WORK-BASED LEARNING AND RESEARCH FOR MID-CAREER PROFESSIONALS: TWO PROJECT EXAMPLES FROM AUSTRALIA

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ABSTRACT

Aim/Purpose	Most research on work-based learning and research relates to theory, including perspectives, principles and curricula, but few studies provide contemporary examples of work-based projects, particularly in the Australian context; this paper aims to address that limitation.
Background	The Professional Studies Program at University of Southern Queensland is dedicated to offering advanced practice professionals the opportunity to self-direct organizational and work-based research projects to solve real-world workplace problems; two such examples in the Australian context are provided by this paper.
Methodology	The paper employs a descriptive approach to analyzing these two work-based research projects and describes the mixed methods used by each researcher.
Contribution	The paper provides examples of work-based research in (a) health, safety, and wellness leadership and its relation to corporate performance; and (b) investigator identity in the Australian Public Service; neither topic has been examined before in Australia and little, if anything, is empirically known about these topics internationally.

Findings	The paper presents the expected outcomes for each project, including discussion of the 'triple dividend' of personal, organizational, and practice domain benefits; as importantly, the paper presents statements of workplace problems, needs and opportunities, status of the practice domain, background and prior learning of the researchers, learning objectives, work-based research in the practice domain, and lessons learned from research which can be integrated into a structured framework of advanced practice.
Recommendations for Practitioners	This is a preliminary study of two work-based research projects in Australia; as these and other real-world projects are completed, further systematic and rigorous reports to the international educational community will reveal the granulated value of conducting projects designed to change organisations and concordant practice domains.
Recommendation for Researchers	While introducing the basic elements of research methods and expected outcomes of work-based projects, examples in this paper give only a glimpse into the possible longer-term contributions such research can make to workplaces in Australia. Researchers, as a consequence, need to better understand the relationship between practice domains, research as a valuable investigative tool in workplaces, and organizational and social outcomes.
Impact on Society	Work-based learning and research have been developed to not only meet the complex and changing demands of the global workforce but have been implemented to address real-world organizational problems for the benefit of society; this paper provides two examples where such benefit may occur.
Future Research	Future research should focus on the investigation of triple-dividend outcomes and whether they are sustainable over the longer term.
Keywords	advanced practice professional, work-based learning, work-based research, leadership, safety, investigation, identity

INTRODUCTION

In this paper we introduce two work-based research projects currently being conducted by mid-career professionals in the contexts of advanced practice professionalism, in order to provide concrete examples of work-based learning (WBL) in Australia, with a focus on research methods, outcomes, and deliverables as practiced in the University of Southern Queensland's Professional Studies Program (USQPSP).

Project One considers safety leadership and its impact on the performance of Australian companies, including the status of authentic leadership and health, safety, and well-being in the workplace and their combined relation to corporate culture. Therefore, a practice-based project is being undertaken to provide an understanding of the effectiveness of safety leadership within an organisation, as well as develop a framework for leaders to promote a culture of health, safety, and well-being to improve company performance as determined by a variety of quantitative and qualitative metrics. Project Two summarises the professional identity of investigators within the Australian Public Service, with an emphasis on definitions of investigation and competency, and how these relate to professional identity. The project is evaluating current competency and training paradigms for investigators, resulting in a competency-based framework designed to help articulate the professional identification of investigators. Descriptions for both projects include background and prior learning of the researchers and lessons learned from work-based research.

We have separately considered the relation between WBL and work-based research (Fergusson, Allred, & Dux, 2018) and explained how each is fostered in the USQPSP for mid-career profession-

als (MCPs). We define MCPs as middle or senior managers or practitioners with more than ten years' professional experience in their practice domain. We have also introduced data that indicate a shortage of advanced practice professionals (APPs) in the Australian workforce, and that up-skilling and training are national priorities (e.g., Minerals Council of Australia, 2014). For example, employment data indicate that by 2030 Australia will have a shortage of 120,000 qualified nurses, many of them APPs (Australian College of Nursing, 2016, p. 7) and in 2016-17 only 73% of "skilled" professional and 59% of technical trade job vacancies were filled, with an average of just 13.5 applicants per vacancy but only two applicants being suitably qualified to fill them (Department of Employment, 2017, p. 5). Indeed, as early as 2000, successive Australian governments have recognised these and other shortages (e.g., Connell & Burgess, 2001) and have, as a consequence, specifically targeted professions such as medicine and nursing to address them (McGrath, 2004).

Moreover, as Noe, Clarke, and Klein (2014) have pointed out, many organisations "are having difficulties finding employees with suitable skill sets for open positions and are uncertain about how to best manage and capitalize on the talents of a workforce that is increasingly diverse in terms of age, race, and national origin" (p. 246). The authors' focus on human capital resource, and its relation to learning, suggests that companies may lose competitive advantage when their implicit and explicit knowledge of this resource is faulty or underdeveloped. These combined challenges have been identified by some higher education institutions in Australia, including RMIT University which in 2009 introduced a Bachelor of Business Entrepreneurship (BBE) to provide a series of WBL courses as part of its strategic aim of enhancing graduate employability and its organisational capacity to deal with the complexities in new and emerging economies (Huq & Gilbert, 2013). Middlesex University in the UK also provides a useful international example of current practice, and Bravenboer and Lester's (2016) exploration of the WBL landscape provides a grounding for aligned approaches when developing university qualifications that enable integration of higher education learning outcomes with professional competence and advanced practice through WBL; their research suggests a benefit when viewing WBL as both a unique field of study and a mode of learning where transferable and higher order skills are necessary for employment.

As a result of these combined economic and educational forces, it has been recognised that in order to enjoy a sustainable workforce, Australia must develop "skills ecosystems" (Hall & Lansbury, 2006) in which APPs have an opportunity to learn, study, and thrive in advanced practice, as well as more broadly enhance work-based learning and research, because APPs are considered workforce contributors who significantly extend knowledge and skills within a practice environment (such as a workplace), and thereby make a valuable contribution to productivity and organisational output and to society as a whole.

In this paper we analyse two work-based research projects from the USQPSP and analyse how each is contributing to filling the shortage of APPs in Australia while simultaneously advancing practice-based disciplines and improving workplaces. Advanced practice professionals possess and display what some call "super-skills" (e.g., Kivunja, 2015). The term super-skills often refers to highly specialised skills and proficiencies, such as those required in professions related to medicine and allied healthcare, construction, information technology, and financial services, but can also relate to advanced practice in general, which requires not only specialist training but the development of problem-solving, field-independent, and other cognitive and affective traits and capabilities necessary to function effectively in, and thereby inform and transform, rapidly changing global worlds of work.

