

Blending the ‘craft’ and ‘science’ of policing: challenges and opportunities for police as professional learning organizations

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ABSTRACT

Police organizations in many liberal democracies are in crisis, prompting calls for cultural and organizational reforms within policing. Central to some of these debates is the ongoing push for police professionalization through academization. This paper offers a critical analysis of the structures underpinning efforts to professionalize policing. We draw on data from two PhD studies, which investigated police learning in Scotland, Sweden, and Finland between 2018 and 2022. The foundational elements needed to foster learning innovations and the ongoing process of professionalization are discussed. Senge’s theory of the learning organization is used to better understand this stabilizing support structure. We argue that a balance between the ‘craft’ and ‘science’ within policing is essential for meaningful professionalization to occur. Without this, officers may become alienated from the organization and fail to develop the practical wisdom that may help to address police crises.

INTRODUCTION

Police organizations in many liberal democracies are in crisis (Deuchar 2023; Hough and Marshall 2025; Jackson, Bradford and Taylor 2024). Against a backdrop of financial challenges, policing is straining to deal with the impacts of increasingly complex and rapidly changing operating environments. These challenges have been compounded in many countries by recruitment and retention issues (Annell et al. 2022; Tyson and Charman 2023; Wilson and Grammich 2024; Wilson et al. 2023), and a seemingly endless series of high-profile scandals highlighting police failings, ranging from poor training to criminality. The growing literature on police officer wellbeing highlights that police officers (and staff) often feel undervalued, under protected, and unsupported by their organization (Atkinson 2017; Charman and Bennett 2022; Edwards and Kotera 2021; Syed et al. 2020; Wilson et al. 2023).

These challenges, although not necessarily new, have created workforce and public confidence crises which various professionalization strategies are attempting to address (Bartkowiak-Théron 2019; Fuchs 2022; Hough and Marshall 2025; Martin 2024; McCanney and Taylor 2025). While we do not contest the benefits of a professional status for police organizations, we argue that the current trend towards police professionalization through academization does not necessarily

reflect the different socio-political, cultural, and organizational contexts within which policing operates, nor the contemporary, reconfigured reality of policing’s hybridity as a profession (Martin 2022; Noordegraaf 2007). Professionalization for the purposes of this paper is a process of moving an occupation currently not regarded as a profession to one which is and which, within the context of policing, is contested.

The emergence of the police professionalization agenda was, in part, a response to the perceived changes and complexity of the role of police officers, which are said to require extensive critical thinking skills in combination with an extensive knowledge of the evidence base underpinning practice (Neyroud 2011; Williams, Norman and Rowe 2019). While the introduction of degree education as part of a professionalization effort to develop these skills has become a panacea for many, evidence of its benefits is scant and inconclusive (Brown 2020; Terpstra and Schaap 2021). While there are some studies highlighting the potential of degree education (Skilling and Thomas 2024), cultural and structural barriers to grasp intended benefits remain (Andrews 2024; Norman and Fleming 2022; Pepper et al. 2025). Importantly, for many, the focus on professionalization through degree entry has also served to exacerbate the binary between academic and experiential knowledge. We argue that establishing an equitable balance between the ‘craft’

and ‘science’ of policing as privileged forms of knowledge and sources of cultural capital can support police to address the complex challenges of the twenty-first century.

This paper provides a rare comparative international perspective from Scotland, Sweden, and Finland, drawing on two recently completed PhD projects, utilizing qualitative and quantitative methods to explore police learning. There are some important similarities and differences between Scotland, Sweden, and Finland explaining why the latter two were selected for comparative purposes with regards Scotland. For example, all three countries are north-western European countries. Scotland, and other central European countries, often look towards Scandinavian countries for policy inspiration. All three countries have unified, national policing structures resulting from an amalgamation of smaller policing organizations, which have taken place during the past decade or so. Single police organizations may increase the comparability of officer viewpoints from different regions within each country. However, some studies have highlighted that organizational structures and cultures within legacy organizations often endure (Tatnell and Elliott 2013; Terpstra and Fyfe 2019), suggesting that findings can still provide useful insights for countries with de-centralized policing provisions.

Sweden and Finland have academized, to varying degrees, their initial police learning programmes, whereas Police Scotland provides all training in-house without extensive police–academic partnerships. A lack of investment in learning and development since its inception in 2013 has been highlighted (HMICS 2020, 2021). Since then, a refocusing on learning and development has taken place alongside a desire to restructure the organization in a way that enhances frontline response and community policing. Police Scotland explored establishing different ‘pathways’ into the service, one of which was a pre-entry undergraduate degree for which there was ‘little political appetite’ (Martin and Wooff 2020). Attempts to professionalize policing through degree entry have therefore ebbed and flowed over the years with a lack of sustainability in practice and impact.

This paper explores the readiness of police organizations to commit to traditional professionalization efforts and what effective scaffolding might look like to support ongoing police professionalization efforts through blending police ‘craft’ and ‘science’ as part of the learning process. For the purposes of this paper, scaffolding depicts a type of stabilizing support structure key to fostering a learning environment. In structuring this discussion, we will use Senge’s (1997) learning organization framework, arguing that this particular supporting scaffolding could create an appreciative environment for police officers to feel valued, supported, and encouraged to develop professional wisdom. This in turn may be one step closer to developing a wider learning sector, which supports law enforcement and public health approaches to social harms.

LEARNING ORGANIZATIONS AND PRACTICAL WISDOM

Rittel and Webber’s (1973) concept of ‘wicked problems’ reminds us that society faces challenges that do not have clear

solutions or desirable outcomes. Policing faces several socio-political and cultural limitations on how to address these problems [Cockcroft and Hallenberg’s (2022) ‘Blue Box’ Conundrum]. Developing police as a profession with certain traits, such as degree entry and a code of ethics among others, is considered important to improve police legitimacy and practice in this context (Martin 2024). Such trait-based notions of professionalization may however simplify the process of achieving these traits and avoid consideration of what else is required to support professionalization efforts and ensure that police and allied professions collaborate to address these complex social problems.

Senge’s (1997) concept of the learning organization, with its focus on embedding and distributing learning across the organization and encouraging the development of sustainable learning mechanisms, presents a useful concept to build the scaffolding required for meaningful efforts to further professionalize policing. Aristotle’s concept of ‘phronesis’ or ‘practical wisdom’ is important in this context, highlighting that someone should know not only what to do, but how to do it and why (Schwartz and Sharpe 2006). This ‘practical wisdom’ is what can create positive change, enabling a meaningful blending of the ‘craft’ and ‘science’ of policing. Such professional practice needs to be supported by the organization, to ensure ‘personal development, job enrichment and the quality of working life’ (Gould 2016: 3) as well as public safety and wellbeing.

