Shifting the Skills Conversation: Building a Lifelong Learning Culture to Foster Innovation in Scotland's Financial Sector

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Shifting the Skills Conversation: Building a Lifelong Learning Culture to Foster Innovation in Scotland's Financial Sector

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Financial Regulation Innovation Lab

Who are we?

The Financial Regulation Innovation Lab (FRIL) is an industry-led collaborative research and innovation programme focused on leveraging new technologies to respond to, shape, and help evolve the future regulatory landscape in the UK and globally, helping to create new employment and business opportunities, and enabling the future talent.

FRIL provides an environment for participants to engage and collaborate on the dynamic demands of financial regulation, explore, test and experiment with new technologies, build confidence in solutions and demonstrate their ability to meet regulatory standards worldwide.

What is Actionable Research?

FRIL will integrate academic research with an industry relevant agenda, focused on enabling knowledge on cutting-edge topics such as generative and explainable AI, advanced analytics, advanced computing, and earth-intelligent data as applied to financial regulation. The approach fosters cross sector learning to produce a series of papers, actionable recommendations and strategic plans that can be tested in the innovation environment, in collaboration across industry and regulators.

The Shifting Locus of Authoritative Advice for Gen Z and Their Financial Lives: An Opportunity for the Credit Union Sector?

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Abstract: Building a sustainable, productive and inclusive financial services sector in Scotland means thinking beyond the needs of today. 'Fostering innovation' requires investing in people's ability to think broader than what's right in front of them, and such capability to be dynamic in behaviour, knowledge and practical expertise is built through the process of learning – over and over again, exploring many different skills and interests, and throughout life. It's for this reason that in this white paper we propose shifting the skills conversation beyond plugging skills gaps and identifying which is the latest technical need in the workforce, and instead building a 'lifelong learning' culture to better foster innovation in Scotland's financial sector, long-term.

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1. Introduction

Building a sustainable, productive and inclusive financial services sector in Scotland means thinking beyond the needs of today. 'Give them a fishing rod, not just a fish, and they'll eat for a lifetime' only works if there are unlimited fish to catch – times move on, the waters change, and instead we must nurture the ability to think of new solutions, and build the confidence to try, fail, and try again.

'Fostering innovation' requires investing in people's ability to think broader than what's right in front of them, and such capability to be dynamic in behaviour, knowledge and practical expertise is built through the process of learning – over and over again, exploring many different skills and interests, and throughout life. It's for this reason that in this white paper we propose shifting the skills conversation beyond plugging skills gaps and identifying which is the latest technical need in the workforce, and instead building a 'lifelong learning' culture to better foster innovation in Scotland's financial sector, long-term.

Scotland's financial sector is the biggest sectoral contributor to Scotland's economy, adding around £14.3 billion GVA per year and employing around 136,000 people[1]. The urgency to address skills gaps and enhance the innovation-capacity of the workforce given the pace of technological, cultural and geopolitical change is well established[2]. The Financial Services Skills Commission (FSSC) found that recruitment alone is not enough to satisfy the industry's demands for skills[3], and so upskilling and empowering the existing workforce is vital. Given also the high competition for technical recruits, there is a clear need to think differently about how to proactively build

capabilities as opposed to relying on reactively hiring after needs arise.

This white paper thus addresses the question:

If we know that there are perpetual skills gaps, and we know that organisational approaches to hiring, training and adapting aren't keeping up, what shifts are required to ensure the future relevance of Scotland's financial sector?

1.1 Practitioner- and research-informed results and recommendations

We discussed these issues with people from education providers, financial services organisations and national skills bodies about their experience designing, undertaking and approving various kinds of training. We asked about the barriers to learning alongside working in their roles, the modes of learning which work in which contexts, the specific needs and opportunities in a changing financial sector, and the reality of utilising and adapting new skills and knowledge in the workplace once the formal training period is complete.