BACKGROUND

For the purposes of illustration and as the most mature models in Australia, we discuss nursing and pharmacy to explain the APP construct (in oncological primary care nursing, APPs are referred to as Advanced Practice Nurses (Sayers, DiGiacomo, & Davidson, 2011) and in pharmacy as Advanced Focused Pharmacists (APPFSC Secretariat, 2012) but may have other names in different practice domains). Specifically, the Advanced Pharmacy Practice Framework Steering Committee (APPFSC)

has articulated the characteristics of APPs for pharmacy (APPFSC Secretariat, 2012). It defines advanced pharmacy practice as "practice that is so significantly different from that achieved at initial registration that it warrants recognition by professional peers and the public of the expertise of the practitioner and the education, training and experience from which that capability was derived" (APPFSC Secretariat, 2012, p. 4). The APPFSC identifies professional traits such as autonomy (i.e., "having a sense of one's own identity and an ability to act independently and to exert control over one's environment, including a sense of task mastery, internal locus of control, and self-efficacy" (APPFSC Secretariat, 2012, p. 4)), peer recognition, and an ability to influence the professional practice of others and the discipline as a whole, as key benchmarks of APPs in pharmacy. However, it is also relevant to point out that "there remains the lack of an agreed definition of advanced practice and its core competencies. This has occurred perhaps as a result of the rapid development of roles captured under the umbrella term 'advanced' that has occurred more rapidly than focussed efforts to clarify and define the term" (Department of Health, 2017, p. 7), although Gardiner et al.'s (2013) use of the so-called "strong model of advanced practice" is informative.

Figure 1(a) shows that a *generalist pharmacist*, who has base qualifications, is able to apply primary skills and knowledge to a wide variety of consumers across a broad range of medical conditions, whereas a *focused pharmacist* can apply those skills and knowledge to either a broad range of medical conditions in a specific consumer group or to a limited range of medical conditions across a wide variety of consumers, and an *advanced generalist pharmacist* can apply her/his skills and knowledge to a wide variety of consumers with more complex health care needs across a broad range of medical conditions. An APP or *advanced focused pharmacist*, on the other hand, can practice effectively across a wide variety of complex health care issues arising from a broad range of medical conditions in a specific consumer group or a limited range of medical conditions across a wide variety of consumers. It is the development and promotion of this type of APP that the profession seeks to foster in Australia.

The skills and knowledge of both an advanced and focused pharmacist could be mistaken for mere specialisation. However, the APPFSC is quick to point out that

> where pharmacists choose to limit their scope of practice by focusing on particular areas of practice (e.g., compounding or medication management) they afford themselves the opportunity to increase their expertise and improve their performance. This is probably the reason that 'specialisation' in practice is often seen as being synonymous with 'advanced' practice. However, 'specialisation' refers only to scope of practice and does not, of itself, confer the additional expertise that underpins advanced pharmacy practice. It therefore follows that 'specialisation' can occur without any associated enhancement of performance. (APPFSC Secretariat, 2012, p. 7)

Thus, there is potential for the concept of specialization to be misunderstood as advanced practice, which importantly includes other, often cognitive, affective, and attitudinal, traits associated with advanced performance and deliverables, such as the ability to (a) manage the effectiveness of work group activities; (b) contribute to the formation of organisational policy; (c) balance contributions to the organisation with contributions to the community; (d) adopt a questioning and critical approach in all aspects of practice; (e) identify domain problems and opportunities, and select and apply appropriate research methods to investigate them; and (f) practice in a manner that encompasses the needs, preferences, and perspectives of others. For this reason, performance level in the APPFSC model,

> may be defined as a level of accomplishment that reflects the *expertise* [emphasis added] of the individual based on their training and experience. It is [therefore] important to recognise that it [i.e., performance] does not relate to any particular service or range of services and is not a measure of the quality of services provided. Professional practice may be viewed as a continuum based on the post-registration learning that has occurred through all means available to the individual. At some point along the continuum there is a 'threshold' performance

level above which performance could be considered 'advanced' while below that threshold performance would be considered to be at the 'general' level. Excellence in practice relates to the quality of professional practice and is achievable by all [professionals] regardless of the performance level at which they operate. (APPFSC Secretariat, 2012, p. 8)

Advanced Focused Pharmacist

Advanced Practice Professional
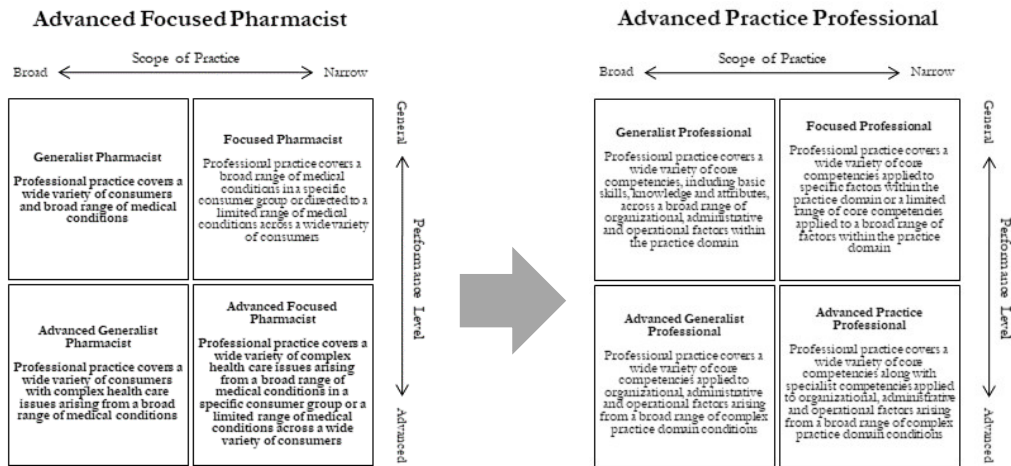
Figures 1(a) and 1(b): Scope of practice and levels of performance for advanced focused pharmacists (APPFSC Secretariat, 2012, p. 7) and for advanced practice professionals

To this end, the APPFSC advocates a continuum model of practice which begins with general quali-fications in pharmacy, and then seamlessly continues through a transition phase of advanced practice and a consolidation phase of advanced practice, ultimately reaching the status of *advanced practitioner* or *advanced focused pharmacist* (APPFSC Secretariat, 2012, p. 10); in the language of this paper, such a practitioner has achieved the status of APP.