The learning organization framework then enables us to look beyond individual processes of learning, such as getting a degree, and ensures that we reflect on how the overall system (organization) and parts within it (the organism) interact to support learning on an individual, team, and organizational level (Kools and Stoll 2016). While scholars have used different definitions of what being a learning organization involves, for the purpose of this paper, we adopt Senge’s (1997) five disciplines of (1) systems thinking, (2) personal mastery, (3) mental models, (4) shared vision, and (5) team learning. Systems thinking asks organizations and individuals within it to look beyond static snapshots of problems and challenges and see the bigger picture, how what they experience relates to other parts of the system (Bui 2020). Personal mastery describes the capacity for personal growth and learning within the individual, a process rather than a destination creating a lifelong discipline in line with one’s purpose, vision and goals (Cabrera and Cabrera 2023). Mental models are ‘used to reason and make decisions and provide the mechanism through which new information is filtered and stored’ (Bui 2020: 499). It describes the assumptions and generalizations we hold to make sense of information, which can both inhibit or promote learning. The discipline of shared vision highlights the importance of a shared value base and commitment to a goal, or a number of goals, ideally co-created across organizational hierarchies (Flood 1998). Lastly, team learning is a way in which synergy is created by developing effective dialogue and communication between individuals to learn from one another (Flood 1998).

It is important within this context to remember that the police exists within the broader ecosystem of related and intertwined organisms, including academia, as well as allied professions, such as social work, health, and private and third sector partners (Serrat 2017). The police in this sense is not

only a crucial component within the criminal justice system but can also enable or challenge the response of allied corresponding agencies. Indeed, police assessments of risk, safeguarding or need, open or close doors for those in contact with the police to access other services, or enter the criminal justice system. Each sector and organization will be somewhere else on the spectrum of the learning organization, which can have an impact on how services can work together effectively, learn from one another, and build cross-disciplinary research and practice agendas. Hence, even where police organizations travel further along the continuum of becoming a learning organization, to enable the meaningful and holistic responses required to address the aforementioned 'wicked problems', a learning sector (ecosystem) needs to develop, aligning different approaches to learning and working across organizations to develop shared understandings.

The lack of a clear definition and the focus within the learning organization framework on broad concepts of 'developing a learning culture' and 'enabling all staff to learn' are considered too vague (Filstad and Gottschalk 2013). Furthermore, the framework has been questioned in relation to its applicability to hierarchical organizations with significant internal and external power structures influencing practice (Cockcroft and Hallenberg 2022; Fielding 2001).

Despite these challenges, developing police as learning organizations is considered to add value in creating the scaffolding that could enable police organizations to achieve professional status and ensure their relevance and legitimacy (Borge et al. 2018; Filstad and Gottschalk 2011; Gould 2016; Wathne 2012). The learning organization concept, therefore, is deeply intertwined with concepts of profession, professionalism, and professionalization.

PROFESSIONALIZATION THROUGH ACADEMIZATION

A foundational argument presented in this paper is that the current trend towards police professionalization through academization is founded on an unhelpful trait-based concept of profession, professionalism, and professionalization. The evidence supporting contemporary police professionalization, through academization, is contested (Martin 2024; Pepper et al. 2025; Skilling and Thomas 2024), which calls for better understandings of different ways to facilitate and support ongoing police professionalization efforts.

Concepts of profession

Definitions of what constitutes a 'profession' within the literature are 'diverse, contested and constantly evolving' (Green and Gates 2014: 75). However, they are often regarded as occupations or organizations with 'special characteristics' (Evetts 2014: 31). These special characteristics or traits are often used to separate the classic professions such as medicine and the law (Lumsden 2017: 3) from occupations and professionals from other workers (Collins, Dewing and Russell 2009). Distinguishing professions from occupations evolved into the taxonomic approach of the 1950s and 1960s, in which

professions 'typically had a stronger formal knowledge and higher educational base than other occupations' (Saks 2012: 2).

Stronger formal knowledge founded on a higher educational base gave professions and professionals 'the authority of the expert' (Evetts 2003, pp. 400–406), which in turn provided 'lay people' with the trust and confidence required to enable professions and professionals to 'accept professional's authority' when telling them 'what is good and right for them' (Evetts 2003: 400). In adopting this 'trait-based' definition of profession, scholars have tended to view policing as an artisan occupation, or at best a 'semi-profession' (Etzioni 1969) based, in part, on policing not satisfying some of these key 'traits', especially the lack of expertise founded on an academic knowledge base. Nevertheless, the current trend towards degree entry only, in many countries including the UK, has been, in part, an ideological attempt by the 'worlds' of politics, academia, and in some instances policing to raise the latter's status to that of a classic profession. The perceived benefits of professionalization being comparability of practice, for example in Australia, Canada, or across Europe (Montgomery 2021; Pepper et al. 2025); benchmarking and the development of a licence to practice (Police Foundation 2022), and through this increasing effectiveness and public trust. This is despite a relatively weak evidence base and varied levels of support within policing (Hough and Marshall 2025).

Professionalization through academization

The trend to professionalize through academization, such as degree entry, has emerged despite being the subject of debate not only within the literature, but also within policing, academia, and politics. Brown (2020) challenged claims of a causal relationship between academic attainment and the professionalism of individual police officers, while Green and Tong (2020: 296) argue that 'there is still not a decisive body of work that can clearly articulate the full range of benefits Higher Education can bring to policing'. Others argue that there are 'potential benefits to be grasped' (Hough and Stanko 2020: 6) such as enhancing critical thinking, reflective practice, problem solving, and a deeper understanding of policing problems to name a few (Brown 2020; Miles-Johnson 2024; Norman and Fleming 2022). While not arguing for academic qualifications, Neyroud's (2011) landmark report did argue in favour of 'the value of linking academic research to operational skills development...' particularly with regards attaining 'Chartered Member Status' with the College of Policing in England and Wales. By this he meant '[t]hose who have reached a higher level of expertise whether through specialism or promotion' (Neyroud 2011: 70).

The benefits of linking academic knowledge to policing practice are often limited to the individual officer, with significant cultural and structural barriers encountered to blend the 'craft' and 'science' of policing sustainably across the organization (Andrews 2024; Martin 2024; Skilling and Thomas 2024). Police academization research tends to focus predominantly on the academic or classroom-based learning, with a strong deficit in exploring the role and value of learning on-the-job, field training, and better understanding its 'craft' (Cockcroft et al. 2025).

