Reflection, pracademics and Cognitive Apprentices

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This paper is focused on the concepts of reflection, pracademics and Cognitive Apprentices used within work-based learning contexts. A hermeneutic phenomenological dialogic exchange was conducted between the authors to gain an in-depth interpretive analysis of the concepts of reflection, pracademics and Cognitive Apprentices. It is evident that reflection is not easy to teach and that modelling it as a practice as 'thinking out aloud' could be beneficial for a novice in their own reflective development. Whether, however, pracademics are best suited as Cognitive Apprentices is still contested and debated. Whilst it is undeniably challenging to achieve the "tri-professional" role of the well-rounded academic (subject expertise, research expertise, and pedagogic expertise), and perhaps realistically no academic is likely to have an equally weighted pie chart of professional abilities, our argument is that to be an academic means embracing the notion of developing in all these arenas.

Keywords: Reflection, Pracademics, Cognitive Apprentices, Work-Based Learning, Cognitive Wrappers

Introduction

This paper will define, describe and explore the intersection between three key concepts: reflection, pracademics and the Cognitive Apprentice. However, first the context of work-based learning (WBL) as the learning framework will be explained.

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WBL bridges the skills gap as well as the gap between academia and practice (Gerhardt and Annon, 2023; Konstantinou and Miller, 2021; Rowe et al., 2016). WBL is a specific mode or form of teaching within Work-integrated Learning more broadly where the student as learner is in full time employment as part of their course (Cooper et al., 2010). For example, in the UK Higher Degree Apprenticeships (HDAs) is a growing form of WBL where a student is 80% on the job and 20% off-the-job while learning (Horden, 2015). These work-based learners are regularly engaged in academic study and as such are regularly taught by staff from an academic institution. Some academic staff are permanent and often discipline specific while other staff are part-time from professional backgrounds or active industry practitioners. It is the latter 'academic' which is labelled the pracademic and valued as educators on courses more explicitly linked with industry or professional backgrounds. The pedagogical competence of these pracademics, especially in reference to reflection, are vital to the delivery and quality of Work-Based Learning (WBL) such as in HDAs in the UK (Bell & Bell, 2020; Gerhardt and Annon, 2023; Konstantinou & Miller, 2020; Konstantinou & Miller, 2021; Rowe et al., 2016). WBL such as HDAs or many postgraduate courses with mature learners already in work, endorse learning environments that depart from traditional lecturer-led passive learning (Mode 1 learning) to an increased emphasis on constructivist approaches, including action-orientated experiential learning, problem-solving and project-based learning (Mode 2 learning) (Bell & Bell, 2020). The authors of this paper represent such a WBL course, one as the pracademic (academic supervisor) and the other as a mature student in work an English teacher doing their master's degree).

The contentious concept of a 'pracademic' (due to differing definitions) (Hodgson & Garner, 2023) generally refers to people at the nexus of the academy and the professional world of practice, a scholar practitioner (Campbell, 2022; Chaaban et al., 2021, Friesen, 2021; Kolber & Heggart, 2022). Pracademics are people who design, facilitate, and engage in forms of education and professional learning (Campbell, 2022; Hollweck & Doucet, 2020; Hollweck et al., 2022a), a situated telling of experience (Chaaban et al., 2021), often involved in transformation, agency and social change (Friesen, 2021). They either develop a dual sense of self, as both practitioners and academics, or develop entirely new professional identities (Chaaban et al., 2021), a third space (Mynott & Zimmatore, 2022). Some argue that the dualism is unhelpful, perpetuating a false analytical dualism of theory and practice (Eacott,