Figure 1(b) also shows the same four generic types of practice professional, irrespective of the do-main, according to scope of practice and level of performance, including the *generalist professional > focused professional* or *> generalist professional > advanced generalist professional*, and shows how both may lead to traits and performance associated with being an APP. However, other terms and constructs, such as *extended practice* and *expanded practice* in addition to *advanced practice*, have been used "to describe specific titles, roles and functions that involve variations to what is generally accepted as a traditional core scope of practice" (Department of Health, 2017, p. 7).

In our definition, an APP's practice may cover a wide variety of core competencies along with spe-cialist competencies applied to organizational, administrative, and operational factors arising from a broad range of complex practice domain conditions. Among the recognised competency hallmarks of APPs is a desire to impact their workplace (and society more generally), their ability to think and read critically, to question and engage with practice domain problems, to solve workplace or work-based real-world problems and to innovate, and, in the context of the present study, their ability to understand and conduct work-based research. As importantly, APPs are often driven by altruism.

In our accompanying paper (Fergusson et al., 2018), we introduced both the unique features of work-based research and its application in the USQPSP (which was specifically designed to meet the needs of MCPs who are APPs by training scholarly professionals rather than professional scholars) as they relate to work-based learning. Professional Studies in this context is a term used to describe academic programs that emphasise *applied* and *non-traditional* modes of knowledge and skills acquisi-tion in higher education, embracing formal, non-formal, and informal pathways of learning coupled with a transformational ethos. A cornerstone of the USQPSP is its focus on work-based research; in particular, its engagement with *action research* using mixed method research designs (e.g., Cresswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009) is to be highlighted.

The purpose of this paper is to expand the discussion of work-based learning and research for MCPs by introducing two projects currently being conducted in Australia as part of the USQPSP doctoral program to identify some of the primary factors associated with contemporary work-based research. Each project, based on the features of work-based learning and research, is divided into six sections: 1) overview of the problem; 2) status of the practice domain; 3) background and prior learning of the researcher; 4) work-based research in the practice domain; 5) expected outcomes of work-based research; and 6) lessons learned from conducting work-based research.

The first of these projects considers the relationship between authentic leadership, health, safety and well-being, and performance as they relate to the corporate culture of Australia. The nexus between safety leadership behaviours and organizational culture and outcomes has been presented elsewhere (e.g., University of Queensland, 2016), but its relation to corporate performance in Australia has yet to be investigated. The second project summarises the development of professional identity of investigators in the Australian Public Service, a topic under-represented in the literature on investigative services and investigation as a profession (although preliminary work on identity has been conducted in policing more generally, e.g., Bayerl et al., 2014).

In this way, the present paper provides concrete examples of work-based learning and insider-research currently being conducted in Australia by APPs, thereby extending our understanding of what is possible in this field of endeavour; such an endeavour extends the work of Costley and Abukari (2015), which sought to assess the impact of work-based research projects at the postgraduate level in the United Kingdom.

PROJECT #ONE: SAFETY LEADERSHIP AND COMPANY PERFORMANCE

OVERVIEW OF THE PROBLEM

Workplace health, safety, and well-being (sometimes called occupational health and safety or OH&S) addresses a combination of individual, organisational and societal issues. Poor workplace health, safety, and well-being practices inevitably impact people, and may include injury and illness (or loss of life in the most extreme cases); workplace injuries and illnesses lead to loss of enjoyment of life (e.g., reduced participation in recreational activities), relationship difficulties and breakdowns, and psychological ill-health (Quinlan, Bohle, & Lamm, 2010), in short, reduced human well-being.

Similarly, at the organisational level, poor workplace health, safety, and well-being results in reduced productivity (or prosecution in the most extreme cases), while from a broader societal view it can adversely impact the economy, insurance schemes, and healthcare costs. For example, according to Gahan, Sievewright, and Evans (2014), direct (i.e., compensation claims and insurance premiums) and indirect (i.e., absenteeism, presenteeism, and turnover) costs associated with injuries and illnesses sustained in the Australian workplace amount to approximately $60 billion each year (which equals almost 5% of Gross Domestic Product).

Despite technological advances, workplace injuries, illnesses, and fatalities are not uncommon, with Safe Work Australia (SWA, 2017) reporting that 178 workers were killed in Australian workplaces in 2016. While this number was a 22.6% reduction from 2015 and a 42.6% reduction from 2007, these data translate to a worker fatality rate of 1.5 fatalities for every 100,000 workers, which was, by way of comparison, approximately the same mortality rate as asthma in 2014 (Australian Institute of Health and Welfare, 2017).

Unplanned events can also adversely affect an organisation's performance, negatively affecting costs, delivery schedules, and customers. Love, Teo, Morrison, and Grove (2016), for example, have explored these impacts on construction projects and the rework required to resolve quality and safety-related issues, showing productivity delays and production downtimes, repairs to damaged plant and

equipment, and poor service delivery to customers can lead to reputational damage and the loss of business.

STATUS OF THE PRACTICE DOMAIN

The project focuses on safety leadership and its impact on corporate performance. As part of the USQPSP, a practice-based project is being undertaken in conjunction with the MCP's employer that aims to provide an understanding of the effectiveness of safety leadership within an organisation, as well as develop a framework for leaders to promote a culture of health, safety, and well-being to improve overall company performance as determined by a variety of objective metrics.

The study aims to explore the role safety leadership plays in fostering a positive and adaptive workplace culture. Gahan (2015) asserts that when an organisation gets its health, safety, and well-being policy position and behaviour right, its culture is stronger and more adaptive, leading to greater resilience, continuous improvement, and better organisational performance; improved safety performance, therefore, can be viewed as having a symbiotic relationship with work quality because of the adverse impact unplanned events (e.g., events that cause injury, illness, damage, or loss) has on costs, delivery schedule, and customer disruption (Love et al., 2016).

It has been established that leadership plays a significant role in organizational success. For example, Wu (2005) pointed out that high-quality leadership is important when responding to volatile, uncertain, complex, and ambiguous (VUCA) environments, and without leadership, organisations are unable to effectively adapt and respond to these challenges. Thus, the Centre for Workplace Leadership (cited in Yukl, 1989, p. 253) stated leadership is "influencing task objectives and strategies, influencing commitment and compliance in task behaviour to achieve these objectives, influencing group maintenance and identification, and influencing the culture of an organization."