In attending to our research question, we triangulated the testimonies from the interviews with insights gathered from various national and financial services industry skills reports, as well as with knowledge gathered from a review of current pedagogical research focused on lifelong learning for adult learners and those working in professional services, managerial roles and leadership positions.

Gathering the insights leads us to propose the following three shifts:

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[1] 'Scotland's new vision for financial services', Scottish Financial Enterprise, 2023.

[2] 'Sectoral Skills Assessment (Financial Services)', Skills Development Scotland, 2024; 'Skills action plan for financial & professional services', Scottish Financial Enterprise, 2022; 'Skills 4.0', Skills Development Scotland, 2018; 'Upskilling Scotland', SCDI, 2020.

[3] 'Bridging the skills gap in a rapidly evolving sector', FSSC, 2024.

1) From 'filling skills gaps' to 'building innovation capability'

2) Accepting and adopting the 'new ways' of learning

3) From 'workplace training' to 'lifelong learning culture'

To further illustrate how these shifts might look in practice, the below table summarises the recommendations made for both the financial services industry as well as for education providers for building and nurturing lifelong learning cultures in Scotland.

Shift proposed	Financial services industry	Education providers
From 'filling skills gaps' to 'building innovation capability'	**Utilise all training opportunities – regardless of the specificity of skills – to build innovation capacity in learners** *Example: Select training courses which include group-work or real-life problem-solving so that learners can build meta-skills in tandem with core or short-term skill acquisition.*	**Stay true to the educational value proposition, but understand, acknowledge, and embed what organisations need** *Example: Universities ensure offered courses still train critical thinking and academic curiosity, but re-design offerings to mirror up-to-date practical elements required 'on the job', informed by insight gained directly from organisations.*
Accepting and adopting the 'new ways' of learning	**Explore, be open to, and allow the piecing together of traditional and non-traditional forms of education and modes of learning** *Example: Consider training that uses innovative pedagogical methods, or that runs on a different timeline beyond the one-year masters or the two-day offsite; don't rely on perceived prestige or 'the done thing' when choosing training approaches to solve new problems.*	**Adopt modern, connected and pragmatic pedagogical approaches to meet the expectations and needs of learners today (and tomorrow)** *Example: Ensure offerings are up to date pedagogically in terms of experiential elements, levels of intensity relevant for the learning outcomes, and flexibility with respect to the needs of the target learner audience.*
From 'workplace training' to 'lifelong learning culture'	**Create lifelong learning culture and processes within organisations by empowering individuals to develop and share their journey over time** *Example: Encourage learners, upon 'return' to the organisation, to share their learnings beyond their immediate team – this recognises their achievement and effort, further cements learning, expands the impact of acquired knowledge beyond an individual, and creates an explicit culture of valuing lifelong learning.*	**Learn from the learners** *Example: Take every opportunity to make learning a two-way process; understand the learners' expectations, interests, needs and value to the education provider, to continually keep offerings fresh, relevant and future-facing.*

2. Switch 1: From 'filling skills gaps' to 'building innovation capability'

There is a balance to be struck between satisfying the immediate needs of industry and developing personnel in such a way that they can adapt, build and lead projects and organisations as they move into the future. By switching from a mindset of 'filling skills gaps' to that of 'building innovation capability', organisations can better map their needs and design future-facing training approaches, as well as ensuring they are prepared for and proactively responding to a changing industry.

2.1 Today's needs

It can be challenging for organisations to navigate the ever-changing technology and financial services landscape to know which skills are needed now and in the very near future. There are some common themes, however, that are key for the workforce to be 'industry ready', given emerging technological, geopolitical and cultural themes of today.

"Employers want certain skills, but what they really want is job readiness"

- Education provider

Technology fundamentals for all: there is a need for those in what are considered 'non-technical' roles to have a basic level of data and technology literacy. Today, it is rare that a role will not have any need for interaction with technology, and technology professionals, so it is crucial that more people are able to speak the same language. Building data and technology literacy results in more people having the confidence to be open to new advancements as they arise, conversing and collaborating with all colleagues – regardless of technical background – across the organisation, and understanding the needs of those in highly technical roles in leadership decision-making scenarios.