In summary, the literature on police professionalization has traditionally focused on a link between profession and academic study. The evidence on the impact of such a professionalization agenda within policing is however mixed and often does not include reference to other learning concepts, which could provide the scaffolding for professionalization efforts, such as Senge's concept of the learning organization. The police learning landscape is diverse and complex, and with the majority of research focused on the USA, England and Wales, Australia, and Norway, this comparative work in Scotland, Finland, and Sweden provides new insights into police learning and education advancing the literature on police as learning organizations, police professionalization, and the promise for a wider learning sector.

METHODOLOGY

This paper presents findings from two PhD studies exploring professionalization and police learning in Scotland, Finland, and Sweden (see Engelmann 2023 and Tatnell 2022 for detailed discussion of methodology). Empirically based, cross-national comparative studies of this type are limited (Noordegraaf and Steijn 2013: 236), but important to develop more refined understandings of the professionalization of public services.

Engelmann's (2023) study explored the role, value, and culture of police learning in Scotland, touching on the role of higher education and organizational learning within both the Police and allied professions. A mixed-methods approach was used including a purposefully designed survey ($n = 381$) and semi-structured interviews ($n = 33$) with police officers across ranks (up to Chief Superintendent level) and roles; semi-structured interviews with practitioners from allied professions ($n = 15$); and semi-structured focus groups ($n = 3$) with students enrolled on one of the first policing focused degrees in Scotland. A mix of purposeful, convenience, snowball, and probability sampling methods were used to reach relevant participant groups. Table 1 highlights the breakdown of participants for the qualitative data collection. Out of the sixty-one participants for the interviews and focus groups, thirty-six identified as male (59 per cent) and twenty-five identified as female

(41 per cent). Demographic data of Survey participants can be found in Tables 2 and 3. Policing participants had varied experiences with higher education before and after becoming a police officer in Scotland. Data were collected between October 2019 and February 2021.

Tatnell's (2022) cross-national, comparative study explored the role of Higher Education in initial police learning programmes within the wider context of police professionalization. A qualitative, multiple, cross-national, case study approach was adopted encapsulating Scotland, Sweden, and Finland. Through a purposive and snowballing strategy, data were collected during forty-nine one-to-one semi-structured interviews and six focus groups from police officer recruits (Scotland) and policing students (Sweden and Finland), police college managers and trainers, tutor constables, first line and senior operational managers and leaders, chief police officers, police unions, university academics, and, in the case of Scotland, those in quasi-governmental policing oversight and governance roles. Table 4 highlights the breakdown of participants. Data were collected during 2019.

Data analysis

Survey data were explored through descriptive analysis to better understand police officer's views on higher education, continuous professional development within Police Scotland, and organizational interest and support for learning. One-way analysis of variances were conducted to test whether certain demographic information influenced police officer viewpoints. Statistical analysis was conducted using SPSS 28.

Qualitative data were analysed inductively and thematically using Braun and Clarke's (2006) six-step thematic analysis. The process was iterative and supported by regular discussions between the authors and their respective supervision teams with extensive knowledge in the field of policing and education. Analysis was completed utilizing the qualitative data analysis software NVIVO.

Through iterative discussions between the authors, there was a shared understanding that the findings highlight the need for a better understanding of the support structures enabling the blending of police 'craft' and 'science'. Such an understanding

Table 1. Cross-tabulation of survey respondents' gender and age (Engelmann 2023).

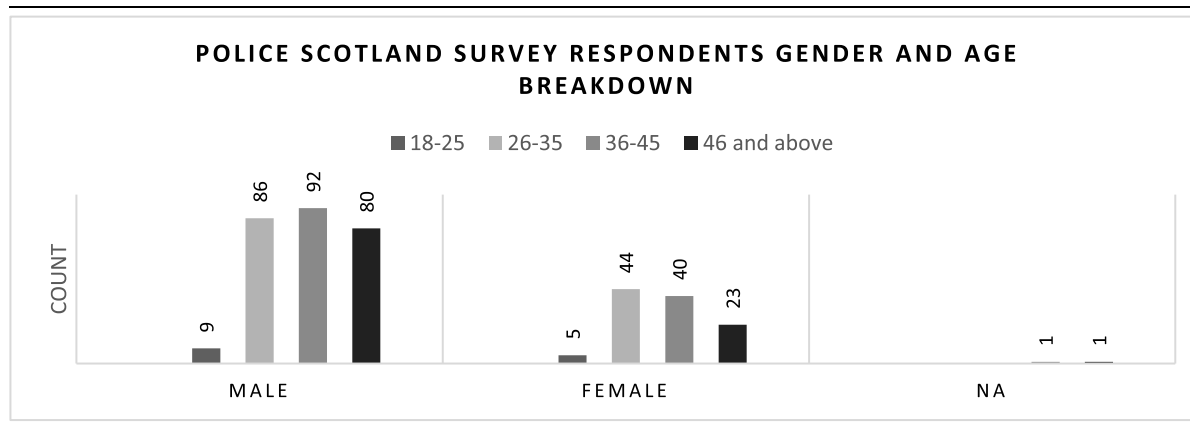


Table 2. Participant characteristics for Engelmann (2023) qualitative data collection (interviews and focus groups).

Type of participants	Number of participants	Years of experience in job/degree
Constable	8	3–28
Frontline management (sergeant)	8	11–27
Middle management (inspector—chief inspector)	8	18–29
Senior management (superintendent—chief superintendent)	8	20–30
Retired police officer	1	30+
Justice social work	6	7–20
Community safety	3	6–15
Third sector	2	5–11
Senior nurse practitioner	2	30–40
Criminal justice agency and retired police officer	2	1
Edinburgh Napier University applied criminology and policing degree students	13	1–2

led to further analysis of the data with Senge's (1997) five mental models as guiding principles to triangulate the studies' data. Findings in this paper reflect police officer viewpoints but highlight some insights from Engelmann's (2023) work with policing university students and allied professions in Scotland. Combining our projects has increased the content validity of our themes and presents a stronger argument overall.

Ethical approval to undertake the studies was received through Edinburgh Napier University and the University of West of Scotland. In addition, access approvals were secured from local stakeholders, police, social work, and local authorities in the different countries.

Table 4. Interview and focus group participant breakdown (Tatnell 2022).