Extrapolating from Yukl's (1989) definition of leadership, safety leadership revolves around leading and influencing to achieve defined health, safety and well-being goals and objectives. Wu (2005) defined safety leadership as "the process of interaction between leaders and followers, through which leaders could exert their influence on followers to achieve organizational safety goals under the circumstances of organizational and individual factors" (p. 28). Safety leadership has therefore been identified as one parameter with which to improve employees' safety behaviour and thereby have a positive impact on a company's health, safety, and well-being performance. To this end, the UK's Health and Safety Executive (HSE) commissioned a review of the literature on effective safety leadership behaviours (Lekka & Healey, 2012). The HSE review found that transformational and authentic theories of leadership have a positive influence on the effective management of safety, and Conchie, Moon, and Duncan (2013) similarly contend that safety leadership initiatives, directed at the supervisory level, may be more effective at improving corporate safety than initiatives directed at the wider employee base.

One way supervisors can better influence employees is through trust. For example, Conchie and Donald (2009) have defined trust as "an individual's willingness to rely on another [person] based on positive expectations that he or she will act safely or intend to act safely" (p. 137). Trust, therefore, has a positive influence on employees' safety behaviour "because it increases their willingness to engage in behaviors that improve safety, particularly those behaviors that carry a risk of being reframed as reflecting poor safety performance" (Conchie & Donald, 2009, p. 137). It can therefore be supposed that safety-specific trust in supervisors can be improved through safety-specific transformational leadership, which in turn generates reciprocated trust.

Moreover, authentic leaders "build enduring relationships, work hard, and lead with purpose, meaning and values" (Avolio & Gardner, 2005, p. 329), openly share information needed to make decisions with their followers, and accept followers' inputs into decision-making (Avolio, Walumbwa, & Weber, 2009). O'Neill, Wolfe, and Holley (2015) found that advocating healthy and safe workplaces requires leaders to build trust with their followers, and that "authentic leaders unambiguously

demonstrate an active commitment to [safety]" (p. 23) by building systems and structures that incorporate practical safety in day-to-day operations, and Cavazotte, Duarte, and Gobbo (2013) found an association between authentic leadership and improved influence on safety performance. Agote, Aramburu, and Lines (2016) have also revealed that authentic leadership behaviour is associated with a follower's trust in their leader; they concluded that "trust is fundamental for the effectiveness of leadership…and [authentic leadership] builds trust" (p. 50). Similarly, in the context of health and safety futures, Ernst and Young (2016) recently identified trust as a foundational requirement for leaders who wish to progress health, safety, and well-being initiatives in the workplace.

An anchor point has been selected in the MCP's focus on safety leadership due to the association of authentic leadership with positive outcomes for followers, including reduced burnout, follower commitment, engagement and empowerment, improved job satisfaction, and trust-building capabilities (Orazi et al., 2014). The MCP is therefore exploring what impact the authentic approach to safety leadership has on safe workplaces, and whether or not this develops a stronger and more adaptive workplace culture, which in turn might lead to greater continuous improvement and better outcomes for Australian organisations (Gahan, 2015), by asking, "Does safety leadership impact organisational performance?", centered on a Pragmatic, problem-centric approach using a longitudinal QUAN>qual>QUAN embedded mixed method design. Pre- and post-intervention of training, quantitative data will be collected via an online survey to approximately 150 managers and staff to measure organisational performance metrics, including revenue, customer net promoter data, lost time injury frequency rate, and total recordable frequency rate; qualitative data will be collected throughout the intervention phase and will include interviews and reflections of participants to measure the response and effectiveness of the health, safety and wellness training implementation.

BACKGROUND AND PRIOR LEARNING OF THE RESEARCHER

The MCP (the second author), a Melbourne-based Certified Chartered Generalist Occupational Health and Safety professional with ten years' experience, is employed as a Health Safety Environment and Quality Manager for an ASX-listed facility management company. The MCP views the continuous increase of knowledge and learning as a personal investment in himself and his career, which Law (2001, p. 4) described as an "investment of energy" and believes that completing the USQPSP will provide a framework for future career opportunities through its interdisciplinary approach as well as its focus on practice-based workplace research.

The MCP's own professional development has included formal, informal, and non-formal learning; formal learning and development have included post-graduate studies in both Occupational Health and Safety as well as business, with a significant proportion of learning and development occurring more informally and non-formally from employment and other community-related work. The MCP was drawn to the USQPSP because of its systematised focus on work-based research—applying doctoral-level inquiry and rigour to workplace issues and projects. The benefits of workplace and work-based journaling, a key element of the USQPSP, are widely accepted (e.g., Nguyen, 2015), however the emphasis on structured workplace and lifelong learning is also considered a key to developing professional capabilities.

WORK-BASED RESEARCH IN THE PRACTICE DOMAIN

Because learning is obviously more than just the storage, retrieval, and application of information, it can no longer be confined to the student-classroom context; learning involves complicated patterns of rational and emotional elements, along with a range of psychological phenomena (Illeris, 2004). Moreover, learning occurs through the social interactions of individuals and their environment, be it through formal or non-formal learning contexts, such as workplaces.

If viewed through the lens of contribution to professional development and employability, as proposed by Bezanson (2003), lifelong learning can be defined as: "All purposeful learning activity un-

dertaken in an ongoing way with the aim of improving knowledge, skills and competence" (Community Outreach and Engagement Core, 2000, p. 3). Furthermore, the concept of work is rapidly changing. Just as the work health, safety, and well-being profession has shifted through five stages (Borys, Else, & Leggett, 2009), so too has the concept of 'work' evolved; we are moving, it is said, from an age of knowledge workers to an age of conceptual workers (Cross, 2012). This new age and world of work sees the convergence of continuous learning as a fundamental requirement for workers to keep up with the rapid, volatile and discontinuous change increasingly seen in the 21st-century workplace. The MCP's doctoral journey can therefore be seen as part of a refocus on continuous learning in this adaptive age.

The notion of applying scientific enquiry to solving complex problems in the workplace highlighted earlier by Gregory (1994) resonates with the researcher and has drawn him to a practice-based learning pedagogy. Practice-based learning has its conceptual underpinnings in the enhancement and recognition of work-based learning and other experiences (Lester & Costley, 2010) through reflective practice (Schön, 1987). It is in these experiences, or experiments of proven and disproven hypotheses (Fox, 2014), where learning occurs through reflection.