"[For data expertise], there has been a lot of relying on consultants in the past, but now there's a realisation that you need everyone to speak the same language, so you are not relying on third parties"

- National skills body

The 'greening' of all roles: whilst there are specialist sustainability roles growing across the financial services sector, there is a need for 'green' themes to be understood by all roles across the sector. This means ESG basics must be presented and understood in context throughout organisations, such that the workforce as a whole builds sustainability readiness as new regulations emerge and environmental situations worldwide change. With finance being a service sector, there is an appreciation required for the impact that ESG topics will have on clients and customers too, if financial institutions are to stay relevant and fulfil expectations. It is crucial that organisations are strategic and proactive, as opposed to reactive, in response to regulation changes, and so adopting an ESG mindset can ensure long-term value for organisation and their various stakeholders.

Cross-functional knowledge-sharing: it is not enough for each organisational function to level-up their teams' knowledge on technology, sustainability and regulatory topics; it is also inefficient for this to be done in silos. If specialists are trying to undertake projects without the understanding, support, and relevant expertise of other functions, productivity slows. It is therefore crucial for different business units to link up their different contexts and understand where there are crossovers and divergences.

"Regulation is quite onerous, it goes through cycles…implementing key principles so it becomes embedded needs adaptability and exposure to multiple parts of firms, you need to have a holistic overview not only of your role but also how it feeds into the wider ecosystem of the business, what the downstream impacts are"

-Financial services professional

2.2 Dynamism for tomorrow

The importance of going beyond technical skills alone in order to build productivity is well-established. Indeed, Skills Development Scotland cluster three sets of so-called "meta-skills" key for the Scottish economy as follows: Self-management (Focusing, Integrity, Adapting, Initiative); Social intelligence (Communicating, Feeling, Collaborating, Leading); and Innovation (Curiosity, Creativity, Sense making, Critical thinking)[4]. Enhancing these skills in isolation, though, doesn't attend to the immediate needs of organizations trying to keep up with technological and regulatory change, and as such, they are deprioritized in the short term. There needs to be a renewed focus on building these kinds of skills for the future – ensuring they are developed alongside satisfying the skills needs of today – incorporating them in training design, personal development strategies and organizational human resource investments.

Adaptation: We are living in a fast-paced world, and so it is crucial that the workforce is change-ready, able to function across disciplines and departments (either skills-wise or in terms of their ability to communicate and collaborate), and can operate well under uncertainty. People across all roles need to have the ability, confidence and motivation to keep up with emerging information (regarding new technologies, regulations, etc.), and know how to apply that new knowledge in context. Training can incorporate, for example, experiential elements to test and develop individual's adaptive capacity in the context of 'real-world' situations, and foresight exercises to deepen learners' interest in what's to come and how to follow new advancements.

"We need to teach people to rewire away from 'finding answers' to being able to understand a chaotic environment"

- Education provider

"We need to be more change-ready, able to jump to a different role family…it's about starting to see yourself as a leader with cross-functional ability and responsibility"

- National skills body

Innovation: To create something new outside the boundaries of the status quo requires a combination of practical, cognitive and social capabilities. When the need arises for new tools and processes, the ability to problem solve outside of your usual remit is key. In order to come up with new ideas utilising new technologies, basic curiosity and motivation to try something new is what drives exploration and action. And to make things happen across teams, organizations and social groups, relationship building and stakeholder management is what's required to manage audiences, translate between contexts and negotiate complex incentive structures. Training can incorporate, for example, group challenges to propose and build something new using course-learned skills – a product, idea, business model, regulatory framework or other relevant output – in order to develop the innovation muscle in learners.

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[4] 'Skills 4.0', Skills Development Scotland, 2018.

