BRITISH ACADEMY OF MANAGEMENT

BAM CONFERENCE

3RD-5TH SEPTEMBER
ASTON UNIVERSITY BIRMINGHAM UNITED KINGDOM

This paper is from the BAM2019 Conference Proceedings

CROSS-DISCIPLINARY INSIGHTS INTO
PROFESSIONAL IDENTITY FORMATION (PIF)

Authors

* Dr Stefanie Reissner, Senior Lecturer, Newcastle University Business School, UK
Email: stefanie.reissner@newcastle.ac.uk

Dr Elizabeth Armitage-Chan, Senior Lecturer, Royal Veterinary College, UK
Email: echan@rvc.ac.uk

Summary

This developmental paper reports on a systematic literature review of research on professional identity formation (PIF), i.e. the process by which individuals gain an understanding of who they are as professionals. While PIF has been a central concern in teaching and the health sciences for many years, it remains understudied in management and organization research. By taking a cross-disciplinary approach to comprise PIF research from a wide range of disciplines, this paper not only enables a more comprehensive understanding of the PIF construct and process but also fosters much needed cross-disciplinary learning.

Key words: cross-disciplinarity, identity work, professional identity formation, review paper

Word count: 4,444 words

* Corresponding and presenting author.

CROSS-DISCIPLINARY INSIGHTS INTO
PROFESSIONAL IDENTITY FORMATION (PIF)

Introduction

Professional identity refers to individuals' understanding of 'who am I as a professional' (Slay and Smith, 2011). It connects individuals with a professional and wider socio-economic context, affecting their attitudes and behaviours at work (Caza and Creary, 2016). Professional identity helps individuals to deal with ambiguity and uncertainty (Trede *et al.*, 2012) and has been associated with increased wellbeing (Cake *et al.*, 2015), resilience (Cake *et al.*, 2017) and employability (Bell *et al.*, 2018) – all of which are of concern across a range of professions. However, professional identity tends to be profession-focused, considering the specific characteristics and behaviours that individuals in a particular field are expected to display. Transferability of insights to other professions is therefore limited.

In contrast, professional identity formation (PIF), the process by which professional identity is developed, is concerned with more generic processes of learning, development and sensemaking that cross professional boundaries. It has been defined as 'what [professionals] know and/or believe but also who they are, how they view themselves as [professionals], how they relate to [others], how they deal with problems, how they reflect on issues, and how they identify themselves within the profession' (Palmér, 2016, p. 682). In this definition, PIF is explicitly and simultaneously linked to individuals' personal identity ('who they are' and 'how they view themselves'), social identity ('how they relate to [others]') and professional identification ('how they identify themselves with the profession'). It thus involves dynamic interplay between personal, organizational, institutional and profession-specific factors.

However, the factors and processes that are at play in the PIF construct have not yet been systematically brought together. This limits the current understanding of what PIF is and how it is brought about. Such a lack of understanding is particularly problematic against ongoing professionalization in the management-related disciplines, such as HRM (see Hallier and Summers, 2011; Mackay, 2017) and project management (see Paton *et al.*, 2013; Sabini and Muzio, 2017). Since PIF has been a major concern in teaching and the health sciences (such as human medicine, nursing and pharmacy) to the extent that the main purpose of professional education is regarded as supporting PIF (Cruess *et al.*, 2014), important insights can be gained from research in these and other professions. To support such cross-disciplinary learning, this developmental paper presents the initial findings of a systematic review of the current PIF knowledge base. After a discussion of the approach to the review presented next, an overview of the PIF construct will be given followed by more detailed discussion of the central PIF characteristics and underlying processes. To conclude the paper, the lessons learned from the review and areas for further research are outlined.

Methodology

Narrative synthesis has been employed in this article, which according to Popay *et al.* (2006, p. 5) is 'an approach to the systematic review and synthesis of findings from multiple studies that relies primarily on the use of words and texts to summarise and explain the findings'. The four-step review and analysis process employed in this article is summarized in Figure 1.

FIGURE 1

In Step 1, we searched the ISI Web of Science, EBSCO Complete and Emerald Management 150 databases for "professional identity formation", "professional identity development" and "professional identity construction" which are widely used to describe the same phenomenon. These searches were limited to these exact terms featuring in the title because the most central concepts are usually stated there. 308 results were identified from a variety of professional fields, including teaching, the health sciences (medicine, nursing, pharmacy), counselling, engineering, journalism, accounting, law and veterinary science.