2021; Hodgson & Garner, 2023; Hollweck et al., 2022a). Nonetheless, Chaaban et al. (2021) argues pracademics should be recruited and valued for exactly these purposes, acknowledging the existence of the theory-practice gap (Thomassen & Jorensen, 2021). As such, pracademia includes the identity of the pracademic, being a noun and an adjective (Hollweck et al., 2022a), and how they interact with communities (especially the academic and professional communities), how they are situated with/in communities (especially the sense of connection and belonging) and how they engage in the dynamic interplay between their identity, the other, the space and consequential action, communication and collaboration (Campbell, 2022). An enduring tension is that the worlds of practice does not necessarily value (or understand) the work of research and scholarship, and universities do not always fully value (or understand) the knowledge and work of practitioners (Campbell, 2022; Eacott, 2021; Konstantinou & Miller, 2021). This tension aids the development of a "socially-embedded identity not just as an individual operating across the 'in between', but a member of a group of those operating similarly in hybrid, dual or multiple education spaces" (Hollweck et al., 2022b, p.14; Mynott & Zimmatore, 2022). Pracademics, as a dual citizens (Hollweck et al., 2022b; Mynott & Zimmatore, 2022) exemplify the role of guide, as they are naturally "engaged in practice and in scholarship (in various forms and ways), they connect and integrate theory and practice, they span boundaries, broker and translate research and practice knowledge, they network and collaborate, and they engage in professional learning and development" (Campbell, 2022, p.100). It is acknowledged that the definition of who is a pracademic is contentious, but for the purpose of this paper the accepted definition of a pracademic includes people who teach part-time in Higher Education as they are active professionals in industry at other times or university educators with an industry background.

An apprenticeship style interplay between master (pracademic as guide) and novice (the WBL student), is called the Cognitive Apprentice. Cognitive Apprentice is a pedagogical approach that emphasises the significance of a process in which an expert teaches a skill to a novice (Collins et al., 1989), in this case, reflection. The Cognitive Apprentice (i.e. the pracademic as guide) centres around an expert making their learning processes explicit to the learner (the WBL student), so that the learner may initially emulate the expert thinking processes before moving on to regulating the processes independently, becoming reflective

knowledge transformers (Akhavan & Walsh, 2020; Porcaro, 2011), also called incidental learning (Konstantinou & Miller, 2020; Wong et al., 2016). The pracademic as Cognitive Apprentice supports a learner's progression from unconscious incompetence to unconscious competence (Porcaro, 2011), a master becoming (Reddy & Shaw, 2019; Schedlitzki, 2018), and helps develop "higher-order or metacognitive skills" (Matsuo & Tsukube, 2020, p.489). The focus on reflection is significant since it is the rope which binds the processes, a crucial skill when developing metacognitive, cognitive, and motivational abilities (Cash, 2016). This paper therefore focuses on the reflective proficiency of pracademics as a Cognitive Apprentice in WBL.

Author A was the MA supervisor of author B, who actually did their research project about the Cognitive Apprentice in teaching English as a language. Author A would self-identify as a pracademic and author B, a full time English teacher, is a quint-essential example of a WBL student although not an example of HDAs. The concept of the Cognitive Apprentice was so fascinating for both student and supervisor that they agreed to explore the concepts in a dialogic exchange with reflection as the key shared phenomena.

Literature Review

The review of literature to follow will focus in more detail on the concepts of the pracademic, their role as a Cognitive Apprentice in WBL in relation to the concept of reflection.

Educator as Pracademic

The challenge for the pracademic is not to have learners mirror teaching but rather to guide them to internally construct meaningful and functional representations of the outside world (Bell & Bell, 2020). Significantly, "pracademics are argued to have the potential to collaboratively contribute to changing the culture of education, improving knowledge and practice, responding to systemic challenges, challenging and changing the orthodox status quo, and bringing about educational innovation and improvement" (Campbell, 2022, p.101). The social environment created by the pracademic facilitates or scaffolds the learning process (Thomassen & Jorgensen, 2021), enriched by reflection (Gerhardt, 2021).

In experiential learning, common in WBL, pracademics guide learners as they work within a social setting to achieve greater levels of understanding through the process. This approach goes beyond merely teaching the theory, to the teaching “for”, which develops learners’ skills and competences ready for or teaching “through”, which supports learning by practising. Approaches to experiential learning can be based on Kolb’s (1984) experiential learning cycle, which draws on the earlier works of Dewey (1963), and Piaget (1950), and others, who emphasized the role of experience in learning and development. According to Kolb (1984, p. 38), “Learning is the process whereby knowledge is created through the transformation of experience”. Experiential learning theory (Kolb, 1984) therefore proposes a (social and exogenous) constructivist theory of learning through which “social knowledge is created and re-created in the personal knowledge of the learner” (Bell & Bell, 2020, p.990). It is dynamic, a holistic experience–based learning process, learning “by” and “through” doing (Bell & Bell, 2020).

