰

- ability to share training costs
- in-built flexibility
- supporting a culture of lifelong learning
- demand-led approach
- quality-assured, learner-directed provision.

Conclusion

As the National Strategy for Economic Transformation identified, a skilled workforce is essential for improving productivity and prosperity. A more highly and relevantly skilled workforce has the potential to reduce underemployment, unemployment and labour market inactivity which could benefit the wider economy, widen the tax base and reduce public spending.⁴⁰ This could also have positive outcomes by reducing inequality as groups of individuals with similar characteristics are overrepresented in the above categories.

It is clear that digital wallets for skills are a fast developing area of interest across the political spectrum and the world. There is widespread potential for an interactive tool to save time and money during recruitment, identify skills gaps and opportunities for training, navigate career pathways, and create a skills system which is more responsive to employers needs. Crucially, any development must have creating and maintaining privacy, trust and accessibility as key priorities.

Any development of a Scottish digital wallet for skills needs to learn from systems elsewhere in the world as well as initiatives already underway here. A key question for Scotland is whether there is a way to benefit from or utilise the current Europass developments in Europe?

Overall, a digital wallet for skills has the most potential to help:

- reduce administration time for validation of past training in recruitment
- address a mismatch or lack of required skills in the workforce.

However, an empty wallet will not be of much use.

Introducing a digital skills wallet without wider investment in skills risks further embedding inequality between higher and lower skilled people in the labour market. If a digital wallet for skills is to be specifically developed for Scotland, it would be most beneficial as part of a package of measures to address Scotland's wider and deep rooted skills challenges.