In Step 2, we screened the abstracts of these articles for relevance. Any duplicates were removed as were articles in which the search terms appeared in a different order, which meant that they typically were not about the PIF construct. Also removed were book chapters, editorials, commentaries and letters to the editor, papers without a clear professional background (e.g. adolescent girls) and papers at the intersection of PIF and other concepts (e.g. PIF and sport, PIF and substance abuse). Articles written in other languages than English were also discarded for reasons of access and accessibility. This left 171 peer-reviewed academic journal articles for further scrutiny.

In Step 3, we accessed these articles through the respective databases, repositories (such as ResearchGate, Academia.edu) or interlibrary loans and imported into NVivo software to aid data management; the text query function enables effective searches for key terms. The articles were then subjected to qualitative analysis to identify pertinent themes. The main themes identified through the analysis that are reported in this article are (1) definition and conceptualization of the PIF construct (including personal and social dimensions as sub-codes) and (2) PIF process (including identity work and sensemaking as sub-codes). The professional field, type of paper, research methods and research context were also noted with the majority of studies deriving from medicine (38) and teaching (30), being empirical (90), using qualitative methods (63) and originating in North America (37).

In Step 4, we discussed the emerging analysis presented next, focusing on the key definitions and assumptions of the PIF construct that are widely found in the extant research. From these discussions, we developed an emerging conceptual framework that incorporates the processual and developmental nature of the PIF construct. These emerging findings are presented next, starting with the definitions and assumptions of the PIF construct.

The PIF construct – definitions and assumptions

The crucial assumptions about the PIF construct can be inferred from Palmér's (2016, p. 682) definition of PIF as 'what [professionals] know and/or believe but also who they are, how they view themselves as [professionals], how they relate to [others], how they deal with problems, how they reflect on issues, and how they identify themselves within the profession', which has been presented above. Implicit in this encompassing definition are the following assumptions about the PIF construct: (1) centrality of knowledge and skills, (2) connection to beliefs and values, (3) origins in personal identity, (4) form of social identity and (5) links to professional identification as detailed next.

Centrality of knowledge and skills

Professional identity is developed within a particular professional context and the accepted requisite technical and interpersonal knowledge and skills that enable individuals to work in that profession. Professional knowledge is important because it 'is one of the characteristics that distinguish professions from other forms of employment' (Sutherland and Markauskaite, 2012, p. 748). For example, in a teaching context, individuals require pedagogic knowledge

and skills to foster student learning. In a medical context, individuals require knowledge about diseases and their diagnosis as well as supporting skills (e.g. taking blood, conducting a patient consultation). In the management-related professions individuals require knowledge about their specific subject area, for example knowledge of employment law in HR or of organizing techniques in project management as well as a range of associated technical and interpersonal skills. In the extant PIF research, the acquisition of knowledge and skills is mostly studied in the context of workplace learning to foster the development of professional self-understanding among professional students.

For example, Clarke *et al.*'s (2014) study of occupational health students emphasizes the importance of work placements through which students can learn more about their professional role in terms of knowledge, skills and personal attributes. They argue that 'through engaging in challenging and autonomous learning experiences, students developed deeper insights into who they were becoming as professionals' (p. 222). In contrast, Chen and Hubinette (2017) argue that dedicated class-room activities can foster PIF among medical students on placement. Their study brought together such individuals in periodic intervals to give them an opportunity to share their experiences of the work placement and to receive staff support when facing difficult situations. They conclude: 'the classroom provides a different context where developmental trajectories can potentially be adjusted or affirmed both through informal interactions as well as the formal, stated goal of having a family medicine-centered curriculum' (p. 881). Furthermore, Christensen *et al.*'s (2017) study emphasizes the hands-on experiences and associated knowledge and skills that medical and nursing students gain in workplace learning. They identify that students behave more professionally when on work placement than in a similar situation on campus, concluding that students position themselves differently depending on the context, which highlights their knowledge and the contextual application of professional norms and expectations.

Connection with values and beliefs

Professional identity is informed by individual and collective beliefs about what constitutes a 'good' professional in a chosen field, which is particularly well developed in teaching and the medical sciences. For example, in Dang's (2013) study of student teachers there is a strong belief that teachers ought to have authority in their professional role, which is corroborated by Mahmoudi-Gahrouei *et al.*'s (2016) findings that student teachers fear losing control. In these studies there is a shared belief about teachers having to be able to guide their students, although such a belief may not be shared across other cultural and pedagogic traditions (see Dang, 2013). Nevertheless, these studies highlight the importance of values and beliefs in shaping students' emerging and evolving professional self-understanding as they strive to become the teachers they believe they ought to be.