"What you find with people innovating in the market is that you actually need people to be curious about how to use technology and how to apply it to make things better. And so, you've got [to have] that skillset in your pocket – that you are challenging how things are currently done and trying to find new ways of doing things"

- Financial services professional

Sustainable organizations: Organizations are groups of people, and so to ensure the future of an organization is to build the ability of the people within it to keep it going regardless of the social, political and cultural environment. Training a particular skill simply plugs a current gap; finding ways to train a skill alongside developing core dynamic capabilities of individuals – specifically related to adaptation and innovation – means building a self-sustaining organization. The journey of upskilling and retraining the workforce, then, must have at its core the encouragement and nourishment of dynamic meta-skills.

3 Switch 2: Accepting and adopting the 'new ways' of learning

In order to translate needed skills into the working context of Scotland's financial services sector, it is crucial that educational interventions are designed such that they work within the context of the evolving financial services industry, as well as meeting the expectations people have given a much more democratic, wide-ranging and technology-driven training sector. With the ever-growing rise of MOOCs (Massive Open Online Course), the widening accessibility of bootcamp programmes, and a post-pandemic culture which demands both offline and online engagement, organisations need to meet the needs and expectations of learners if they hope to create and foster an engaged skilled workforce.

3.1 Modern learning

Today, there are myriad forms of learning, which means there are new kinds of accreditations, styles of teaching, and influential voices which may feel unfamiliar. Learner's expectations have changed alongside these shifts in – particularly – online and social-media-influenced forms of training: they want and need their employers to recognize the value of these new learning modes such as bootcamps, hybrid learning, and microcredentials. This means providing and designing modern training, encouraging staff to undertake new external offerings, simplifying processes for verifying and approving staff proposals to managers, and recognizing the validity of alternative forms of certifications and experience. It's worth acknowledging that the workforce of the future are the young people of today, so understanding their expectations and experiences of learning is vital for attracting and retaining talent moving forward.

"There are some great learning options our there without accreditation, and it is a shame when they don't get the recognition that they deserve"

- Education provider

Experiential learning: modern forms of training are highly experiential in that learners are provided with far more hands-on activities to connect what they learn to real-world situations. Experiential learning is particularly popular in the form of project-based training, which mimics 'on the job' activities either pre-designed for courses or coming directly from learners bringing real-world examples in from their work. Training which incorporates group work, including all the social, emotional and cultural dynamics that arise, and tasks learners with creating outputs as a team, is very common in modern pedagogical approaches.

"You can bury yourself in books, but it's the doing it practically that makes the material different"

- Financial services professional

Intensive learning: the 'bootcamp' form of learning is particularly trendy, and tends to be an intense, 3-6 month, small cohort experience where people emerge with well-developed skillsets (particularly in areas such as software development) making them immediately hireable, and potentially subject matter experts. This is more of a 'springboard' approach to learning and starting to infringe on undergraduate certifications; it is particularly popular with job-switchers or those looking to take large leaps upwards or sideways within their organisation.

Reflective learning: navigating challenging experiences is crucial in training designed for real-world use. Experiencing and processing emotions which arise in both the learning journey as well as in the execution of tasks is crucial to take training beyond knowledge acquisition into wisdom and the ability to apply it post-training. In entrepreneurship- and leadership- related education in particular, it's been shown that this reflective element of training leads to more resilient behaviour and to confronting cemented habits of mind[5]. The emotional process of reflecting on and challenging your own mindset is particularly popular in design-inspired approaches to learning and strategy, as well as those concerned with futures thinking[6].

"[Testing] your thinking and probing a bit your understanding was done often [during the course] …it served two purposes – it sort of keeps everything a little bit sharper in terms of why people are going to the course, keeping that front of mind, but it also sharpens the learning to have to replay back key takeaways"

- Financial services professional

3.2 Connected learning

Training is most effective when done in context – learnings are connected to the job, organisations are connected with the learning provider, and topics are connected to one another throughout the narrative of the course. Often, individuals will undertake training in a silo, and as such, the benefits are limited to the timeframe of the training, or to the small group of people in their team as they work to integrate their knowledge back into the organisation. Learnings can extend and grow beyond the individual learner when training approaches are built for connection.