References

1. OECD. United Kingdom Economic Snapshot. Going for Growth 2021 - United Kingdom. 2021. Accessed [online](#) 31st October 2022.
2. Scottish Government. Scotland's National Strategy for Economic Transformation. 5. Skilled Workforce. 2022. Accessed [online](#) 7th October 2022.
3. European Union Eurostat. Population by educational attainment level. Population by educational attainment level, sex and NUTS 2 regions (%). 2022. Accessed [online](#) 12th December 2022.
4. Scottish Government. Scottish Employer Skills Survey 2020. 2021. Accessed [online](#) 5th October 2022.
5. Scottish Government. Scotland's National Strategy for Economic Transformation. 5. Skilled Workforce. 2022. Accessed [online](#) 7th October 2022.
6. Scottish Government. Scottish Budget 2022 to 2023. Chapter 7 Education & Skills Portfolio. 2021. Accessed [online](#) 29th October 2022.
7. Scottish Government. Cost crisis: letter to Scottish Parliament committee. Agreed savings and additional income. 2022. Accessed [online](#) 29th October 2022.
8. Skills Development Scotland and Scottish Government. Climate Emergency Skills Action Plan 2020-2025: Key Issues and Priority Actions. 2020. Accessed [online](#) 19th October 2022
9. Scottish Government. Future skills: action plan. 2021. Accessed [online](#) 20th October 2022.
10. Scottish Government. Scotland's National Strategy for Economic Transformation. 5. Skilled Workforce. 2022. Accessed [online](#) 7th October 2022
11. Scottish Government. Skills: shared outcomes framework. 2022. Accessed [online](#) 20th October 2022.
12. Scottish Government. Adult learning strategy 2022 to 2027. 2022. Accessed [online](#) 20th October 2022.
13. Scottish Government. The Replacement of European Structural Funds In Scotland Post EU-Exit. Accessed [online](#) 6th January 2023.
14. UK Government. Multiply in Scotland, Wales and Northern Ireland. 2022. Accessed [online](#) 20th October 2022.
15. UK Government Department for Education. Employer Skills Survey 2017: Research Report. 2018. p.113. Accessed [online](#) 4th October 2022
16. Scottish Government. Scottish Employer Skills Survey 2020. 2021. Accessed [online](#) 5th October 2022
17. Resolution Foundation. Train in Vain? Skills, tasks, and training in the UK labour market. 2022. Accessed [online](#) 6th December 2022.
18. Skills Development Scotland. Skills 4.0: A skills model to drive Scotland's future. 2020. Accessed [online](#) 27th October 2022.
19. Scottish Government. Scottish Employer Skills Survey 2020. Introduction. Accessed [online](#) 25th October 2022.
20. Scottish Government. Scottish Employer Skills Survey 2020. Recruitment and skills-shortage vacancies. Accessed [online](#) 25th October 2022. Contains public sector information licensed under the Open Government Licence v3.0.
21. Scottish Government. Scottish Employer Skills Survey 2020. The internal skills challenge. Accessed [online](#) 25th October 2022. Contains public sector information licensed under the Open Government Licence v3.0.
22. Scottish Government. Scottish Employer Skills Survey 2020. Recruitment and skills-shortage vacancies. Accessed [online](#) 25th October 2022. Contains public sector information licensed under the Open Government Licence v3.0.
23. Scottish Government. Scottish Employer Skills Survey 2020. The internal skills challenge. Accessed [online](#) 25th October 2022. Contains public sector information licensed under the Open Government Licence v3.0.
24. Scottish Government. Scottish Employer Skills Survey 2020. Key Findings. Accessed [online](#) 25th October 2022.
25. Office for National Statistics. Regional gross value added (balanced) per head and income components. 2022. Accessed [online](#) 31st October 2022.
26. Scottish Government. Scottish Employer Skills Survey 2020. Key Findings. Accessed [online](#) 25th October 2022.
27. Confederation of British Industry. Learning for Life: Funding a world-class adult education system. 2020. Accessed [online](#) 28th October 2022.
28. Jobs for the Future. Building a Skills-Based Talent Marketplace: Verifiable Credentials Wallets for Learning and Employment. 2022. Accessed [online](#) 11th October 2022.
29. Scottish Government. A changing nation: how Scotland will thrive in a digital world. Principles of a Digital Nation. 2021. Accessed [online](#) 25th October 2022.
30. Scottish Government. Connecting Scotland: phase 1 evaluation. Connecting Scotland and digital exclusion. 2022. Accessed [online](#) 25th October 2022.
31. International Association of Privacy Professionals. White Paper - Self-sovereign identity as future privacy by design solution in digital identity? 2022. Accessed [online](#) 10th October 2022.
32. International Association of Privacy Professionals. White Paper - Self-sovereign identity as future privacy by design solution in digital identity? 2022. Accessed [online](#) 10th October 2022.

33. Edinburgh Napier University: Research Innovation Enterprise. Napier University Blog. Scottish Enterprise Supports Promising Cyber Security Business from Edinburgh Napier University. 2022. Accessed [online](#) 26th October 2022.
34. European Commission. European Skills Agenda: for sustainable competitiveness, social fairness and resilience. 2020. Accessed [online](#) 20th October 2022
35. European Commission European Skills Agenda: for sustainable competitiveness, social fairness and resilience. 2020. Accessed [online](#) 20th October 2022
36. Liberal Democrats. 2019 Liberal Democrat Manifesto. Our Plan for a Stronger Economy: Opportunities Throughout Life. 2019. Accessed [online](#) 27th October 2022.
37. Labour Party Council of Skills Advisors. Learning and skills for economic recovery, social cohesion and a more qual Britain. Adult and Lifelong Learning. 2022. Accessed [online](#) 27th October 2022.
38. Pye Tait Consulting on behalf of the Engineering Construction Industry Training Board. Skills Transferability in the Engineering Construction Industry. 2020. Accessed [online](#) 20th October 2022.
39. Scottish Parliament. Meeting of the Parliament (Hybrid): Meeting date: Thursday, October 28, 2021. Accessed [online](#) 27th October 2022.
40. Chartered Institute of Personnel and Development. Skills to Grow: The case for enhanced individual learning accounts in Scotland. 2021. Accessed [online](#) 27th October 2022.

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