Branch and Frankel (2016) further posits that humanistic values are an essential characteristic for medical professionals. They exposed medical educators to emotional narratives as part of a professional development programme, which participants left skilled at 'addressing the needs, fears, concerns or emotions of a patient, family member, learner or colleague' while also 'strengthen[ing] [their] awareness that deeply held humanistic values, such as altruism, compassion, empathy, respect, or integrity, guided the interaction' (p. 1395). Similarly, veterinarians tend to believe in the centrality of animal welfare in their professional self-understanding (Armitage-Chan, 2018), which typically tallies with their motivation for becoming a veterinarian. She argues that a strong focus on animal welfare can be challenging for veterinarians when they have to negotiate situations in which owners' needs stand in tension with what may be best for the animal. Rather, individuals with a broader professional self-

understanding as mediators between animal and owner may find their professional identity less compromised over time.

These studies emphasize the importance of individuals connecting with values cherished in their profession to help them develop a professional self-understanding that aligns with their own values. Such values are not only deeply embedded in these professions' self-understanding but transmitted to students in professional education and socialization to meet expectations by pupils / students, patients / clients and wider society. However, difficulties can arise when values cherished by the profession are out of line with individuals' personal values.

Origins in personal identity

Professional identity originates in individuals' personal self-understanding (Erikson, 1959). For example, Cruess *et al.* (2014, p. 1447) argue that 'the development of a professional identity takes place within the context of individual identity formation, a process that begins at birth and results in a complex mix of identities (gender, nationality, race, religion, class, etc.) that represents how each individual is perceived and perceives herself or himself'. The role of personal identity is highlighted in Dang's (2013) study of two student teachers of English as a foreign language, whose emerging and evolving self-understanding as a teacher is shaped by their upbringing. One individual is from a well-off urban family where the English language has had a role in everyday life. She subsequently develops a confident teacher identity with an emphasis on critically assessing the knowledge and teaching practice of herself and others. The other individual is from a less well-off rural family and found learning English herself rather difficult. Her emerging teacher identity focuses on accommodating students' emotional needs and maintaining their motivation for the study of foreign languages.

Similarly, Reissner's (2019) quasi-longitudinal study of PIF among veterinary students suggests that individuals' self-understanding is retained over time. She has followed three individuals over an 18-month period through repeat interviewing, comparing and contrasting their accounts over time. In all three students' accounts, elements of how these students identified themselves as were retained with one student positioning herself as an animal-loving scientist, the second as a people person with an interest in animals and science and the third as a scientist seeking best clinical practice. The study suggests that a person's self-understanding anchors him/her in who they really are as a person while they are exploring who they might be as a professional while acquiring knowledge and skills in the classroom and being socialized into key professional behaviours and norms in work placements. Such anchoring may help individuals to critically engage with the values and beliefs discussed above and relate them to their personal value base.

As such, PIF has to be understood and studied in relation to who an individual is in terms of their demographic characteristics (gender, age, education etc.) as well as their self-understanding as a person and what matters to them. It is thus a personal process that requires self-knowledge and the ability to reflect on and learn from experience in the context of widely accepted and expected professional knowledge, skills, values and beliefs.

Form of social identity

In addition, professional identity is a form of social identity that distances professionals who have undergone rigorous training, examinations and often registration with a professional body from non-professionals (Tajfel, 1974, 1978). A profession thus forms a distinct social group that seeks to upheld requisite knowledge and skills as well as accepted beliefs and values. Being

a member of a profession requires interaction with others – educators or mentors (de Lasson et al. 2016; Gaufberg et al. 2017), peers and wider communities of practice (Chen and Hubinette 2017; Makay 2017; Noble et al. 2014) as well as professional associations and wider society (Brouard et al. 2017, Helmich et al. 2017).

Lave and Wenger's (1991) notion of *communities of practice*, as a group of people that have a common purpose and identity, is widely cited in the extant PIF research to conceptualize individuals' engagement with a profession and its sub-groups as part of their professional training and socialization. Such engagement with a profession, particularly in work placements, has been given a central role in PIF. For example, Nyström (2009: 2) explains that during training individuals are 'exposed to different communities of practice, with particular sets of traditions, activities and boundaries' – a canon of accepted social practices that are at the heart of a profession and transmitted to students during professional training. Similarly, Crossley and Vivekananda-Schmidt (2009, p. e603) posit that being part of a community of practice helps medical students 'to "feel" like a member of the profession, while Cruess *et al.* (2015, p. 3) argue that 'the sense of belonging, an important component of a community of practice, translates into the collegiality of the profession. … The profession exerts a compelling social influence on its members as compliance with professional norms eventually emerges from within the individual'. Helmich *et al.* (2017, p. 61) emphasize the shifting and dynamic nature of such collaboration in that 'identity emerges from collaboratively negotiating meaning within the communities of practice'.