Spalding and Wilson (2002) have defined such reflection as "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (p. 1394). The epistemological basis of practice-based learning is grounded in pragmatic Constructivism, where knowing and doing are interdependent; it is this notion of Constructivism, where practice is informed by knowledge which in turn generates further knowledge, that leads to change in practice (as identified 30 years ago by Schön, 1987).

The USQPSP harnesses practice-based pedagogy by applying doctoral-level inquiry and rigour to workplace issues and projects, thereby building a student's professional capabilities, self-awareness, and reflective abilities. The USQPSP therefore suits the enhancement of professional practice, as it applies a robust, pedagogical framework to each student's domain of practice, while developing the MCP's capabilities, building capacity in their practice environments, and contributing to their self-awareness and intellectual independence (University of Southern Queensland, 2017).

To this end, the USQPSP encourages candidates to develop practice-based projects which incorporate action research (Doncaster & Thorne, 2000) by 1) identifying a need for change; 2) designing and implementing interventions to bring about change; 3) evaluating the effectiveness of interventions; 4) identifying further needs for change; and 5) repeating as required. Throughout these research cycles, reflection on the actions taken in the workplace provides the researcher with an opportunity to learn through further reflection and modified action, thereby solving problems in, and expanding one's knowledge of, the practice domain.

EXPECTED OUTCOMES OF WORK-BASED RESEARCH

The USQPSP seeks to deliver a triple dividend. Benefits at the individual level centre on self-development; the MCP expects that completing this program will "impart a set of high-level skills and capabilities", as suggested by Doncaster and Thorne (2000), including: "habitual reflection and self-directed learning; an ability to tackle unpredictable problems in novel ways; an ability to synthesise ideas and redefine existing knowledge; and an ability to work at the current theoretical limits" of his field of practice.

According to the MCP, the anticipated organisational benefits include "a better understanding of the effectiveness of safety leadership within an organisation, as well as a tangible framework for leaders to work within in order to have a salutary impact on unplanned events. The overall benefit anticipated for the organisation is a reduction in unplanned events and improved organisational performance".

An anticipated outcome is a "significant and original contribution to knowledge [specifically] in the context of professional practice" (Australian Qualifications Framework Council, 2013, p. 63). The OHS Body of Knowledge for the profession in Australia has been in development since 2009, with its first iteration published by the Health and Safety Professionals Alliance (HaSPA, 2012). The OHS Body of Knowledge will continue to be updated and revised as the "evidence base expands" (HaSPA, 2012, p. i), but it is anticipated that the outcomes and learnings of this USQPSP research project will contribute to the expanding body of evidence in health, safety and well-being, the third leg of the dividend tripod.

LESSONS LEARNED FROM CONDUCTING WORK-BASED RESEARCH

On entering the USQPSP, the MCP was expecting a linear learning process—a step-by-step process of building knowledge and skills.

While, the program design provides a scaffold of learning outcomes, the MCP has found "learning to be nonlinear and non-sequential, as a result of the self-paced, learner-centred pedagogy." Coaching and guidance is provided by USQPSP facilitators and the MCP's supervisory team, however the responsibility for learning and driving progress is that of the MCP. Thus, the MCP has progressed through four key learning milestones in the USQPSP; these learnings are presented in Table 1.

Table 1: MCP learning milestones in the USQPSP.

Milestone	MCP Learning
Developing a Learning Program	Prior to commencing the practice-based research project, USQPSP candidates are encouraged to reflect on and review their previous learning in order to develop and plan learning objectives (LOs). MCP's develop a Statement of Prior Learning with LOs formulated at the taxonomic level of synthesis and evaluation. This process helped the MCP understand that learning opportunities can be found everywhere, not just in formal classroom settings. The MCP initially found this process to be confronting, accompanied by an overwhelming self-doubt and sense of "intellectual phoniness" (Clance & Imes, 1978, p. 241).
Developing a Research Proposal	Developing a practice-based research proposal was the culmination of coursework in preparation for the MCP's transition to doctoral candidature. The MCP valued the critical review, coaching, and advice provided by his supervisory team, which helped guide the structure and approach of the research proposal and increased the MCP's confidence in preparation for the confirmation seminar. It was during this stage the MCP understood he, not his supervisors, was in control of his doctoral program.
Confirmation of Candidature	In preparing for confirmation, the MCP had to reimagine how to speak to the research proposal. Valuable feedback was received both during the seminar and in the confirmation report, which recommended the MCP include more of himself in the proposal, despite his knowledge, passion for the topic and breadth of experience conveyed in the confirmation presentation. The feedback to locate and include himself in his work strongly resonated with the MCP and changed his thinking around expectations for academic workplace writing and research.

Milestone	MCP Learning
Ethics Approval	The MCP was then required to secure ethics approval for his workplace research project. As part of this process, the MCP had to critically evaluate his research proposal and methodology to assess their potential impact on participants. The USQPSP human research ethics process provided a robust and structured approach to assessing each stage of interaction with participants and prompted reflection on previously unconsidered aspects of those potential impacts. Reflecting on the human research ethics process, the MCP appreciated the thoroughness of the process, which ensured high levels of protection to all participants in work-based research project.

While the research and doctoral program is still in progress, there have been opportunities for the MCP to learn through action and practitioner inquiry (Dana & Yendol-Hoppey, 2014). As explained in the companion paper (Fergusson et al., 2018), it has been in micro-reflective cycles where the MCP has turned concrete experience into workable conclusions and learnings.

The doctoral journey has been one of continual learning; everything which has preceded it has helped prepare the MCP for the journey—each life-stage has presented its own learnings, and each has supported subsequent growth and opportunity. The MCP therefore likens the doctoral journey to that of a black belt in karate: each rank prepares the participant for the next grade, but the black belt is not the end of knowledge; it is rather the beginning of new knowledge. The MCP's aspiration is thus to harness the concept of *Shoshin*, in which "there are many possibilities [in the beginner's mind], but in the expert's [mind] there are few" (Suzuki, 2011, p. 21).

PROJECT #TWO: PROFESSIONAL IDENTITY AND TRAINING OF INVESTIGATORS

OVERVIEW OF THE PROBLEM

Precise definitions of investigator identity and its recognition as an independent profession have not been forthcoming. This workplace research project will examine the professional identity of investigators within the Australian Public Service and consider its fit-for-future competencies and training.