In WBL, pracademics encourage the practice of professional enquiry and the formulation of new knowledge (Campbell, 2022). The duality of identities, hybrid-specialist and multi-member (Hollweck et al., 2022b), of the pracademic contributes to frictions and frustrations, having multiple and changing identities, possessing the mindset of an academic as well as a practitioner yet not really exclusively belonging to each (Campbell, 2022; Mynott & Zimmatore, 2022). However, this may be beneficial, as it adds the value of coalescence, collaboration and intentional multiplicity (Hollweck et al., 2022a). However, the friction of being part of the professional collaboration, but also apart from it due to their role as pracademics, constant identity renegotiation (Chaaban et al., 2021), duality as a revolving door (Hollweck et al., 2022b), identity construction and deconstruction (Chaaban et al., 2021), contributes to a feeling of isolation (Campbell, 2022), and marginalisation (Hodgson & Garner, 2023) especially if they are not full time academic staff. If academic staff, pracademics are often on teaching contracts rather than research contracts (Kolber & Heggart, 2022). This isolation is evident in the critique offered by some such as Eacott, (2021, p.58), “appearing as hostile”. “The pracademic becomes the outsider to at least one of the professional worlds they inhabit” (Hollweck et al., 2022b, p.14).

The pracademic is seen as a “bridge”, “a ladder”, “dismantling the Wheel” of traditional conceptions of research and practice and valuing the importance of working simultaneously within, between, and beyond the demarcated spaces of practice, policy, and academia (Campbell, 2022, p.102; Hollweck et al., 2022b). Pracademics are a boundary spanner of the ethereal world of academia as a scholar, and the pragmatic world of practice (Chaaban et al., 2021; Eacott, 2021; Friesen, 2021; Kolber & Heggart, 2022). As such they can also be described as an interpreter, translator, speaking the languages of research, academic and practice, a connect, an interface, a synergy between academics and practitioners (Chaaban et al., 2021; Friesen, 2021).

Pracademic as Cognitive Apprentice

The Cognitive Apprentice builds on a core common thread within Vygotsky’s constructivism (1978), Sweller’s cognitive load theory (1988) and Bandura’s social learning theory (1977) by creating a relationship between the learner and the environment (de Bruin, 2019), developing tacit knowledge through personal contact with and observation of others, working under an experts’ guidance, interacting with them and adjusting performance accordingly (Cheng et al., 2014; Wong et al., 2016). The Cognitive Apprentice weaves theoretical features together within a sequential and systematic pedagogical tapestry, cycle of planning, monitoring, and evaluating, to support novices becoming experts (Porcaro, 2011). The Cognitive Apprentice methodology of modelling, scaffolding, and coaching progresses on to exploration and generalisation (fading) as the student reaches expertise (Munby et al., 2003; Matsuo & Tsukube, 2020). Explicitly teaching novices how to become consciously familiar with the methods they use to learn, how and why they work, and when and how to apply them, could help them think more like experts (Sweller, 1988). Shanahan et al. (2011) established that, through performing a ‘think-aloud’ process, it was clear that experts think differently from novices. Reynolds and Rush (2017) observed that experts, through their think-aloud methodology, create an internal dialogue with themselves whereas novices act at a surface-level comprehension, looking for a single right answer.

The Cognitive Apprentice demands a trifold approach to apprenticeships: (1) a cognitive apprenticeship to learn to think like others in their profession, (2) a practical apprenticeship

to learn how to perform like those in their profession and, (3) a moral apprenticeship to learn how to act with moral integrity (Best et al., 2021). Munby et al., (2003) refer to the latter as dispositions (values, attitudes, and preferences) which influence how an individual constructs knowledge and is therefore a more broader component together with knowledge and skills of the 'becoming' journey (Reddy & Shaw, 2019). These cognitive skills are not fully observable so pracademics as Cognitive Apprentice are required to make expert tacit processes explicit (Hale, 2021; Matsuo & Tsukube, 2020), thinking-aloud. Tacit or procedural knowledge is opaque and acquired from experience, but learning is derived from decoding tacit knowledge rather than simply the experience itself (Munby et al., 2003). The Cognitive Apprentice therefore adopts the paradigm of situated learning, a concept in which learning is grounded in authentic experience (Munby et al., 2003; Lave & Wenger, 1991; Reddy & Shaw, 2019), linking to values and dispositions. As Munby et al. (2003, p.96) state, tacit knowledge is more readily acquired in unusual situations, a-typical (Johnson & Senge, 2010), when experts increase their use of metacognition. It is often in these circumstances that a novice will miscode, not recognising the change in conditions warranting a change in routine/action.