PIF is thus situated at the intersection of personal and social identity as an individual's professional self-understanding is shaped by their personal self-understanding as well as the collective understanding of established professionals and their community of practice. It must be recognized that personal and social identities are not fixed but subject to change as professional groups engage in discussion of new practices, expectations and meanings (Helmich *et al.*, 2017). Simultaneously, it is argued that self-identity is also subject to change as individuals engage with a profession. In Cope e*t al.*'s (2017, p. 554) words: 'learners become immersed and socialized into a culture, such that their identities – their very selves – are in some way changed'.

Links to professional identification

Professional identity involves identification with a profession in that individuals proudly claim membership of that profession. For students in professional training and socialization, interaction with established professionals, for example, as part of work placements or other communities of practice, helps them to 'construct a sense of their profession which includes its duties, its boundaries, its values and its aspirations' (Lingard *et al.*, 2002, p. 728). Over the course of professional training and socialization, individuals not only tend to learn how to behave like a professional but also to 'feel' like one (Crossley and Vivekananda-Schmidt, 2009), readily identifying themselves as a doctor, teacher, engineer etc.

Extant PIF studies have shown that such professional identification is a slow process. In most professions, individuals spend several years on a 'dry-run' (Vivekananda-Schmidt *et al.*, 2015) of being a professional, practising their skills in the relatively safe environment for professional training and socialization. For instance, in Eliot and Turns (2011, p. 642) study of engineering students, one participant commented on the perceived differences between professional education and professional practice as follows: 'I think I learned to showcase my work better and become ready to present to knowledgeable audience. Up to now it was okay to talk in terms of laymans [sic] terms and now I have to put up a professional front'. But even

after graduation, some newly qualified professionals find it awkward to self-identify as such. For example, in Noble *et al.*'s (2015, p. 296) study of pharmacy students, one participant said: 'I never … felt like I was ready' to start work and be a pharmacist. Similarly, in Armitage-Chan's (2018) study of newly graduated veterinarians, participants' narrative accounts suggest that not all feel ready to take on the work and responsibilities of a veterinary surgeon.

As such, while professional identification is an integral part of PIF, it may have a longer timeframe than, for example, the acquisition of knowledge and skills, the familiarization with beliefs and values or the socialization into communities of practice with their accepted norms and behaviours. Undoubtedly, PIF is at its most intense when individuals undergo professional training and socialization but is likely to remain part of their professional practice.

Processes of professional identity formation

PIF as a process

The central assumption of the PIF construct is implicit in its name: professional identity *formation* or professional identity *development*. PIF thus is regarded as a process that is effected through learning and personal sensemaking and that unfolds over time. Learning takes place in the classroom for the acquisition of knowledge, workplace learning for the acquisition of skills, norms and behaviours, and in interaction in communities of practice as already discussed. Sensemaking is an interpretive process by which people make their experiences meaningful (Weick, 1995), typically accompanying more formal means of learning (Reissner, 2008). For example, Nadelson *et al.* (2017) explain that as part of their professional training engineering students undergo a process of learning that starts off with students observing existing practice and following simple instructions. After that, they become able to question and contribute to existing practice before collaborating fully in professional practice. Hirschy *et al.* (2015, p. 778) further argue that 'individuals who perceive that their professional work is related to their own sense of self will characteristically take a personal approach to their future profession and actively integrate their learning with other aspects of their life'. There are two main implications of such a conceptualization of the PIF construct as discussed next.

PIF as learning and sensemaking

The conceptualization of PIF as a process of learning and sensemaking implies that it involves the exploration of multiple possible answers to the question of 'who may I be as a professional'. In the extant PIF research, this is supported by theories of 'possible selves' (Markus and Nurius, 1986) and 'provisional selves' (Ibarra, 1999) that emphasize fluidity, ambiguity and potentiality of developing an answer to who one may be as a professional. For instance, Hamman *et al.* (2013, p. 329) argue that such self-concepts 'may reflect an individual's expectations, including hopes, aspirations, fears, and threats. … Possible selves theory provides a way of describing the individual's use of strategies aimed at realizing hoped-for and avoiding feared possible selves, which speaks directly to the manner in which identity may become agentic'. Mahmoudi-Gahrouei *et al.* (2016) identify that student teachers consider a 'good teacher' to be someone who inspires and cares for their pupils and fear becoming a teacher who is the opposite – uninspiring and uncaring.