Connecting with peers: Learning alongside others is not new, but it's key to design training such that people integrate and share knowledge between them, as opposed to simply co-existing in the same in-person or virtual space. Peer connection gives learners confidence, grows professional networks (especially if the group contains people from different organisations and departments), provides a community of support along the learning journey, and can make learning into a more enjoyable social experience. Facilitating connections is an art, and so course design and course leader choice should reflect that.

"External training is useful in terms of getting other people's perspectives, and interacting with more senior colleagues – when I was in a small firm, there were not as many views and we could be pigeonholed – it's beneficial to be taken out of that"

- Financial services professional

Connecting your own learning up: Connecting up your own learning pathway is key to ensure knowledge is effectively obtained – demonstrating personal responsibility in the design and implementation of the learning goals has been shown to positively impact skill acquisition and use in context[7]. By reflecting on

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[5] Crosina et al, 2024; Dalton, 2018; Kim et al, 2023.
[6] Meisiek et al, 2023; Fergnani, 2022.
[7] Hoover et al, 2010.

what has been learned at each stage and connecting that with those of your peers, learners can make the most of various training designs and approaches – by simply recording thoughts in the virtual chat at the end of a session or designing and regularly referring back to personal training goals.

"After each lecture we were asked to put some reflections [in the virtual chat box] on what our key thoughts were, and I thought it was quite good because it forced yourself to think 'what did I get out of that?'…and then you would see other people's comments and think 'I completely missed that point'…I suppose it gives you some accountability for what you've taken away from it"

            - Financial services professional

Connecting within organisations: It is key that when learning is happening within organisations that relevant people know about it to make sure the interventions are valuable; for example, if someone is training in a technical skill not usually central to their role, connecting them with those in other technical roles who can already speak the language can be crucial for both individual learning as well as inter-department collaboration. Encouraging learners to share acquired knowledge beyond their own team means investing in training for an individual can quickly become an investment in broader organizational capacity.

Connecting to the job: The importance of practical application in skill development is key – there needs to be a mirror of reality built into training design so that learners can make clear links with their workplace. Sometimes though, in a bid to justify the investment in learning, the practical elements become too central, and the same values and processes end up being reinforced as opposed to learners acquiring new knowledge to improve and build upon the status quo. By blending practical elements with more 'academic' forms of knowledge, learners can challenge and learn new thought processes

which not only connect to their job but enhance it. For example, it has been shown that developing a 'historical sensibility' in leadership training (i.e. teaching business history and tasking learners with analysing historical documents and events) helps to overcome the influence of dominant institutional logics which sometimes curb reflexive decision making in managers[8].

"A partnership programme with universities I think works really well; I think having a blend of industry sponsor with the academic side adds a nice amount of balance…you're speaking to people in your work every day and can get views on things, but actually it's about bringing outside perspectives in"

            - Financial services professional

3.3 Pragmatic learning

There are various 'real life' constraints to undertaking training in the financial services industry. From a lack of time due to caring responsibilities, tiredness from the day job, and training encroaching into leisure time, to a lack of resources to fund 'ideal' programmes out of reach for individual or organisational budgets and priorities, there needs to be a pragmatic approach to learning which ensures equitable access whilst providing the best experience within constraints.

"If I've got a deadline or a big meeting with a regulator, I can't just say 'I'm off to uni for the day'"

            - Financial services professional

"Employers need to give people a bit more leeway…If you've ever tried to study at night…we work all day, it's so hard because you're mentally tired already, or you're physically tired, or you've got kids…how are you supposed to keep people up to date?"