This is done through effective modelling, exposing the thinking of an expert learner (Quigley et al., 2018). It is a tool which allows pracademics as a Cognitive Apprentice to develop student skills gradually by dismantling the process into small chunks of declarative and procedural knowledge. A recent review on 'think-aloud' modelling studies (Traga Philippakos, 2021) considered the impact of metacognitive modelling on writing instruction, and discussed the effectiveness of coping models compared to mastery models. Mastery models perform the task error-free, establishing a positive attitude towards task completion and high levels of confidence (Sherrington, 2019). Coping models, on the other hand, show a level of empathetic teaching by illustrating hesitations and errors in the writing process yet with a gradual progression towards improvement and successful completion (Sherrington, 2019). Independence is the goal of students as they journey along the continuum of novice to expert – reaching a point when they can enter a disciplinary discourse without being prompted (Didau, 2015). Structured help in the form of coaching and scaffolding, enables them to achieve this (Cullen, 2019). Collins et al. (1989) defined coaching as assistance from an expert; it is not a sequential activity but rather the chain that binds the entire

apprenticeship experience (Hale, 2021). Paz Dennen (2013) draws out a second term which shares many of the same qualities: mentoring. She defines it as one who mediates expert knowledge for novices, helping that which is tacit become more explicit; they provide strategies such as verbal descriptions and visual aids to reveal expert knowledge to the learner. Mentoring implies a reciprocal process of growth where the novice and the mentor obtain diverse benefits from multiple sources depending on their own improvement areas and professional needs (Aravena, 2018; Wilson, 2021). It is an active experience based on advice, reflections, counsel and professional development in different contexts for both the novice and the mentor (Aravena, 2018; Wilson, 2021).

Pracademics scaffold by guiding learners, encouraging them to think deeply and leading them through the questioning process and reducing support as the learning process continues (Bell & Bell, 2020). Learners look to the pracademics as a Cognitive Apprentice for guidance, direction and prompts when they are unable to proceed without some temporary intervention that will enable them to take part in the active learning process, defined as a 'cognitive wrapper' (Soto, 2015). The 'wrapper's' focus is on prompting students' metacognitive skills, and this indicates a high level of reflective proficiency required from the pracademic.

Reflection

The "disciplining" role of self-reflection is a mechanism for internalised self-regulated surveillance operating within discursive practices at work and occur through processes such as planning, monitoring and evaluating (Munby et al., 2003). However, Lester and Costley (2010) suggest companies restrict the potential for critical reflection where an uncritical approach to organisational norms and values can lead to "game playing" by employees and managers, which inhibits learning. It is a potential tightrope walk for the pracademic as Cognitive Apprentice who needs to keep the balance between facilitating the individual's self-assessment development against this concrete benchmark, whilst also enabling the individual to understand the importance of social context in relation to the self (Schedlitzki, 2018). WBL relies on reflection and the ability of the pracademic to be a reflective practitioner because reflection is seen as an integral component of work, a necessary

element in evaluation, sensemaking, learning and decision-making processes in the workplace (Bravenboer, 2018) and thus an integral component (Gerhardt, 2021). Engaging learners in critical reflection processes is not easy (Schedlitzki, 2018). It is through a focus on reflection that the needs of production can be reconciled with the needs of employees to have satisfying engagement with their work (Bravenboer, 2018). Boud et al. (2006) argued, that "productive reflection" can help to address some of the complexities and uncertainties that organisations face and the theory-practice gap. Productive reflection emphasises the social collective aspects of reflection – people reflecting together in the workplace (Bravenboer, 2018; Munby et al., 2003; Thomassen & Jorgensen, 2021).

Schön (1983) described an alternative way of learning based on "reflection-in-action" through which learners learn by critically reflecting on theory and re-evaluating that knowledge in action. Dewey (1938) referred to this process as 'self-correction' (Dewey, 1938; Thomassen & Jorgensen, 2021; Thurgate, 2021) but this may be not be evident in the novice. Seeing the Cognitive Apprentice doing this is therefore vital. The combination of reflection-in-action with reflection-on-action provides a deeper understanding of the potential value and role of reflection in experiential learning. Transformation occurs when learning encourages deep questioning of "long established frames of reference" leading to the creation of "new meaning schemes" (Mezirow, 1990, p.5). Experiential learning can provide the opportunity to engage in transformative learning, which can result in a change to learner "identity" (Bell & Bell, 2020).