However, as individuals engage in professional work, their professional self-understanding can change to the negative. For example, Chong (2011) identifies a gap between perceptions of teacher students about the expected and experienced realities of being a teacher, which may lead to declining motivation, less inspiration of students and lower levels of care

and support. Similarly, Noble *et al.* (2014) argue that pharmacy students develop an idealistic understanding of what it means to be a pharmacist whilst in training, which is challenged in practice and requires individuals to revise their professional self-understanding to find their place in the profession.

PIF as an ongoing process

The conceptualization of PIF as a process of learning and sensemaking is based on the assumption that PIF originates in something that is transformed as part of the process. For example, Cruess *et al.* (2015, p. 1) argue that 'those entering [professional education] arrive with a personal identity formed since birth. As they proceed through the educational continuum, they successively develop the identity of [the chosen professional]. Each individual's journey from layperson to skills professional is unique and is affected by "who they are" at the beginning and "who they wish to become"'. The notion of process further underpins Hirschy *et al.*'s (2015) input-environment-output model. Input refers to individuals' personal characteristics (gender, age, ethnicity, etc.). Environment refers to their professional experiences as part of their formal studies (curriculum, educators, learning experiences, etc.) and in informal learning (practical experiences, involvement in professional associations etc.). Output refers to individuals' professional identity. Similarly, Barbarà-i-Molinero *et al.* (2017) propose a model of PIF that includes intrinsic factors for choosing a particular profession, social experiences and expected outcomes, educational and professional context as well as degree characteristics as important influences of PIF during professional training. While such models are by their very nature somewhat simplistic, they highlight a certain complexity inherent in the PIF construct: it is shaped by a variety of factors that interact in dynamic interplay, and it can therefore be hard to grasp and study.

Due to the fluidity of people's emerging and evolving professional self-understanding, the notion of identity work is an important part of PIF. It is defined as the interpretive process by which individuals are 'engaged in forming, repairing, maintaining, strengthening or revising the constructions that are productive of a sense of coherence and distinctiveness' (Sveningsson and Alvesson, 2003, p. 1165). In her study of newly qualified veterinarians, Armitage-Chan (2018, p. 62), for example, argues that individuals use 'social experiences to question prior identity understanding, and reconstruct a version of the self that is informed by context and remains open to further intentional reconstruction'. PIF thus draws on individuals' personal identity (past, present and possible future identities) as well as a profession's social identity in the light of changing societal expectations but relies on individuals' agency (Mahmoudi-Gahrouei *et al.*, 2016) to make sense of the personal and social dimensions of PIF as well as their connection. PIF thus requires individuals to interpret their experiences in relation to their personal and wider professional context as people, professions and wider societal expectations are constantly evolving.

Towards a conceptual framework

To facilitate a more systematic and comprehensive understanding of the PIF construct that can support cross-disciplinary learning, the analysis presented above is summarized in the following, emerging conceptual framework (see Figure 2).

FIGURE 2

To honour the processual nature of PIF, the emerging conceptual framework is centred on learning, sensemaking and identity work as they help individuals to interpret their experiences and explore who they may be as professionals (Hamman *et al.*, 2013; Mahmoudi-Gahrouei *et al.*, 2016; Markus and Nurius, 1986). These interpretive processes are informed by knowledge and skills, beliefs and values, personal and social identity as well as professional identification as discussed above. The dynamic interplay between these five factors in learning, sensemaking and identity work is signified by the circle in the middle. While there is no strong emphasis in the extant PIF research on the expected outcomes of identity work, there are suggestions that a professional identity that aligns personal and social factors can lead to increased resilience (Cake *et al.*, 2017) and wellbeing (Cake *et al.*, 2015). More research is required to better understand if and how PIF can support resilience and wellbeing and what role personal and social factors – particularly professional education and socialization – have therein.

Given the role of professional education and socialization in PIF as discussed above, further research is required to gain a better understanding of how individual's learning, sensemaking and identity work can be fruitfully supported. While some studies emphasize the importance of class-room learning (Clarke *et al.*, 2014), others establish that classroom learning can also support PIF (Chen and Hubinette, 2017). It is possible that different activities are required at different points to meet students' specific needs at that time but these need to be studied in a more focused manner.