            - National skills body

Managing attention: Learning is always happening alongside other activities and

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[8] Cavanagh et al, 2023.

priorities, so when designing training, it's worth understanding the context in which tasks may be undertaken – perhaps in the flow of a typical workday, dipped in and out of alongside email and phone notifications; or perhaps in a more immersive environment where attention can be much more focused. Learning tasks need to be designed such that learners actually do them and so being cognisant of the various cognitive loads and the mode and context of learning is crucial for effective take-up. Facilitation of certain activities may be a better choice for some learning outcomes; more simpler forms of engagement and reinforcement such as a quick pop-up multiple choice quiz may be enough for others.

"Typically, you sit on a call, or an online thing, and you'll be doing emails on the side, so you're not fully doing the course you've enrolled in"

- Financial services professional

Managing time: Post-pandemic work cultures are much more hybrid in nature, which also allows for far more inclusive and equitable access, so it's key to justify in-person or real-time learning for the right reasons and be inclusive about what can be done remotely and asynchronously. Microlearning – short-engagements in learning activities, common in the design of online courses today – is popular due to its convenience, because learners can dip in and personalise their learning related to what they need when they need it[9]. Courses which are around 12 weeks long hit a sweet spot of ensuring commitment as it's long enough to learn deeply, but short enough to plan life events and work schedules around; two-year Masters courses and two-day training courses are more common, however.

"Long term commitments is perhaps putting people off…you don't know example what is going to happen with your family world or work life, whereas if you can segment and chop

things up a bit more actually what you're really seeing ahead of you is the next step of that"

- Financial services professional

Managing remote engagement: Online and asynchronous learning can be engaging and effective when designed well. For example, offering regular virtual real-time drop-in sessions with instructors to supplement self-study portions of courses can allow learners to reflect on their own process as well as resolve problems. Also, building a cadence into online offerings, as opposed to dropping all the content at once, can give learners structure and encourage 'keeping up' with the class to ensure learners stay on track. For virtual group sessions, sometimes facilitation can be over-engineered resulting in lack of engagement – a casualness and an acceptance that virtual conferencing technologies are increasingly the norm can do well to settle learners into the experience.

"People say you have to be in the classroom, but I've had a good experience online – the drop-in sessions are really good: I've listened to three lectures myself and now here's an opportunity to say 'I didn't understand that bit' – we would discuss [problems that arise] and somebody else would say 'this is what I took out of it, what do you think?'"

- Financial services professional

Managing power and personality: Learning in the context of work brings up various considerations around how people interact within organisations. Explicit and implicit hierarchies need to be acknowledged, and training designs can utilise this knowledge for learner benefit. Education providers and financial services organisations would do well to collaborate in understanding the needs and contexts relevant for offered training. For example, training could be designed such that the experience of different seniority levels is shared for common understanding and cross-level networking can take place, or training

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[9] Bruck, 2006.

could be segmented or facilitated such that more junior members of the workforce feel empowered to actively take part without feelings of intimidation. An appreciation for various different personality types and levels of comfort in learning contexts is key if training is to speak to each learner and ensure their potential is realised.

"Confidence and mindset are so important; people go to training and panic and overthinking about having to talk in front of people and present, and then don't take the stuff in because it's super daunting – it then has no impact"

— Financial services professional

3. Switch 3: From 'workplace training' to 'lifelong learning culture'

With fierce competition for skilled workers, and a sense of scarcity around hiring for the most innovation-driven roles, it's understandable why organisations focus on ensuring employees are focused on their specific roles and are hesitant to fund supplementary training which ultimately may benefit a competitor. And with ever busier workloads and organisations focused on managing and avoiding employee burnout, organisations can be forgiven for sometimes putting what may seem like 'extra' learning which doesn't directly match the job lower on priority lists. Innovation can only be fostered if people and organisations are empowered to be growth-minded, curiosity-driven and able to approach unknowns as they arise – these capabilities are built through the process of learning, regardless of the topic. To create the next iteration of Scotland's financial sector, then, a culture of lifelong learning must be built.