Reflection can be taught (and learnt) through strategic teaching intervention and appropriate scaffolding (Bell & Bell, 2020), and modelling by a master i.e. the Cognitive Apprentice. There is a strong alignment between the development of critical reflective capacities and enhanced context-dependent 'operant competence' (Bravenboer, 2018). Reflexivity adds further value because it provides a process through which critical reflection can occur (Bouten-Pinto, 2016). Furthermore, critical reflection, as a valued business benefit, has the potential for significant cultural change within the organisation (Bravenboer, 2018).

The pracademic, who now takes on the role of coach or developer as a Cognitive Apprentice (Mueller & Anderson, 2014), can encourage the practice of 'reflection-in-action' (Schon, 1983; Thurgate, 2021). Reflecting during the experience allows learners to re-evaluate their logic and strategy based on their current outcomes, and make adjustments accordingly to enhance the outcome of the experience.

Conclusion

This paper aimed to understand pracademics and their reflective proficiency as a Cognitive Apprentice in WBL. The authors aimed to understand a phenomena (pracademics), through in-depth interpretative analysis, as it presents itself to us as conscious human beings (Dibley et al., 2020), to reflect on experience thus far in relation to reflection i.e. temporality and historicity (Dibley et al., 2020) to enabled "dialogic exchange" (Dibley et al., 2020, p.94), to gain insight "into understanding the human experience of being-in-the-world in ways which resonate with others, achieving the 'phenomenological nod'" (Dibley et al., 2020, p.117). This paper considered the intersection of three key concepts regarding historicity (the situatedness of the experience) and thrownness (the predetermined way in which we are shaped and being shaped by the specific, familial, social and cultural environment) (Dibley et al., 2020, pp. 43-44). Authors echo the view of Schedlitzki (2018) that reflection is not easy to teach and implement and often ends up being a simple evaluation of practice satisfying lecturing staff and professional and regulatory bodies ignoring oneself doing the practice (Wong et al., 2016). Having reflective proficiency as a Cognitive Apprentice has an impact on 'thinking aloud' in reference to reflection and therefore enabling/guiding the novice in developing metacognitive skills (Matsuo & Tsukube, 2020). Experience within Higher Education ranges between awareness of 'pedagogical' delivery aspects as noted by Bell and Bell (2020), and focusing on values or dispositions as stated by Munby et al. (2003) and professional learning and 'becoming' (Campbell, 2022; Chaaban et al., 2021), even though reflection or metacognition would be implicit within the process. It is evident how a 'think-aloud' cognitive wrapper by pracademics as Cognitive Apprentices can improve the delivery and reflection within WBL by making students more explicitly aware of how they can further develop in their reflection by modelling, coaching and facilitating reflection. This 'think-aloud' process in relation to reflection can also aid tutors to be more aware of their own expert processes, making this more explicit to the novice. It is clear that the use and effect of reflection by pracademics cannot be assumed and therefore effectively being modelled as

a Cognitive Apprentice. They are however, better suited to be a Cognitive Apprentice. Pracademics are uniquely placed to deliver professional learning but need more support themselves to be even more effective especially as reflective practitioners and therefore as Cognitive Apprentices. The debate continues whether pracademics make a better Cognitive Apprentice within WBL.

Whilst it is undeniably challenging to achieve the "tri-professional" role of the well-rounded academic (subject expertise, research expertise, and pedagogic expertise), and perhaps realistically no academic is likely to have an equally weighted pie chart of professional abilities, our argument is that to be an academic means embracing the notion of developing in all these arenas. Defining yourself as a "pracademic" risks shutting the door on this, and self-limiting who you are as an academic. (Hodgson & Garner, 2023, no page)

References

Akhavan, N. & Walsh, N. (2020). "Cognitive Apprenticeship Learning Approach in K-8 Writing Instruction: A Case Study", Journal of Education and Learning, Vol. 9 No. 3, pp.123-142.

Aravena, F. (2018). "Mentoring novice school principals in Chile: what do mentors learn?", International Journal of Mentoring and Coaching in Education, Vol. 7 No. 3, pp. 219-230. https://doi.org/10.1108/IJMCE-01-2018-0002

Bandura, A. J. (1977). Social learning theory. Englewood Cliffs, Prentice Hall.