In addition, further research is required to study the PIF process over time. The current knowledge base derives from relatively small-scale and time-bound studies, which prevent a more holistic understanding of the points or situations when PIF is most intense. It is possible that professional students do not engage in PIF continuously, but only at specific points, for example, when their emerging and evolving professional self-understanding is challenged. Such points may be work placements or the transition from professional education into professional practice (Noble *et al.*, 2015) Also, with the majority of PIF studies examining individuals in professional training, there is a particular need to understand the need for PIF and the process of PIF among professionals at different stages of their career.

Conclusion

This developmental review paper systematically brings together the factors and processes at play in PIF to develop an integrated understanding of the PIF construct and process. Based on key assumptions, the analysis identified five factors that inform people's development of a professional self-understanding: knowledge and skills; beliefs and values; personal identity; social identity; and professional identification. These factors inform the cognitive, interpretive processes by which individuals make sense of their experiences – here of the dynamic interplay between who they are as a person, who they may want to be as a professional and also who they are expected to be as a professional by their educators, peers, professional bodies and wider society. By reviewing the extant PIF research from a variety of professions, we hope that the findings and analysis present here provides opportunities for cross-disciplinary learning in the light of ongoing professionalization in the management-related fields.

References

Armitage-Chan, E. (2018). *Learning to be: Professional identity formation in novice veterinarians* (Doctoral thesis). King's College London, London.

Barbarà-i-Molinero, A., Cascón-Pereira, R. and Hernández-Lara, A. beatriz (2017). Professional identity development in higher education: influencing factors, *International Journal of Educational Management*, **31**, pp. 189–203. DOI: 10.1108/IJEM-05-2015-0058.

Bell, M. A., Cake, M. A. and Mansfield, C. F. (2018). Beyond Competence: Why We Should Talk About Employability in Veterinary Education, *Journal of Veterinary Medical Education*, **45**, pp. 27–37. DOI: 10.3138/jvme.0616-103r1.

Branch, W. T. and Frankel, R. (2016). Not all stories of professional identity formation are equal: An analysis of formation narratives of highly humanistic physicians, *Patient Education and Counseling*, **99**, pp. 1394–1399. DOI: 10.1016/j.pec.2016.03.018.

Cake, M. A., Bell, M. A., Bickley, N. and Bartram, D. J. (2015). The Life of Meaning: A Model of the Positive Contributions to Well-Being from Veterinary Work, *Journal of Veterinary Medical Education*, **42**, pp. 184–193. DOI: 10.3138/jvme.1014-097R1.

Cake, M. A., McArthur, M. M., Matthew, S. M. and Mansfield, C. F. (2017). Finding the Balance: Uncovering Resilience in the Veterinary Literature, *Journal of Veterinary Medical Education*, **44**, pp. 95–105. DOI: 10.3138/jvme.0116-025R.

Caza, B. B. and Creary, S. J. (2016). The construction of professional identity. In Wilkinson, A., Hislop, D., and Coupland, C. (eds),*Perspectives on Contemporary Professional Work: Challenges and Experiences*. Cheltenham Glos UK ;;Northampton Mass. USA: Edward Elgar, pp. 259–285.

Chen, L. Y. C. and Hubinette, M. M. (2017). Exploring the role of classroom-based learning in professional identity formation of family practice residents using the experiences, trajectories, and reifications framework, *Medical Teacher*, **39**, pp. 876–882. DOI: 10.1080/0142159X.2017.1317729.

Chong, S. (2011). Development of teachers' professional identities: From pre-service to their first year as novice teachers, *KEDI Journal of Educational Policy*, **8**, pp. 219–233.

Christensen, M. K., Henriksen, J., Thomsen, K. R., Lund, O. and Mørcke, A. M. (2017). Positioning health professional identity: on-campus training and work-based learning, *Higher Education, Skills and Work-Based Learning*, **7**, pp. 275–289. DOI: 10.1108/HESWBL-01-2017-0004.

Clarke, C., Martin, M., Sadlo, G. and de-Visser, R. (2014). The Development of an Authentic Professional Identity on Role-Emerging Placements, *British Journal of Occupational Therapy*, **77**, pp. 222–229. DOI: 10.4276/030802214X13990455043368.

Cope, A., Bezemer, J., Mavroveli, S. and Kneebone, R. (2017). What Attitudes and Values Are Incorporated Into Self as Part of Professional Identity Construction When Becoming a Surgeon?:, *Academic Medicine*, **92**, pp. 544–549. DOI: 10.1097/ACM.0000000000001454.