Inputs from regulatory officers impact our lives; from receiving a parking infringement notice to justifying one's qualification to serve as a company director, regulatory interactions occur on an almost daily basis. These types of interactions, although related, are distinct from interactions with investigators of policing agencies, because these are mostly associated with crime. It is in the context of policing agencies that the present study of investigation has been conceived, a term which can be defined as a "process of seeking information relevant to an alleged, apparent or potential breach of the law, involving possible judicial proceedings. The primary purpose of an investigation is to gather admissible evidence for any subsequent action, whether under criminal, civil penalty, civil, disciplinary or administrative sanctions. Investigations can also result in prevention and/or disruption action" (Australian Government, 2011a, p. 1).

Investigators within Australian Federal Government agencies typically possess a minimum vocational qualification (e.g., Certificate IV in Government [Investigation]). However, not only are investigators directly involved in gathering facts and evidence to determine breaches of relevant legislation and to correctly apply the law and rules of evidence, it is also necessary that they interact successfully with witnesses and offenders. Despite this apparent uniformity of underlying roles and functions, investigators are not always trained consistently or adequately to perform these tasks. Certainly, many inves-

tigators may have been drawn from the ranks of State and Federal police forces and are therefore experienced in the demanding field of criminal justice, but more recently, investigator recruits have also included agency-trained public servants, and the training these investigators have received to qualify for the job can be inconsistent. Inadequacy in both the quality and sustainability of investigator training in some Public Service sectors has been observed over the last 20 years (e.g., Roberts, 2000).

Moreover, regulatory training in Australia has typically been outsourced to private firms, who base the content of their programs on national qualifications frameworks and the legislative requirements of Australian Government Investigation standards (e.g., Australian Government, 2011a). But the selection of an appropriate training provider by Federal Government agencies is often not based on the record of the provider or their ability to deliver satisfactory or sustainable results, but on their ability to negotiate the tendering process, thus potentially affecting the quality of investigator training outcomes.

STATUS OF THE PRACTICE DOMAIN

The concept of investigation has been applied colloquially in different Federal Government contexts. Investigation is primarily regarded as a set of skills that can be utilised by anyone with a desire to extract information or facts from circumstances rather than a distinct, well-articulated profession. It is this emphasis on application of tasks that dilutes and obfuscates the classification of investigation as a profession. Furthermore, from this superficiality follows what could be regarded as a haphazard and opportunistic approach to its training delivery, where vocational institutions engage in ad-hoc methods to impart knowledge and skills; investigation may find application in real-world working environments, but its true professional identity has remained elusive.

The regulatory environment of Australia employs investigation in a variety of ways: from determining breaches of workplace legislation and enforcing worker/employer rights to prosecuting tax fraud. The Federal Government originally mandated alignment of its investigation practitioners with the Commonwealth Fraud Control Guidelines (Australian Government, 2011b), which stipulate the minimum qualification standards required for personnel in each agency that undertakes investigation as a core function. This requirement has since been modified, with qualification derivation now under the provisions of the Australian Government Investigations Standards (Australian Government, 2011a), specifically Section 1.5 of the Standards. This Section references the applicable Public Service Training package (i.e., PSP04) for the purposes of training course equivalence in an attempt to standardise delivery.

Any work that is performed for a living can be deemed 'professional' work, but as Lawrence (1999) has previously observed the definition of what constitutes a profession can be debated. According to Mulcare (2014, p. 32), "a profession is a disciplined group of individuals who adhere to ethical standards and who hold themselves out as, and are accepted by the public as, possessing special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level." It can thereby be argued that a profession is a cooperative undertaking and not an individual quest; such a view suggests that professional practice occurs where occupationally organised groups function according to moral guidelines above and beyond what society demands as a norm (e.g., Davis, 2002).

Early interpretations of professions thus suggested that those professing must embrace a moral calling and a desire to honourably serve society, thus extending work into professional independence and an ability to choose where and when one works (Coffee, 2006). Therefore, moralities translation into a professional code of practice was viewed as intrinsic to professional identity, without which we would merely be left with honest occupations and trade associations (Davis, 2002). This extra-materialistic view of what it means to engage in a profession is accepted in the modern sociological sense and inextricably links a profession to society; a profession, then, is a moral community of like-

minded members whose influence extends into society via interactions between the profession and society in which the interactions take place (e.g., Frankel, 1989). Drawn from this preliminary examination of professional identity, such a definition of investigation as a profession will underpin the research process undertaken by the MCP. What it means to be a professional investigator and how that is interpreted by the relevant Federal Government agency will have a bearing on understanding effective and meaningful ways of integrating competence and competency-based investigator training into investigation.

In Australia, competence has found application in competency-based training where programs are designed around pre-determined training and assessment outcomes, often designed to meet industry requirements (James, 2001). If done well by a Federal Government agency, training not only enhances individual employee performance and productivity, which feed into broader organizational goals, but can also positively influence employee alignment, engagement and overall performance (Ice, 2009). Moreover, evaluation of training is key to establishing its relevance and effectiveness, and thus needs to be built into training packages during the design phase; evaluation must verify that a change occurred, that change was a result of training, and that change can be repeated with other employees.

Minimal research has been directed toward public service subset functions in Australia, including investigation; this has been compounded in the Australian Public Service, which contains a multitude of regulatory environments in different agencies with related, but very distinct, investigative methodologies and needs. Consequently, the competence base and ongoing level of training applicable to practitioners is often deficient, and whether training contributes to professionalization is a question which may bear on proposed or perceived improvements. On that basis, a pedagogical analysis of investigative training in the Public Service sector will be one of the primary subjects of this research. The project will analyse and evaluate current competency and training paradigms for investigators within the regulatory environment of the Australian Public Service resulting in a competency-based framework designed to help articulate the professional identification of investigators by asking: "What are the key competencies and training needs that define, describe and develop a fit-for-future investigation profession in the Australian Federal Public Service?" using an Pragmatic exploratory QUAL>QUAN mixed method sequential design, which will firstly identify and interview key informants within the profession to obtain qualitative data and will then be thematically analysed to serve the basis of a larger scale quantitative survey.