"We often hear industry complain about the lack of homegrown talent in Scotland…the solution is the elephant in the room: waiting for someone to come out of university means waiting years; instead, they could upskill their own talent"

— Education provider

3.1 Empowering individuals

People need to want to learn in order to successfully acquire knowledge and put it to use. But learning is a challenge, and so organisations which don't actively encourage and empower individuals to undertake their chosen learning journeys not only make learning harder for the workforce but put people off from trying in the first place. Building a supportive environment for lifelong learning is crucial to motivate people to take on the task.

Treating talent as long-term: Career journeys have changed from the 'job for life' pathway; people want (and often are required) to change organisations and job roles many times throughout their working life. That's not to say that organisations should treat workers as temporary, or as a future asset to a competitor; providing resources and an environment to grow longer term is what retains talent and builds the skill base of the workforce[10]. Instead of identifying which skills are missing from which people, building development plans for everyone that accepts and respects individual learning goals which may go beyond their role and organization trains and enhances the learning muscles needed for self-sustaining innovative workforces. Coaching or mentorship support can further help employees gain insight about their development over time.

"People don't want to do [the programming language] R for the rest of their lives, they are not robots, they want to progress; it's also very important for mental health at work…don't just teach them one thing, teach them how to progress"

— Education provider

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[10] Chodyniecka et al, 2022.

Entertain new ideas: If staff approach line managers with desired training courses only to be told they don't match the approved list of suppliers, the organization will build a reputation for not being supportive of learning. Not only does it show a lack of trust in the workforce, it demonstrates a lack of curiosity and openness. An organization cannot demand those capacities of its workforce if decision-makers don't demonstrate them in practice.

"[Financial services] is not a sector where folk don't care about upskilling and reskilling, it's about ease of access… employees engage with learning but it can be so much admin to apply for it and persuade their employer"

- National skills body

Celebrate learning: Valuing training goes beyond funding and approving time off for it; once training has been undertaken, celebrating that achievement can cement the commitment to lifelong learning and encourage learners to continue on development journeys and inspire others to undertake new training. Inviting learners to share knowledge, demonstrate new skills and advise colleagues underlines the value of learning and contributes to a felt culture of encouragement. Having learners teach what they have learnt also cements the knowledge and provides further development of their skillsets.

3.2 Empowering decision-makers

In the midst of client deadlines, KPIs and stakeholder management, it can be challenging for leaders and managers to set aside time and energy to make changes to organisational culture. As such, lifelong learning needs to be embedded into processes and systems to make it easier for decision-makers to support the rest of the workforce as they develop.

Close the knowing-doing gap: Where organisations may worry about the usefulness of training, being creative in finding ways to integrating knowledge as the 'next step' can ensure organisations always benefit from learning, regardless of the pathway of the individual. Closing the knowing-doing gap can be achieved with a supportive environment where feedback is provided post-training to reflect on implementation and the challenges that arise, as well as boosting the confidence and motivation for people to lead with their newly acquired skills and knowledge[11]. Learners could be asked, or required as part of their training, to teach elements of what they've learned to broader teams – both to cement learning and encourage implementation of the knowledge, as well as growing the learner's capacity to be a subject matter expert within the organisation, ready for others to approach for aid in their projects.

"Unless I can apply it now, I don't feel the urgency – there's lots of stuff I've learned years ago that I've forgotten because I'm not using it…it needs to be threaded into the day-to-day to actually be worth it"

- Financial services professional

Make lifelong learning the job: If learning can become part of the flow of work – part of the working week, on the list of to-dos, with managers expecting it to be prioritised – it becomes not only easier to undertake alongside work, but it becomes part of the culture of the organisation. Organisations could shift from counting total 'learning hours', and instead focus on total 'active learners', so that it's not about a few keen people doing lots, but about lots of people actively developing.