Country	Total no. of interviews	Police officers	Academia, police staff educators	Quasi government and police oversight—governance
Finland	17	12	5	0
Sweden	14	10	4	0
Scotland	18	13	3	2
Total	49	35	12	2

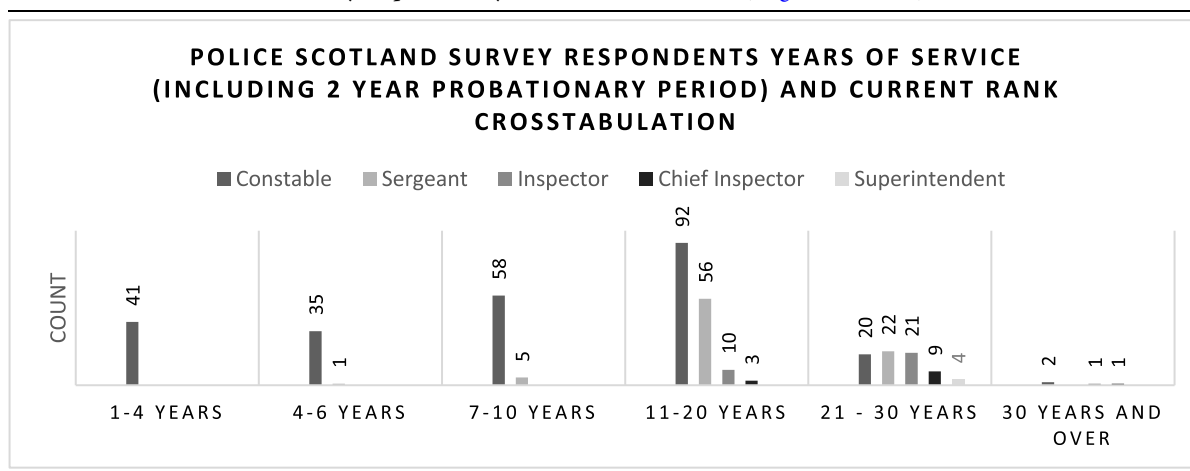
FINDINGS

Themes are presented using Senge's (1997) five pillars of a learning organization: the socio-political context of police-academic partnerships (Senge's 'shared vision' and 'team learning'), police cultural capital associated with different forms of learning and knowing (Senge's 'mental models' and 'personal mastery'), and organizational and structural readiness for innovation and change (Senge's work on 'systems thinking'). These are not self-contained themes; instead, they are connected in complex and non-linear ways.

Socio-political context—'shared vision' and 'team learning'

In Scotland, Sweden, and Finland, the extent to which there was a shared vision between and within the 'three worlds' of policing, politics, and academia with regards police professionalization through education varied.

In Scotland, policy formulation had been largely homogenous and non-negotiated, driven primarily by the 'one-world thinking' of policing. There was some evidence to suggest that police leaders were also influenced by the governing Scottish National Party's (SNP) ideology of Scottish exceptionalism being distinct or 'better than ... England and Wales' (Brangan 2019: 782):

Table 3. Cross-tabulation of survey respondents' years of service and rank (Engelmann 2023).

(the) more elitist degree route didn't sit comfortably with the SNP

(Scotland, Participant SCP20, senior policing leader, Tatnell)

While it was unclear whether Scottish Ministers had directly or indirectly influenced the policy formulation process in this instance, this senior policing leader was clearly aware of the SNP-led Government's ideological position, which, it is suspected, contributed to the decision not to adopt a degree entry pathway alongside other entry pathways.

There was agreement amongst Scottish university student participants that police engagement with higher education would signify to the public that officers and the organization were intelligent and competent to do the job:

If there's more engagement with [higher] education and also just sharing that with the public, I think it would increase police legitimacy, because they would just see that this is an organization that's intelligent and competent.

(Scotland, University Student Focus Group 1, Student 1, Engelmann)

Perceptions among police officers in Scotland in terms of the value of degree entry and academic learning, particularly for senior officers, varied, as indicated by the below quotes and survey responses in [Table 5](#):

What does academic learning have to do with policing?

(Scotland, Participant SCP20, police officer, Tatnell)

I think there's a lot of room for bringing academia into policing in terms of you know reading journal articles and that kind of

thing you know, stuff at the kind of cutting edge of police academia and things like that. There's a lot of room for improvement in getting that material and getting that learning to frontline officers, who are actually interacting with the public and who I would argue are the ones making the most difference to service users.

(Scotland, Participant 4, frontline police officer, Engelmann)

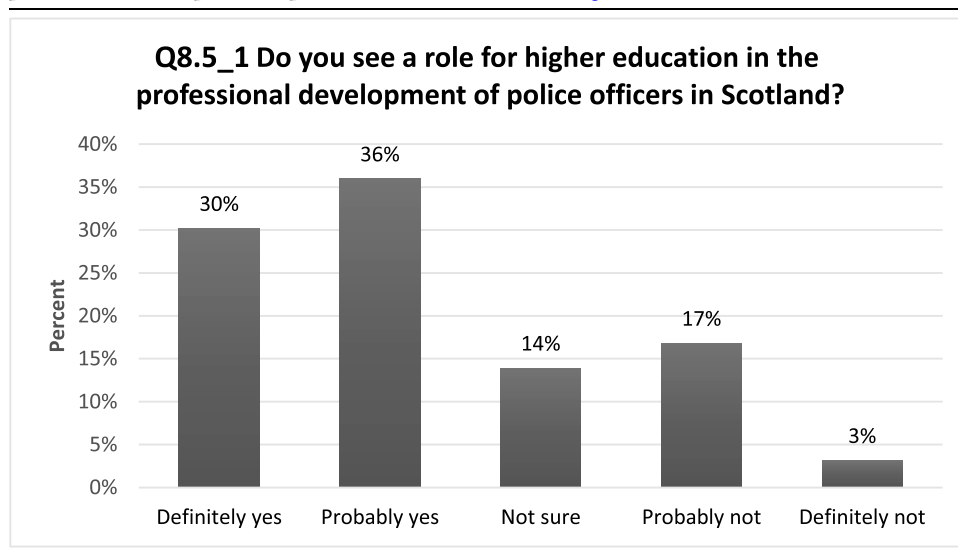
Attempts to turn policing into a classic profession by making it graduate-entry only were considered by this degree-educated chief officer from Police Scotland to be a 'conceit':

...you know this thing about giving people three-year undergraduate degrees... [I am] not in favour... I think it's just a conceit quite frankly ... there is something about policing in England and Wales having a massive inferiority complex and wanting to be seen as a profession, wanting to be seen as equivalent to doctors and lawyers and teachers (slapping hand down on the desk repeatedly with each point). And the way to achieve that seems to be that everybody has some sort of academic qualification.