Crossley, J. and Vivekananda-Schmidt, P. (2009). The development and evaluation of a Professional Self Identity Questionnaire to measure evolving professional self-identity in health and social care students, *Medical Teacher*, **31**, pp. e603–e607. DOI: 10.3109/01421590903193547.

Cruess, R. L., Cruess, S. R., Boudreau, J. D., Snell, L. and Steinert, Y. (2014). Reframing Medical Education to Support Professional Identity Formation:, *Academic Medicine*, **89**, pp. 1446–1451. DOI: 10.1097/ACM.0000000000000427.

Cruess, R. L., Cruess, S. R., Boudreau, J. D., Snell, L. and Steinert, Y. (2015). A Schematic Representation of the Professional Identity Formation and Socialization of Medical Students and Residents: A Guide for Medical Educators, *Academic Medicine*, **90**, pp. 718–725. DOI: 10.1097/ACM.0000000000000700.

Dang, T. K. A. (2013). Identity in activity: Examining teacher professional identity formation in the paired-placement of student teachers, *Teaching and Teacher Education*, **30**, pp. 47–59. DOI: 10.1016/j.tate.2012.10.006.

Eliot, M. and Turns, J. (2011). Constructing Professional Portfolios: Sense-Making and Professional Identity Development for Engineering Undergraduates, *Journal of Engineering Education*, **100**, pp. 630–654. DOI: 10.1002/j.2168-9830.2011.tb00030.x.

Erikson, E. H. (1959). Identity and the life cycle: Selected papers. New York: International Universities Press.

Hallier, J. and Summers, J. (2011). Dilemmas and outcomes of professional identity construction among students of human resource management, *Human Resource Management Journal*, **21**, pp. 204–219. DOI: 10.1111/j.1748-8583.2010.00132.x.

Hamman, D., Coward, F., Johnson, L., Lambert, M., Zhou, L. and Indiatsi, J. (2013). Teacher Possible Selves: How Thinking about the Future Contributes to the Formation of Professional Identity, *Self and Identity*, **12**, pp. 307–336. DOI: 10.1080/15298868.2012.671955.

Helmich, E., Yeh, H.-M., Kalet, A. and Al-Eraky, M. (2017). Becoming a Doctor in Different Cultures: Toward a Cross-Cultural Approach to Supporting Professional Identity Formation in Medicine, *Academic Medicine*, **92**, pp. 58–62. DOI: 10.1097/ACM.0000000000001432.

Hirschy, A. S., Wilson, M. E., Liddell, D. L., Boyle, K. M. and Pasquesi, K. (2015). Socialization to Student Affairs: Early Career Experiences Associated With Professional Identity Development, *Journal of College Student Development*, **56**, pp. 777–793. DOI: 10.1353/csd.2015.0087.

Ibarra, H. (1999). Provisional selves: Experimenting with image and identity in professional adaptation, *Administrative Science Quarterly*, **44**, pp. 764–791.

Lave, J. and Wenger, E. (1991). Situated learning: Legitimate peripheral participation. Cambridge: Cambridge University Press.

Lingard, L., Reznick, R., DeVito, I. and Espin, S. (2002). Forming professional identities on the health care team: discursive constructions of the 'other' in the operating room, *Medical Education*, **36**, pp. 728–734. DOI: 10.1046/j.1365-2923.2002.01271.x.

Mackay, M. (2017). Identity formation: professional development in practice strengthens a sense of self, *Studies in Higher Education*, **42**, pp. 1056–1070. DOI: 10.1080/03075079.2015.1076780.

Mahmoudi-Gahrouei, V., Tavakoli, M. and Hamman, D. (2016). Understanding what is possible across a career: professional identity development beyond transition to teaching, *Asia Pacific Education Review*, **17**, pp. 581–597. DOI: 10.1007/s12564-016-9457-2.

Markus, H. and Nurius, P. (1986). Possible selves., *American Psychologist*, **41**, pp. 954–969. DOI: 10.1037/0003-066X.41.9.954.

Nadelson, L. S., McGuire, S. P., Davis, K. A., Farid, A., Hardy, K. K., Hsu, Y.-C., Kaiser, U., Nagarajan, R. and Wang, S. (2017). Am I a STEM professional? Documenting STEM student professional identity development, *Studies in Higher Education*, **42**, pp. 701–720. DOI: 10.1080/03075079.2015.1070819.