Bell, R. and Bell, H. (2020). "Applying educational theory to develop a framework to support the delivery of experiential entrepreneurship education", Journal of Small Business and Enterprise Development, Vol. 27 No. 6, pp. 987-1004. https://doi.org/10.1108/JSBED-01-2020-0012

Best, S., Beech, C., Robbé, I.J. and Williams, S. (2021). "Interprofessional teamwork: the role of professional identity and signature pedagogy – a mixed methods study", Journal of Health Organization and Management, Vol. 35 No. 5, pp. 561-578. https://doi.org/10.1108/JHOM-06-2020-0242

Boud, D., Cressey, P. and Docherty, P. (Eds) (2006). Productive Reflection at Work: Learning for Changing Organizations, Routledge.

Bouten-Pinto, C. (2016). "Reflexivity in managing diversity: a pracademic perspective", Equality, Diversity and Inclusion, Vol. 35 No. 2, pp. 136-153. https://doi.org/10.1108/EDI-10-2013-0087

Bravenboer, D. (2018), "The unexpected benefits of reflection: a case study in university-business collaboration", Journal of Work-Applied Management, Vol. 10 No. 1, pp. 50-62. https://doi.org/10.1108/JWAM-01-2017-0002

Brown, D. and Scaife, H. (2019). “Understanding and Applying Qualitative Data Analysis”. In: C. Opie and D. Brown (eds). Getting Started in your Educational Research. SAGE. Ch.11.

de Bruin, L. R. (2019). “The use of cognitive apprenticeship in the learning and teaching of improvisation: teacher and student perspectives”, Research Studies in Music Education, Vol. 41 No. 3, pp.261–279. DOI: https://doi.org/10.1177/1321103X18773110

Cash, R. (2016). Self-Regulation in the Classroom: Helping students learn how to learn, Free Spirit Publishing.

Campbell, C. (2022). "Afterward? Moving onwards for developing pracademia and pracademics in education", Journal of Professional Capital and Community, Vol. 7 No. 1, pp.98-108. https://doi.org/10.1108/JPCC-01-2022-104

Chaaban, Y., Sellami, A., Sawalhi, R. and Elkhouly, M. (2022). "Exploring perceptions of pracademics in an Arab context", Journal of Professional Capital and Community, Vol. 7 No. 1, pp. 83-97. https://doi.org/10.1108/JPCC-11-2020-0091

Cheng, C.-Y., Ou, T.-Y., Chen, T.-L. and Chen, Y.-Y. (2014). "Transferring cognitive apprenticeship to manufacturing process knowledge management system: A case study of small- and medium-sized coating industry", VINE, Vol. 44 No. 3, pp.420-444. https://doi.org/10.1108/VINE-03-2013-0011

Collins, A., Brown, J.S. & Holum, A. (1989). “Cognitive apprenticeship: making thinking visible”, American Educator, Vol. 15 No. 4, pp.6-11.

Cooper, L., Orrell, J., & Bowden, M. (2010). *Work integrated learning: A guide to effective practice*. Routledge.

Cullen, S. (2019). “Fading: removing teacher presence in directed teaching”, Bennet, T & Boxer, A. (Eds), The Research Ed Guide to Explicit and Direct Instruction, John Catt, Woodbridge, pp.87-94.

Denzin, N.K. and Lincoln, Y.S. (Eds.) (2008). Collecting and Interpreting Qualitative Materials, 3rd ed., SAGE.

Dewey, J. (1933). How we think, A Restatement of the Relation of Reflective Thinking to the Educative Process, D.C. Heath and Company.

Dibley, L., Dickerson, S., Duffy, M., and Vandermause, R. (2020). Doing Hermeneutic Phenomenological Research, SAGE.

Didau, D. (2015). What if everything you knew about education was wrong?. 1ST ed., Crown House.

Eacott, S. (2022). "Pracademia: an answer but not the answer to an enduring question", Journal of Professional Capital and Community, Vol. 7 No. 1, pp.57-70. https://doi.org/10.1108/JPCC-12-2020-0100

Friesen, S.L. (2022). "Dwelling in liminal spaces: twin moments of the same reality", Journal of Professional Capital and Community, Vol. 7 No. 1, pp.71-82. https://doi.org/10.1108/JPCC-11-2020-0095

Gerhardt, T. (2021). “An exploratory study of a work-based learning reflection module and the potential links between student attendance and engagement and student success as an indication of the mastery of reflection”, Reflective Practice, Vol. 22 No. 6, pp.824-843. DOI: 10.1080/14623943.2021.1976133

Gerhardt, T and Annon, P. (2023). “Towards conceptual clarity: Pedagogical liminality”, International Journal of Work-Integrated Learning, Vol. 24 No. 2, pp.209-225.Hale, D. (2021). “Making Thinking Visible in English Literature”, Tomsett, J. (Ed) Cognitive Apprenticeship in Action, John Catt, Woodbridge, pp.63-68.