(Scotland, Participant SCP14, Chief Police Officer, Tatnell)

In the case of Sweden, there was complexity of cultural synergies within and between the 'three worlds' of politics, academia, and policing: between political parties; between 'management cops' and policing students; between policing students and academia; and between policing and some political parties. Relational power sat largely with the worlds of politics and academia, with the resulting 2-year university-based initial learning model generally perceived by police officers to foreground the political ideology of the Social Democratic Party to raise academic standards of police and allied professions:

Table 5. Survey responses ($n = 381$) to question 8.5_1 'Do you see a role for higher education in the professional development of police officers in Scotland' (Engelmann 2023).



I think this is about ideology. It goes very deep in how they see the society. And it's not only the police branch, it's a lot of other branches that they are striving to get on an academic level. It's important for the Social Democratic Party. Has been for many, many years.

(Sweden, Participant SWP 11, Chief Police Officer, Tatnell)

Progress towards realizing this ambition with regards policing has ebbed and flowed, making progress when the Swedish Social Democratic Party were in Government, and stopping when more right-leaning parties who were opposed to further academization were in power.

Academia's influence on policy formulation in Sweden was also strong during the policy formulation process. When in power, the Social Democratic Party established working groups led by academia to make the case for a compulsory, pre-entry degree, which involved reducing field training to focus on academic learning, as this chief police officer explained:

I tried [...] to have more on the job training, but I didn't succeed. In the [working] group that was in charge for the report, [...], all of them were from the academic world, but one was from the police education academic, and all of them, including the chairman of this work, was supporting that if we want to make half a year longer, it should be more theoretical.

(Sweden, Participant SWP11, Chief Police Officer, Tatnell)

In Finland, while policy formulation had also been heterogeneous and negotiated, relational power between the 'three worlds' was located principally with policing, with academia playing a supportive role. The resultant pre-entry, 3-year degree programme foregrounded the vocational needs of policing while also meeting the vocationally focused accreditation needs of academia.

However, the world of politics also had an important role to play. Progression of the degree entry-only policy pathway was dependent on the election of a national Government whose views aligned with those of academia and policing. Such synergy between the 'three worlds' of policing, academia, and politics provided a window of opportunity to secure parliamentary approval for implementation, as this quote from a chief police officer shows:

When I present my idea of increase the level of police training up to high level education. First reaction in Minister of Education was never, never ever ... it was one Friday morning in June 1999 ... I turned to my good friend in Finnish Parliament ... my friend [...] [who taught] me one thing that if this is 1999 [...] believe me, the next election will be 2001 and the whole idea of education policies should change or will change in 2001. So, I do my homework again and I was very aware to [the] situation which was the right moment when I went again to Minister of Education. So always there has to be a bit [of] luck. So, I was just [there at the] right time in the right place and that there was a new minister which took this very serious and said, 'absolutely, this is wonderful idea ...

let's do, let's do this and that' ... right time, right moment [laughs].

(Finland, Participant FP18, Chief Police Officer, Tatnell)

Academia's relational power within the policy formulation process was founded on Finland's Police University College's (also known as POLAMK) positionality as a statutorily independent University of Applied Science and its voluntary, partial subordination to the National Education Board, which enabled it to demonstrate the quality assurance standards required of a degree awarding institution.

While the policy formulation process in both Sweden and Finland had been heterogeneous and negotiated, the key difference was relational power. In Finland, unlike in Sweden, the dominant voice was the 'world' of policing which enabled the resultant compulsory, pre-entry Bachelor's degree programme to foreground the vocational needs of policing over those of politics and academia, as this chief police officer explained:

The main reason definitely, was an analysis of the operative environment of the police. It's becoming more complicated on several levels. The degree is a completely secondary issue ... it comes as a result from these thoughts, that the police education, became so, broad, so extensive that it justifies a Bachelor's level degree.

(Finland, Participant FP02, Chief Police Officer, Tatnell)

Cultural capital and foregrounding—'mental models' and 'personal mastery'

The extent to which academic knowledge (science) and technical and experiential knowledge (craft) were foregrounded as privileged forms of knowledge and sources of cultural capital within policing varied between countries. In Scotland, as mentioned previously, some police officers and those in oversight and governance roles generally perceived academic knowledge as having little relevance to policing:

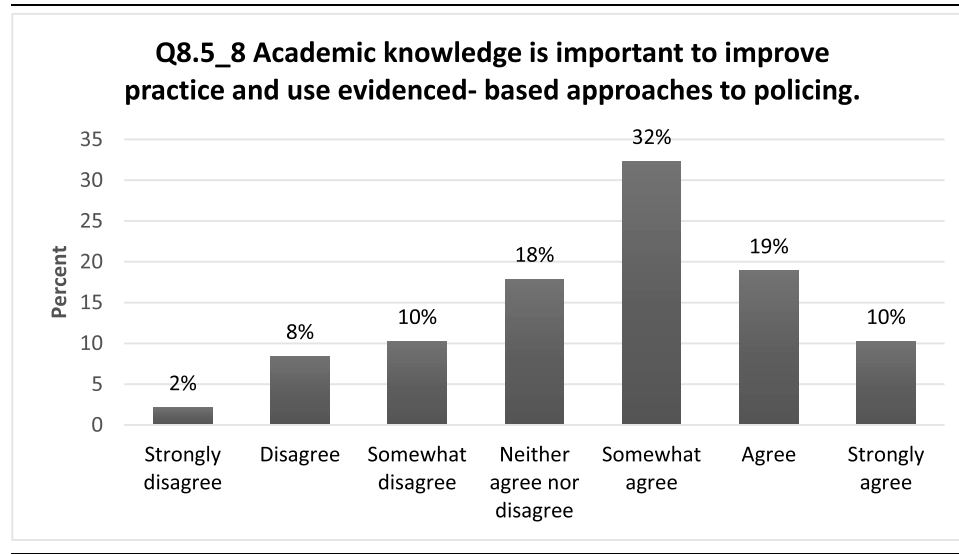
In terms of kind of operational roles, I don't think it [academic knowledge] holds a great deal of currency to be honest with you.

(Scotland, Participant 4, frontline officer, Engelmann)

Despite Scottish police officers voicing a reluctance to accept academic knowledge as useful for policing practice in interviews, the majority of survey respondents (62 per cent) agreed at least to some degree that academic knowledge is important to improve practice and use evidence-based approaches to policing (Table 6). These responses suggest that in the police officer mental model there is a space for academic knowledge even if not always realized. Scottish interviews and survey responses in both studies highlighted that academic knowledge was perceived as being of greater relevance to officers in more senior and/or specialist roles.