Noble, C., Coombes, I., Nissen, L., Shaw, P. N. and Clavarino, A. (2015). Making the transition from pharmacy student to pharmacist: Australian interns' perceptions of professional identity formation, *International Journal of Pharmacy Practice*, **23**, pp. 292–304. DOI: 10.1111/ijpp.12155.

Palmér, H. (2016). Professional primary school teacher identity development: a pursuit in line with an unexpressed image, *Teacher Development*, **20**, pp. 682–700. DOI: 10.1080/13664530.2016.1202311.

Paton, S., Hodgson, D. and Muzio, D. (2013). The price of corporate professionalisation: analysing the corporate capture of professions in the UK, *New Technology, Work and Employment*, **28**, pp. 227–240. DOI: 10.1111/ntwe.12014.

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Britten, N., Roen, K. and Duffy, S. (2006). *Guidance on the Conduct of Narrative Synthesis in Systematic Reviews: A Product from the ESRC Methods Programme*. Lancaster: NSSR.

Reissner, S. (2008). Narratives of Organisational Change and Learning: Making Sense of Testing Times. Edward Elgar Publishing Ltd.

Reissner, S. (2019). Becoming a vet: The dynamic interplay between self-identity and professional education in professional identity formation among veterinary students. In Milton Keynes: British Academy of Management Conference,.

Sabini, L. and Muzio, D. (2017). The long way to professional recognition: project management in Italy, *International Journal of Managing Projects in Business*, **10**, pp. 822–840. DOI: 10.1108/IJMPB-02-2017-0011.

Slay, H. S. and Smith, D. A. (2011). Professional identity construction: Using narrative to understand the negotiation of professional and stigmatized cultural identities, *Human Relations*, **64**, pp. 85–107. DOI: 10.1177/0018726710384290.

Sutherland, L. and Markauskaite, L. (2012). Examining the role of authenticity in supporting the development of professional identity: an example from teacher education, *Higher Education*, **64**, pp. 747–766. DOI: 10.1007/s10734-012-9522-7.

Sveningsson, S. and Alvesson, M. (2003). Managing Managerial Identities: Organizational Fragmentation, Discourse and Identity Struggle, *Human Relations*, **56**, pp. 1163–1193. DOI: 10.1177/00187267035610001.

Tajfel, H. (1974). Social identity and intergroup behaviour, *Social Science Information*, **13**, pp. 65–93. DOI: 10.1177/053901847401300204.

Tajfel, H. (ed.) (1978). Differentiation between Social Groups: studies in the social psychology of intergroup relations. London: Academic Press.

Trede, F., Macklin, R. and Bridges, D. (2012). Professional identity development: a review of the higher education literature, *Studies in Higher Education*, **37**, pp. 365–384. DOI: 10.1080/03075079.2010.521237.

Vivekananda-Schmidt, P., Crossley, J. and Murdoch-Eaton, D. (2015). A model of professional self-identity formation in student doctors and dentists: a mixed method study, *BMC Medical Education*, **15**. DOI: 10.1186/s12909-015-0365-7.

Weick, K. E. (1995). Sensemaking in Organizations. London: Sage Publications, Inc.

Figure 1: Review process

```
┌─────────────────────────────────────┐
│            Step 1:                   │
│  Literature search using ISI Web of  │
│  Science, EBSCO Complete and Emerald │
│      Management 150 databases        │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│            Step 2:                   │
│   Scrutinizing literature for        │
│   relevance                          │
│   Applying exclusion criteria        │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│            Step 3:                   │
│     Accessing relevant articles      │
│  Importing full-text into NVivo      │
│  software                            │
│  Qualitative analysis of articles    │
│  into themes                         │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│            Step 4:                   │
│   Developing conceptual framework    │
│   Identifying areas for further      │
│   research                           │
└─────────────────────────────────────┘
```
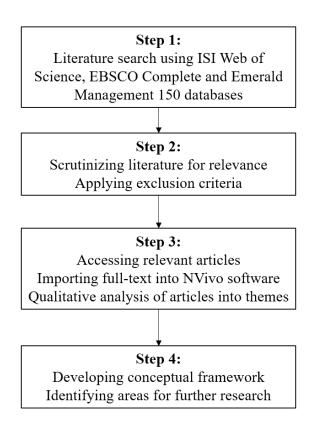
Figure 2: Evolving conceptual framework

Knowledge / skills

Beliefs / values

Personal identity

Social identity

Professional identification

Who may I be as a professional?
Learning
Sensemaking
Identity work