"It's been found that if you can do the learning at any time without a deadline, people won't do it…some financial services firms instead have regular learning slots – maybe every

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Friday after 3pm, maybe a day a month – they are trying different things but it's about getting people into the habit of learning as part of work"

<div align="right">- National skills body</div>

Make lifelong learning the strategy: Instead of sticking with skills gap strategies and workplace training status quo initiatives, make the very concept of lifelong learning a key part of central organisational strategy. Trying to squeeze new solutions into out-of-date short-term strategies reduces the value of these new approaches to learning; sometimes priorities need to explicitly change so that processes and behaviours can adapt accordingly. If managers are following a lifelong learning strategy for their team, as opposed to worrying about competing for a small external talent pool to fill skills gaps, it's far easier to justify modern, inclusive, empowering learning for the existing workforce.

"I definitely say to my team to take a couple of hours on a Friday to do a course...I think it's the role of the firm to have that culture – not just to say it, but to actually have it happen and promote it and be elaborate as well"

<div align="right">- Financial services professional</div>

4. Recommendations for the financial services industry

1) Utilise all training opportunities – regardless of the specificity of skills – to build innovation capacity in learners

Specific short-term specific technical skills and knowledge needs still need to be met by organisations, but there is no reason that learners cannot build dynamic meta-skills through the learning process, if done in a deliberate and pragmatic way. By designing or undertaking modern training, and connecting learning effectively, learners can build their dynamic capability alongside 'plugging' a particular gap in their skillset.

2) Explore, be open to, and allow the piecing together of traditional and non-traditional forms of education and modes of learning

Knowledge and skills can be acquired in many different places and in various ways. Understanding what specific providers can offer – as opposed to relying only on prestige and existing relationships – allows for a much more personalised and efficient approach to learning, which also makes the most of what's out there. Create, advocate for and recognise modular certifications which piece together the various expertise available in Scotland, along with a central portal for learners to easier access courses and be inspired to add to their learning.

3) Create lifelong learning culture and processes within organisations by empowering individuals to develop and share their journey over time

Learning is a muscle in itself, and it leads to more curious, adaptable, innovative people. By building a culture which supports and celebrates learning – as opposed to seeing it as a time-sink, a gap-filler, or a dull requirement for employees – a dynamic skilful workforce can emerge. Empower individuals to shape their own learning journeys and build processes that capture the benefit beyond one person.

5. Recommendations for education providers

1) Stay true to the educational value proposition, but understand, acknowledge, and embed what organisations need

Educational institutions which are not built solely to provide training for organisations have much to offer organisations if they can adjust offerings in line with industry needs. Amending learning outcomes, definitions of impact, and modes of delivery with a clearer understanding

of the needs of organisational learners doesn't mean compromising the educational offering but rather putting it in the right context to be effectively received. Get to know the target audience well to understand where in the market existing offerings best fit and how to design new offerings with learner-first principles. Meta-skills and dynamic capabilities are crucially important in building the future of Scotland's financial services industry, so incorporating pedagogical techniques to improve adaptation and innovation capabilities no matter the focus of the course is key to deliver what organisations need today and tomorrow.

2) Adopt modern, connected and pragmatic pedagogical approaches to meet the expectations and needs of learners today (and tomorrow)

Playing a role in lifelong learning journeys means meeting people where they are today, so moving with the pedagogical times is crucial if education providers don't want to be left behind in the ever-growing global learning landscape. Consider modularity in the offerings, and how they fit into broader learning pathways beyond the institution, so that learners can personalise their education, and keep coming back regardless of where that journey leads. Education providers in Scotland can play a key role in supporting lifelong learning culture nationally and across industries. For example, in offering bite-sized, free courses to encourage a culture of learning for all, education providers could open up learners' base and could encourage talent from other industries to move into the financial industry (or vice versa) as opportunities ebb and flow due to technological change.

3) Learn from the learners

Learners have much to bring to education providers. For providers with research capacity, learners can be providing case studies, anecdotes and data about the real world they and their organisations operate in, to then inform future research (which then informs future educational offerings) – the teaching doesn't have to be one-way. Understanding what learners are interested in in terms of topics and modes of learning can further enhance future iterations of courses in line with market and cultural expectations.

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