Personal mastery and mental models were generally conceptualized in narrow terms within Police Scotland, focused on experience and on-the-job learning:

Table 6. Survey responses ($n = 381$) to question 8.5_8 ‘How much do you agree or disagree with the statement “Academic knowledge is important to improve practice and use evidence-based approaches to policing”’ (Engelmann 2023).



I think nothing, no university can teach you how it is to work with people day in and day out. Nothing can prepare you for that but years of experience and facing it yourself.

(Scotland, Participant 7, frontline police officer, Engelmann)

Many police officers in Scotland would highlight the half-hearted attempts of the organization to integrate academic science into policing, which further confused officers and negatively influenced their own motivation to learn:

The organization is not interested in it anymore and [the officer] is only in year two [of the degree]. So, they’ve [Police Scotland] just abandoned her and the cohort of people that are on it, and that’s symptomatic of the organization. So, [...], they fund one thing and then you know the shiny, shiny is now over here, so they’re not interested in it anymore.

(Scotland, Participant 3, middle management Police Officer, Engelmann)

The above example highlights a cynical understanding of Police Scotland’s provision of learning opportunities, where the motives for learning provisions were called into question. It was rarely considered to be based on a genuine interest in the personal or professional development of officers but perceived a tick box exercise.

By way of contrast to policing in Scotland, professionals from allied professions, such as social work and nursing, highlighted the clear learning mental model presented to them within their organization, which appeared to blend ‘craft’ and ‘science’ almost seamlessly:

I definitely think learning is encouraged and it’s supported and [...] people who are doing the practice educating, like the

council funds that, and they get study days and there’s like special leave policy, which allows for study days and stuff, you know, so from that point of view the council’s supportive. I don’t pay for any of my own training, the council funds my training whatever it is.

(Scotland, Participant 3, Justice Social Work practitioner, Engelmann)

In Sweden and Finland, vocationally relevant academic knowledge along with ‘craft’ knowledge were sources of cultural capital and formed officers’ mental models and sense of personal mastery. Contemporary policing environments were perceived to require police officers and staff to have the capability to think for themselves and have the motivation to maintain their own professional knowledge:

... the police profession and [...] the police mission is being more complex all the time. The police is working within a more complex society. Laws are changing and the conditions under which people live under are more complex... the notion of the idea of lifelong learning that the police officers could learn within one time period and then stop learning. But rather they want people to be able to develop through their whole professional life.

(Sweden, Participant SWP 11, Chief Police Officer, Tatnell)

Scottish, Finnish, and Swedish university policing students, although not synonymously supporting the need for higher education, confessed that they appreciated the grounding a degree could give them. Their interest in the academic subject of policing highlights their interest and curiosity as part of their sense of personal mastery (Senge 1997).

Organizational and structural readiness for innovation and change—'systems thinking'

Our findings suggest that the readiness for systems thinking is not quite there yet in Scotland. Officers described the current thinking as lacking in its ability to recognize and work within the wider context of policing, with many officers suggesting that a different mindset is required to get there:

There is such an inertia in terms of change, but if we look into the 21st century and you know there's lots of talk about cyber-crime and the cyberspace and different ways of working and then you add into that the political instability that we're seeing not just in the UK but right across Europe and in America and in the far east and the middle east. If we're ever gonna [sic] get through [...] we need a different mindset, we need a different type of ship, there's a crisis in terms of the resources that we've got so we're gonna [sic] need a different level of thinking a different style of approach.

(Scotland, senior management police officer, Engelmann)

A central theme contributing to challenges in systems thinking was risk aversion and the ability for officers to reflect on difficult topics, raise concerns, and learn together:

They need to create a culture where they want to hear the truth and that's genuine and it's not just a case of them wanting to hear it but not do anything about it.

(Scotland, Participant 6, senior management police officer, Engelmann)

In Scotland, many participants did not feel as though meaningful learning was possible due to a lack of safe spaces to share challenges and risks, and an unwillingness to genuinely invite and act upon learning, as the above quote demonstrates. To enable systems thinking and the development of a learning organization, safe spaces are central in identifying current and future practice gaps and promote respectful communication and decision-making (Örtenblad 2018).

The benefit for policing to think beyond the narrow confines of its traditional 'heroic' purpose (Reiner 2010; Waddington 1999), to work inter-professionally and to integrate (police) science and systems thinking, was reflected upon by police officers from Sweden and Finland:

Now we have seen the first course [Bachelor's Degree] [...] on the beat [sic]. I can say the skills are even better because they understand more [sic] the problems... the knowledge about the society and to take care [of] the problems so that we really solve the problem. Not just put the case behind us and come back again in that place.

(Finland, Participant FP18, Chief Police Officer, Tatnell)

In Scotland, our findings suggest Police Scotland struggles to create supportive learning environments, in contrast to experiences in Finland and Sweden. Interviews and survey responses

from Scotland suggest that individuals learned in silos, with a lack of focus on the way in which different parts of the system can and should interact with one another.

DISCUSSION

Findings highlight that the learning organization scaffolding could aid police organizations, policy makers and academics to move beyond narrow conceptualizations of evidence-based policing and police education reforms, offering a more holistic but nuanced lens through which to view, challenge and expand the blend of 'craft' and 'science'. Such a blend needs to be understood, valued, and agreed upon across the three worlds of academia, politics, and policing, and shared with allied professions. Thereby encouraging the latter to collectively move away from the existing protectionist inter-agency approach to collaborative working, and towards developing a connective professionalism (Meurs and Noordegraaf 2022) and learning sector. Connective professionalism operates beyond the constraints of organizational and professional boundaries to create a public services sector which can effectively learn together, embodying the 'radical, new, collaborative culture' suggested in the Christie Commission on the Future Delivery of Public Services in Scotland (2011: viii).

The comparative nature of this study highlighted professionalizing benefits of academization within policing are not universally proven or accepted (Pepper et al. 2025), but also that the underpinning trait-based notions of police professionalization can be unhelpful. The 'modern, collaborative and knowledge-intensive' ways in which to address twenty-first century policing problems are often hindered by institutional arrangements and identities (Meurs and Noordegraaf 2022). The complex system within which police officers act, needs to be the first area of intervention when it comes to policing reforms. Without psychologically safe and supportive learning environments (Garvin, Edmondson, and Gino 2008), academically educated police officers who 'mess' (Meurs and Noordegraaf 2022) with the organization in an attempt to improve practice, will fall short of the wider aim of police professionalization. A meaningful commitment to police organizations as inter-connected public sector wide learning organizations, both in ethos and resources, supports the development of practical wisdom which, we argue, would increase the confidence and competence of police officers and therefore policing practice. More importantly, it aids the wider structural change called for by many academics, who have in recent years challenged policing's capacity to adapt to the challenges of the twenty-first century (such as Blaustein, Shearing, and Miccelli 2024).