BACKGROUND AND PRIOR LEARNING OF THE RESEARCHER

The MCP (the third author) has worked as an investigative practitioner for 27 years, undertaking investigative functions within the Australian Federal Police and Queensland Police Service (both in uniform and plain clothes) and has worked as a private factual and surveillance investigator, more recently in the Federal public service as an investigator and an investigation manager. The MCP currently manages a team of investigators charged with regulating the Tax Practitioner profession. Throughout his career, the MCP has utilised a range of common and statute laws as a regulator, and although the landscape of regulation is heavily influenced by (or indeed dependent on) the law to drive process, the investigative function comprises a set of core skills or competences allowing practitioners to apply the law in accordance with established procedures and precedent.

Investigative training throughout this period led the MCP to in-service (in the case of policing) and privately sourced vocational courses and qualifications. Delving into tertiary education as a means of career development, on peer advice, the MCP completed a Master's degree in fraud and financial investigation, which touched upon the topic of investigation as a profession. The concept focussed the MCP's thinking about current levels of Federal investigative training. The MCP was aware of the requirements of the Commonwealth Fraud Control Guidelines (Australian Government, 2011b), which mandate the minimal level of vocational training required to undertake work as an investigator, but a lack of cohesion between the requirement to undertake training and the application of training was observed, along with the lack of locally trained investigators in the Australian Public

Service who were mostly supplemented by law enforcement staff with pre-existing training and experience.

As a manager of staff who were undertaking the requisite training program, the MCP saw firsthand evidence of a lack of cohesiveness and alignment between coursework and its application. This problem is compounded by the differing requirements of public-sector agencies compared to more conventional law enforcement approaches, and in that the actual practice of newly acquired skills was not regularly available in the public service workplace. Thus, the opportunity to solve a real-world problem in a situational context fit with the intended learning outcomes of the USQPSP, and it became obvious that the application of workplace research in this area might serve to argue the case for change in investigator training and competency.

WORK-BASED RESEARCH IN THE PRACTICE DOMAIN

Professional Studies, as a distinct university-level program, has gained traction because it is a relevant and attractive option for MCPs seeking to enhance learning and development in a context that has both current and practical application. Action learning theory (e.g., Gregory, 1994) proposes that professionals learn most effectively when learning is achieved by addressing real-world problems in the context of their working environment; such a view has its foundations in tangible, real-world problems which can serve as catalyst for social regeneration (Boshyk, 2014). Gregory (1994) draws a distinction between action learning and action research, founding the latter on the former by emphasising that action learning (i.e., learning in the workplace when bound by real-world problems and solutions) becomes action research when inquiry is applied to specific problems which can be addressed by defined research questions and strategies aimed at solutions and improvement. Action learning is therefore similar to action research, in that it includes an action-oriented query which can be considered collaboratively, with the goal being experiential learning and improvement (Rigg, 2014).

Learning in the workplace offers as many opportunities as does learning in the classroom, but to be competitive in the 21st-century marketplace, work-based learning must be focused by reflection on practice (Raelin, 2008). In his self-directed leadership development model, Nesbit (2012) considers 'reflection' a meta-skill, which is one of the three skills he considers crucial for self-development. In this model, deep and considered reflection is crucial to a learner's understanding of her/his personal and institutional shortcomings. Such an approach is central to the USQPSP. However, notwithstanding the benefits of structured micro- and macro-reflective practice as discussed in our accompanying paper (Fergusson et al., 2018), the motivational demands of this individually driven and isolated process can be problematic. For example, Galea (2012) noted the dangers of inadequate reflection by referring to Dewey's view that some thinking through reflection can be devoid of inquiry, can be hasty and inconclusive, and that a careful and considered approach, lacking as much as possible from the interference of individual bias, is most productive. Nonetheless, the reflective professional can be pivotal in work-based learning upon which effective work-based research can be well founded and productive.

EXPECTED OUTCOMES OF WORK-BASED RESEARCH

There is a growing demand for higher education to become more involved in work-based learning, work-based research, and professional development. For example, Lester and Costley (2010) maintain there is a growing body of evidence which suggests adult participation in higher education is increasing directly as a result of linkages and alignment between work-based learning and higher education. The resultant alliances and projects thereby add value to the workplace and practice domain.

Criticisms of such programs stem from concern about their integrity in an academic sense, including their structure, assessment criteria, and the roles that teachers play. Participants in a work-based program at Coventry University were therefore surveyed during 1999–2000 to determine benefits and

concerns of students and employers (Johnson, 2001). Benefits identified by students included flexibility of training and attendance, up-to-date course material, and gaining marketable skills, while employers saw benefits in the flexible approach to learning with a relatively low cost of training, and improvements arising from work-based projects; the University counted an increase in staff knowledge, along with training and collaboration with corporate partners and associated funding benefits, as an advantage.

However, students saw the apparently loose structure of the course and requirements for self-motivation as limitations; course credibility was also cited as a concern for both students and employers, and employers considered the security of their intellectual property rights a concern, and the provision of mentors in the workplace as a limitation and challenge. Similarly, the University considered an overarching concern emanating from the perception of work-based courses being substandard in comparison to their more traditional research-based programs, and that academic snobbery and the resultant logistical issues of staff training and allocation needed to be overcome. It can nevertheless be seen that different types of Professional Studies programs are gaining traction throughout the world, as higher degrees with integrity and purpose increasingly offer tangible benefit to working communities, particularly as a result of increased research and when new data come to light and are tested.

While arguments for and against these types of programs were considered by the MCP prior to enrolment in the USQSP, his employer and related employee groups involved in the present study were in support of it, and the benefits to both stakeholders (such as higher engagement and relevance along with lower costs) outweighed concerns about intellectual property rights.

## LESSONS LEARNED FROM CONDUCTING WORK-BASED RESEARCH

Capability is a conceptually higher order practitioner ability than competence (Lester, 2014); capable advanced practitioners not only know what, but how, to learn (Woods, 2013), and such capabilities allow practitioner-led learning and reflection, driven by holistic considerations and a self-motivated desire to improve (Lozano, Boni, Peris, & Hueso, 2012).

The distinction between capability and competence is important when considering the self-assessment process undertaken in the USQPSP. Earlier we referred to the micro-reflective cycle (Fergusson et al., 2018), a process utilised in the USQPSP to first understand and then develop a learning profile of the MCP's professional capabilities and a set of learning objectives (or LOs, elsewhere referred to as intended learning outcomes or ILOs, e.g., Belland, French, & Ertmer, 2009) to frame a way of maximising and extending the learning process (a USQPSP instrument called the *CV Tool* is used for this purpose). These LOs then serve as the foundation to a research program, which, according to the MCP, "would not only actualise the LOs but, through them, achieve the broader goals of the USQPSP", including the development of APP skills and knowledge. An example for this MCP, showing the relation of LOs, learning profile and their relation to APP, can be seen in Figure 2.