Hodgson, R. and Garner, I. (2023). *Are staff with professional and industry expertise proper academics?* Wonkhe. Available at: https://wonkhe.com/blogs/are-staff-with-professional-and-industry-expertise-proper-academics/ [Accessed 01/11/2023].

Hordern, J. (2017). Bernstein's sociology of knowledge and education (al) studies. In G. Whitty, & J. Furlong (Eds.), *Knowledge and the study of education: An international exploration* (pp. 191-210). Symposium Books

Johnson, M. and Senge, M. (2010). "Learning to be a programmer in a complex organization: A case study on practice-based learning during the onboarding process at Google", Journal of Workplace Learning, Vol. 22 No. 3, pp.180-194. https://doi.org/10.1108/13665621011028620

Kolb, D. (1984). Experiential Learning, Prentice Hall.

Kolber, S. and Heggart, K. (2022). "Education focused pracademics on twitter: building democratic fora", Journal of Professional Capital and Community, Vol. 7 No. 1, pp.26-44. https://doi.org/10.1108/JPCC-11-2020-0090

Hollweck, T. and Doucet, A. (2020). "Pracademics in the pandemic: pedagogies and professionalism", Journal of Professional Capital and Community, Vol. 5 No. 3/4, pp.295-305. https://doi.org/10.1108/JPCC-06-2020-0038

Hollweck, T., Netolicky, D.M. and Campbell, P. (2022a). "Defining and exploring pracademia: identity, community, and engagement", Journal of Professional Capital and Community, Vol. 7 No. 1, pp.6-25. https://doi.org/10.1108/JPCC-05-2021-0026

Hollweck, T., Netolicky, D.M. and Campbell, P. (2022b). "Guest editorial Pracademia: exploring the possibilities, power and politics of boundary-spanners straddling the worlds of practice and scholarship", Journal of Professional Capital and Community, Vol. 7 No. 1, pp.1-5. https://doi.org/10.1108/JPCC-01-2022-103

Konstantinou, I. and Miller, E. (2020). "Investigating work-integrated learning and its relevance to skills development in degree apprenticeships", Higher Education, Skills and Work-Based Learning, Vol. 10 No. 5, pp.767-781. https://doi.org/10.1108/HESWBL-05-2020-

0112

Konstantinou, I. and Miller, E. (2021). "Self-managed and work-based learning: problematising the workplace–classroom skills gap", Journal of Work-Applied Management, Vol. 13 No. 1, pp.6-18. https://doi.org/10.1108/JWAM-11-2020-0048

Lave, J. and Wenger, E. (1991). Situated Learning: Legitimate Peripheral Participation, Cambridge University Press.

Lester, S. and Costley, C. (2010). “Work-based learning at higher education level: value, practice and critique”, Studies in Higher Education, Vol. 35 No. 5, pp.561-575.

Matsuo, M. & Tsukube,T. (2020). “A review on cognitive apprenticeship in educational research: Application for management education”, The International Journal of Management Education, Vol. 18 No. 3. DOI: 18. 100417. 10.1016/j.ijme.2020.100417.

Merrill, B. and West, L., (2009). Using Biographical Methods in Social Research, SAGE.

Mezirow, J. (1990). Fostering Critical Reflection in Adulthood, Jossey-Bass.

Mueller, S. and Anderson, A.R. (2014). “Understanding the entrepreneurial learning process and its impact on students’ personal development: a European perspective”, The International Journal of Management Education, Vol. 12 No. 3, pp.500-511.

Munby, H., Versnel, J., Hutchinson, N.L., Chin, P. and Berg, D.H. (2003). "Workplace learning and the metacognitive functions of routines", Journal of Workplace Learning, Vol. 15 No. 3, pp.94-104. https://doi.org/10.1108/13665620310468432

Mynott, J.P. and Zimmatore, M. (2022). "Pracademic productive friction: boundary crossing and pressure points", Journal of Professional Capital and Community, Vol. 7 No. 1, pp.45-56. https://doi.org/10.1108/JPCC-11-2020-0093

Opie, C. (2019). “Research Procedures”. In: C. Opie and D. Brown (eds). Getting Started in your Educational Research. SAGE. Ch.9.