Through the lens of Senge's (1997) theory, we argue that contemporary policing needs to be uncoupled from trait-based professionalization approaches and instead refocused on building the requisite scaffolding on which to facilitate the development of both organizational and individual learning and development. Building such scaffolding has the potential to enhance policing resilience and effectiveness within rapidly changing and increasingly complex operating environments, further professionalizing the police. An over-reliance on police (re-) professionalization through academization strategies could

lead to the alienation and de-skilling of police officers and an uneven distribution of power and opportunities.

Organizational and structural readiness for innovation and change—‘systems thinking’

Systems thinking, is a way in which to look beyond a simple A causing B scenario by looking at the complex interrelationships between A and B and also the influence of C and D for example (Senge 1997). The fact that academic knowledge is not yet fully recognized and integrated into police culture and practice in Scotland, presents a factor C which hampers the impact of factor A (higher education for police officers) on factor B (the officer with more knowledge and skill instigating change). The time limited support for such initiatives based on need at the time and political priorities (rather than long-term embedded strategies to learning) presents factor D, influencing officer morale and trust in the organization. This was in contrast to what we found in Sweden and Finland.

Findings from Sweden highlight that when coupled with heterogenous policy development pathways in which the ideological needs of politics, and the accreditation needs of academia are foregrounded over the vocational needs of policing and which do not acknowledge the cultural capital associated with craft-based knowledge, cultural schisms may arise, which can undermine ongoing professionalization efforts. The ability of policy makers and strategic leadership within the three worlds of academia, politics and policing to see and understand the wider system interacting and influencing how change and support is perceived and experienced, as in Finland, is important for officer alignment with organizational values and ambitions, as well as its sustainability. Charman and Bennet’s (2022) work on voluntary resignations and occupational stressors support this assessment by warning police organizations to take a closer look at internal factors and systems that can hamper or support organizational commitment amongst officers. A recently published report from Scotland highlights the importance of expectations versus reality for recruit police officers and the centrality of supportive learning structures and leadership in retention and retaining important knowledge and skill (Grant, Heild, and Backhaus 2024). None of this is new knowledge. Findings from New Zealand highlighted similarly the importance of organizational and in particular leadership support and leadership training in supporting job satisfaction and organizational commitment (Brough and Frame 2004). Therefore, this paper adds to a growing evidence base reminding policy makers, senior leaders and academics to recognize wider internal and external factors influencing police learning, job satisfaction, agreement with values and cultures and their ability to adapt to them.

Noordegraaf’s (2015: 791) concept of the ‘re-location’ of professional work whereby the boundaries between the work of one occupation, profession, or organization and the ‘outside worlds’ of others become more fluid’ support the argument by reformists (e.g., Hallenberg and Cockcroft 2017), that police professionalization through higher education can support the relocation of professional work by providing police officers with a wider understanding of their role and positionality, as was found to be the case in Finland. However, a certain amount

of scaffolding is required to enable this system understanding to have a meaningful impact in practice, which in Scotland we struggled to find. There is a need for support mechanisms such as the co-production of knowledge, capacity building and an emphasis on applied, mutual learning targeting joined or shared priorities to allow for systems thinking (Haynes et al. 2020). All of this supports not only the need to develop police as learning organizations but also the need for a learning sector with safe learning environments and embedded structures across law enforcement and public health.

Cultural capital and foregrounding—‘mental models’ and ‘personal mastery’

While both studies found that university-based policing students in Scotland and Finland had an interest and curiosity about vocationally relevant academic knowledge, adjusting already well developed cognitive ‘mental maps’ (Senge 1997) can be difficult as they help officers explain and understand the world. In Scotland, the social, cultural, and political foregrounding of experiential ‘craft’ learning as a preferred source of knowledge and source of cultural capital could be an explanation as to why previous attempts to further professionalize through academization have been fruitless there (see Martin and Wooff 2020). Even where personal mastery may promote wider engagement with knowledge, a culturally narrow mental map within the police can hamper such development (Andrews 2024).

In Finland, the generally held perception was that both vocationally relevant academic theoretical knowledge and technical craft skills training are considered an important foundation for the development of professional expertise, thereby providing a more conducive mental map to develop lifelong learning as part of ongoing professionalization efforts. ‘Truly effective training should kick-start expansion, recognizing that professionals are agents in their own contexts and beyond’ (Beighton and Poma 2015: 198). Within policing, where there is a balance between supporting and curtailing professional discretion, this is difficult to develop (Cockcroft and Hallenberg’s 2022, ‘Blue Box’ Conundrum). However, if we are to ensure that police officers stay mentally engaged on the job, we need to recognize that we have to give them something to work for, and promoting personal mastery and a lifelong learning attitude is one way to ensure that officers are interested in using evidence-informed practice which blends the ‘craft’ and ‘science’ of policing.

While the established academic police learning pathways in Sweden and Finland might partly explain some of the pro-professionalization through academization sentiments expressed by participants, there were also some important differences. Unlike in Sweden, where the initial learning programme is delivered at five ‘mainstream’ academically-focused universities, the Finnish initial learning programme is delivered at a University of Applied Science, the Police University College. As distinct from ‘mainstream’ academically-focused universities, the assessment criteria are more vocationally focused. Differences in relational power between the worlds of academia and policing, coupled with the differences in the types of Higher Education institutions and their respective assessment criteria help, it is argued, to understand the nuanced findings within the

broadly supportive view of police professionalization through academization.

Socio-political context—'shared vision' and 'team learning'

If the organization is perceived as not valuing academic knowledge in the eyes of police officers, as we found in Scotland, their motivation to engage with higher education in the future and their response to professionalization through academization may be negatively influenced. This speaks to [Senge's \(1997\)](#) learning organization pillar of having a shared vision which is not only shared across the organization, but also created and shaped by officers and staff to facilitate buy in. The pace of change and the ways in which officers are included in decision-making for their own learning and development are important for reforms to have the desired impact ([Khalil, Harding, and Hartley 2019](#); [Watkinson-Miley, Cox, and Deshpande 2022](#)). Implementation of reforms should be supported by feedback loops ([Cox et al. 2018](#); [Reichborn-Kjennerud 2021](#)), which allow for reasonable adjustments, based on police officer lived experiences supporting a shared vision and team learning. Our findings confirm [Reichborn-Kjennerud's \(2021\)](#) suggestion that 'professional cultures matter for how useful employees perceive standardized training programmes to be, and that routines and standardized procedures need not be contradictory to learning', which could reduce possible implementation and interpretation gaps.