Moreover, the CV Tool utilizes a taxonomy of four capability learning areas (i.e., communication, intellectual, methodological, and personal/social) against which the MCP can align previous work experience, thereby allowing a seamless linkage between items in the learning profile and the different classes of LOs in order to generate a complete and holistic self-assessment of past work experience and learnings along with future learning and research needs.

By documenting the MCP's life-skills and historical work experience through the CV Tool, the self-administered assessment of prior learning "revealed a breadth of historical experience, much of its related to investigating, as well as the application of management skills." After developing the learning profile, the highest rated areas in the MCP's skillset were spread across all four of the capability areas. Some areas of deficiency, when compared with associated skills in each capability area, attracted attention because they related closely to what the MCP perceived as learning development opportunities. Strengths and current learnings were identified in the areas of intellectual capabilities, com-

munication-related capabilities, and personal/social capabilities, and were self-assessed as being substantially related to managerial experience. A deficiency was observed by the MCP "in methodological capability, specifically in technology adoption and tolerance for ambiguity," and thus, as a result of identifying this deficiency, a constructive outcome of the exercise was to focus future learning on developing the MCP's methodological capability during the USQPSP.
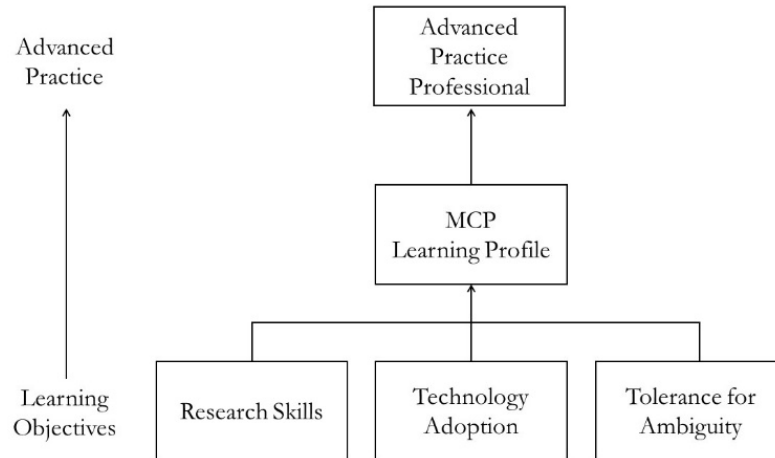
Figure 2: CV Tool output for MCP learning profile.

A cursory reflection on these learning needs may indicate a conservatism induced by the Public Service environment and might be attributed to a general apathy about technology and its application in a modern workplace. However, technology was not absent from the MCP's workplace experience and therefore the identified learning needs may indicate more of a reluctance to embrace communication and social networking tools (and to thereby enjoy their benefits), and hence the micro-reflective cycle may have been a factor in arriving at an understanding why these capabilities were underdeveloped. Similarly, tolerance for ambiguity, specifically rigidity of a prescriptive workplace, may underpin such reluctance to change coupled with a lack of opportunity to exercise change. As documented in Figure 2, these capabilities have therefore been targeted for attention in the formation of the MCP's self-designed LOs as indicated by the following:

a) *Enhance critical thinking, objective judgment and tolerance for ambiguity by critically evaluating existing methodologies utilised in the delivery of regulatory training and by designing a best-practice model capable of being uniformly adopted.* The process of researching methodologies, which is a core element of addressing the problem of competence deficiency, will exercise and develop research skills founded on the elements of critical thinking, objective judgment and tolerance for ambiguity necessary for an objective and balanced assessment of the data acquired.

b) *Subject to best-practice model identification, enhance adoption of technology by collating, assessing and proposing suitable technologies for the delivery of regulatory training.* This objective contributes to suitable technology identification and adoption as a delivery mechanism aligned with proposed competencies.

c) *Enhance tolerance for ambiguity and objective judgment by remaining cognizant and recording reflections related to potential ambiguities presented by methodological analyses and testing, and by validating results using qualitative and quantitative means.* This last objective relates directly to the research process and the need for objectivity when maintaining rigor and formulating persuasive arguments. Reflection on conflicting results of analysis and acknowledging potential biases is the bedrock of maintaining objectivity and essential to a sufficient and acceptable research product, what in the USQPSP is called a project 'artefact'.

Each of these LOs will measure self-development as part of the doctoral learning journey facilitated by the work-based research project. They are drawn from self-identified deficiencies in MCP capabil-

ity and "will hopefully be satisfied by the workplace research process and work-based project." As an integral part of the USQPSP, these contributions form part of the proposed triple dividend of outcomes.

CONCLUSION

We have identified the important role that learning and research play in the working lives of MCPs who are APPs. To this end, the Professional Studies Program at University of Southern Queensland teaches and mentors the development of higher-order research and scholarship as a way of promoting work-based learning and professional achievement; its goal is to thereby create *scholarly professionals*. A second dimension of the Program is its contribution to workplace and practice domain problems, including limitations of research and gaps in knowledge associated with emerging professional roles and changing workplaces. Finally, the Program seeks to have an impact on society more generally through a combination of the personal development of APPs and the value they bring to workplaces, practice domains, and society. In this paper, we call these collective benefits a triple dividend.

The two project examples presented in this paper begin to document the types of professional engagement and applied projects possible in work-based research by APPs and highlight the multifarious dimensions of learning MCPs can engage in as they advance in professional practice.

While statements of workplace problems, needs, and opportunities, along with the status of the practice domain, are common in this type of doctoral action research, these project examples also show how the background and prior learning of the MCP, learning objectives, work-based research in the practice domain, and lessons learned from conducting research can be integrated into a structured framework of advanced practice. While also introducing the basic elements of applied research methods and expected outcomes of work-based research projects, the examples in this paper give a glimpse into the possible longer-term contributions such research can make to workplaces in Australia.

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BIOGRAPHIES
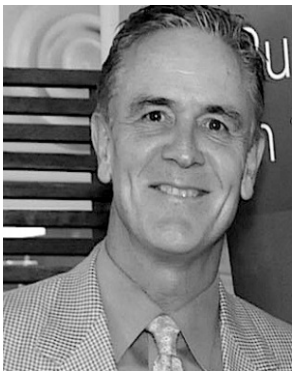
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