Paz Dennen, V. (2013). Cognitive Apprenticeship in Educational Practice: Research on Scaffolding, Modeling, Mentoring, and Coaching as instructional Strategies, 1st ed., Florida

State University.

Piaget, J. (1950). The Psychology of Intelligence, Routledge.

Porcaro, D. (2011). "Applying constructivism in instructivist learning cultures", Multicultural Education & Technology Journal, Vol. 5 No. 1, pp.39-54. https://doi.org/10.1108/17504971111121919

Quigley, A., Muij, D. & Stringer, E. (2018). Metacognition and self-regulated: Guidance Report. Available at: https://educationendowmentfoundation.org.uk/public/files/Publications/Metacognition/EEF_Metacognition_and_self-regulated_learning.pdf [accessed 20 July 2021]

Reddy, P. and Shaw, R. (2019). "Becoming a professional: A longitudinal qualitative study of the graduate transition in BSc Psychology", Education + Training, Vol. 61 No. 2, pp.272-288. https://doi.org/10.1108/ET-10-2018-0210

Reynolds, T. & Rush, L. (2017). “Experts and Novices Reading Literature: An Analysis of Disciplinary Literacy”, English Language Arts, Literacy Research, and Instruction, Vol. 56 No. 3, pp.199-216. DOI: 10.1080/19388071.2017.1299820

Rowe, L., Perrin, D. and Wall, T. (2016). "The Chartered Manager Degree Apprenticeship: trials and tribulations", Higher Education, Skills and Work-Based Learning, Vol. 6 No. 4, pp.357-369. https://doi.org/10.1108/HESWBL-05-2016-0034

Saunders, M. Lewis, P. and Thornhill, A. (2016). Research Methods for Business Students, Pearson Education.

Schedlitzki, D. (2019). "Developing apprentice leaders through critical reflection", Higher Education, Skills and Work-Based Learning, Vol. 9 No. 2, pp.237-247. https://doi.org/10.1108/HESWBL-09-2018-0095

Schön, D.A. (1983). The Reflective Practitioner: How Professionals Think in Action, Basic Books.

Scott, D., & Morrison, M., (2007). Key Ideas in Educational Research, Continuum.

Shanahan, C., Shanahan, T. & Misischia, C. (2011). “Analysis of expert readers in three disciplines: History, mathematics, and chemistry”, Journal of Literacy Research, Vol. 43 No. 4, pp.393–429.

Sherrington, T (2019). “Teacher-led instruction and student-centred learning are opposites”, Barton, C. & Bennett, T. (Eds.), Education Myths, John Catt, Woodridge.

Soto, P. (2015). “Cognitive Wrappers: Metacognition and Reflection Tools. To Learn How To Learn”, Creighton University, available at: http://hdl.handle.net/10504/74461. [Accessed 2 November 2021]

Thomassen, A.O. and Jørgensen, K.M. (2021). "John Dewey and continuing management education: problem-based learning for organizational sustainability", Journal of Workplace Learning, Vol. 33 No. 3, pp.229-242. https://doi.org/10.1108/JWL-05-2020-0080

Thurgate, C. (2021). "Making sense of the individual experience of those who undertake new role development in the workplace", Journal of Workplace Learning, Vol. 33 No. 4, pp.259-272. https://doi.org/10.1108/JWL-05-2020-0094

Sweller, J. (1988). “Cognitive load during problem solving: effects on learning”, Cognitive Science, Vol. 12, pp.275–285.

Traga Philippakos, A. (2021). “Think Aloud Modelling: Expert and Coping Models in Writing Instruction and Literacy Pedagogy”, The Language and Literacy Spectrum, Vol. 31 No. 1, pp.1-28, available at: https://digitalcommons.buffalostate.edu/lls/vol31/iss1/1 [Accessed 3 November 2021]

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes, Harvard University Press.

Wong, K. Y., Whitcombe, S. W. & Boniface, G. (2016). Teaching and learning the esoteric: an insight into how reflection may be internalised with reference to the occupational therapy profession, *Reflective Practice*, Vol 17 Issue 4, pp. 472-482, DOI:10.1080/14623943.2016.1175341