The complex *wicked problems* of the twenty-first century transcend the expertise of one service and even where practical wisdom of different services is pooled, we might not be able to solve these problems. Nevertheless, in a time where an interdisciplinary learning sector is required, it is not only the 'craft' and 'science' of policing that needs blending into a shared vision, it needs to be a joined effort where each part of the whole (police, allied professions, publics, politics, higher education/academia) is acknowledged and seen as part of a wider vision for a connective professionalism within public services that is for the good of society. To achieve this, based on the findings presented here, organizations including the police have some work to do in giving up control and widening their engagement with different forms and ways of learning and thinking that are not purely based on political priorities, policing priorities or current craft knowledge.

We acknowledge, as others have, that there are 'tensions [in] welcoming science into a tradition of craft-based thinking' ([Stanko and Dawson 2016](#): ix). It is important to capture the hearts and minds of officers and the way in which they develop knowledge, skill, competence and confidence, rather than introducing a prescriptive notion of professionalism that is focused on compliance and the imposition of unhelpful standards ([Bacon, Heberton, and McCann 2023](#)). We argue instead that a reconfigured, hybrid notion of professionalism ([Noordegraaf 2015](#)) necessitates a refocusing towards the development and utilization of 'practical wisdom' (phronesis) which blends the 'craft', and 'science' of policing ([Innes 2010](#); [Wood et al. 2018](#)). Such a focus on the development and utilization of 'practical wisdom' would enable evidence-based practice founded on 'a decision-making process which integrates the best available evidence, professional judgement, and community

values, preferences and circumstances... as a research-informed, practitioner-centred, and community-oriented approach to policing practice' ([Klose 2024](#): 5). It is therefore the creation, assessment and translation of evidence into practice, amongst a reflective and skilled workforce, rather than blind acceptance of different viewpoints and evidence, which could enable professional problem solving and develop police organizations as learning organizations ([Martin 2024](#)).

CONCLUSION

This paper has highlighted that notions of profession, professionalism, and professionalization are socially, culturally, and politically constructed and manifest differently depending on the different contexts within which they are formulated. The contribution of this paper is the nuanced understanding of why developing the requisite scaffolding for police as learning organizations is important to support ongoing professionalization efforts in Scotland and elsewhere. The comparative nature of our work was able to clearly illustrate the different ways in which relations between the 'three worlds' of politics, academia and policing are significant in the way in which professionalization manifests in western countries, is experienced and leads to tangible change.

The approach developed in Finland appears to be most desirable with a balanced approach between the 'three worlds' of politics, academia and policing. The 'world' of policing remaining a dominant but not overshadowing voice ensuring that craft knowledge remained a substantial and appreciated aspect of police learning. Sweden's model appears still in transition and not quite achieving an appreciative balance of the 'three worlds', similarly in Scotland the relational power of policing and the distance to the 'world' of academia also challenging a balanced approach. The paper argues that an appreciative balance between the 'three worlds' is desirable and would aid police organizations, such as those in Scotland and Sweden, to future proof and further professionalize their organizations. To achieve this however, cultural and structural changes are required in all 'three worlds', which are difficult to achieve in times of ongoing global and local financial, security, and legitimacy pressures. Nevertheless, the development of learning organizations presents a first step in laying the groundwork for such a re-balancing.

The learning organization is central to develop sustainable and safe learning environments which create mental models in line with the wider policing vision, and support employee's commitment to the organization, while developing lifelong learning attitudes in line with the concept of personal mastery. A focus on the development of personal mastery can in turn create organizations which focus on the development of practical wisdom which will support positive and effective evidence-informed policing practices, empowering officers to become problem-solvers and researchers into their own practice. Like [Bacon et al. \(2023](#): 1–2), we argue that officers (and staff) need to be at the heart of professionalization efforts, with meaningful listening, feedback and transparency in decision-making guiding organizational and policy responses.

Therefore, it would benefit policy makers to recognize that policing is a hybrid profession ([Martin 2022](#); [Noordegraaf 2007](#)), which like other public sector occupations is undergoing

something of a reconfiguration as it responds and adapts to increasingly complex and rapidly changing operating environments. The learning organization as scaffolding should support and build upon the way that policing appreciates and utilizes academic, technical, and experiential knowledge. The blend of the ‘craft’ and ‘science’ of policing will not only support the development of practical wisdom but has the potential to enhance legitimacy and trust (Wilson and Miles-Johnson 2024).

Speakman et al. (2023) reiterate the need to move away from single agency responses to sector wide change when thinking about learning and development to improve practice, underscoring that law enforcement and public health agencies are inextricably linked. Considering the complex and intersectional nature of policing, changes are not only required within policing, but academia, politics and allied professions also need to move away from siloed and narrow views of learning and knowing to enable honest and reflective discussions which address the theory-practice divide. This speaks to the need for going beyond the learning organization framework to promote the development of what we call a learning sector supporting the development of connective professionalism (Meurs and Noordegraaf 2022). A learning sector would create shared and multi-agency learning environments which help develop shared visions, boundary working and the identification of organization and practice boundaries in the response to wicked problems. The development of a learning sector was sparked by Engelmann’s work with police and allied professions and requires further research to identify in what ways the learning organization building blocks may be replicated across a complex law enforcement and public health system.

The findings presented here are limited by sample size and geographical focus (largely Scotland with insights from Sweden and Finland) and by participants who may reflect those who had an interest in learning and development, skewing findings. Additionally, the focus in these studies was largely on police officers. It is important to remember that police services also have a significant number of police staff, which would benefit from more research to explore their needs and experiences in relation to the professionalization of policing. Nevertheless, by collaborating and triangulating our findings we present a more comprehensive picture of how officers experience and perceive professionalization efforts, educational reform and learning in different countries and were able to make informed conclusions about what this could mean for ongoing professionalization efforts.

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CONFLICT OF INTEREST

The authors do not have a conflict of interest but want to highlight that they both have frontline experience of policing. Engelmann was a Special Constable (volunteer police officer) with Police Scotland between 2020 and 2023, and Tatnell

worked as a full-time police officer for 30 years, retiring from Police Scotland in 2014. We have insights that not many academics have and whilst we publish this paper as academics, we see ourselves as outsider insiders.

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DATA AVAILABILITY

The data underlying this article will be shared on reasonable request to the corresponding author.

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