Competency, Capability and Professional Identity: The Case for Advanced Practice

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In the last 40 years, a series of models and frameworks associated with competency, capability and identity have been advanced in the published literature. These models and frameworks have arisen at a time of fundamental shifts in both the type and nature of work in developed countries, for example shifts associated with changes to labour markets from a reliance on jobs in agriculture and manufacturing (in the industrial era) to a reliance on jobs in both traditional and novel service industries (in the post-industrial and service eras) along with a rise in demand for work which requires non-routine cognitive abilities and attributes.

Moreover, an increasing demand for advanced practitioners and leaders in every field of work has led to the advent of the so-called 'advanced practice professional', a practitioner who contributes higher order cognitive, affective and conative inputs to organisations and the world of work more generally. These fundamental shifts in work now require practitioners to not only have the competencies and capabilities to perform at a high level, but also require a well-developed sense of professional identity and an ability to contribute, as a discipline leader, in innovative ways to enhance organisational performance and the world of work more generally.

This paper explores these propositions. We advocate a model of advanced practice professionalism in relation to competency, capability, and professional identity, and show through two real-world examples how work-based learning and research, as practiced by University of Southern Queensland in its Professional Studies program, contribute to the development of advanced practice professionals in Australia.

Keywords: Competency, capability, identity, advanced practice, professional studies, work-based learning, work-based research

Introduction

Our general goal is to introduce the relationship of competency and capability to professional identity and show how their respective development can lead to advanced practice. We will also indicate, using two real-world examples, how a Professional Studies degree program in Australia

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built around a pedagogy of work-based learning (WBL) has been operationalised to create advanced domain specialists. Notwithstanding issues surrounding diverse functional learning definitions, which use nomenclature like 'expanded', 'extended', 'advanced' (e.g., Chang, Gardner, Duffield, & Ramis, 2012) and 'expert' (Luther & Rosenbaum, 2018), such educational approaches to professional practice in Australia have been deemed important because:

> The capacity to attain and apply new knowledge, and use new technologies will be the focus of the future. As both knowledge and technologies risk rapid obsolescence, and tasks become susceptible to automation, human skills required by the market and society will constantly shift. In this environment, it is crucial to have [educational] systems that support and enable people to retrain, rather than learn how to do one job very well (Australian Industry and Skills Committee [AISC], 2017, p. 26).

The type and nature of work are changing. These changes, sometimes referred to as 'megachanges' (e.g., Kohlbacher, 2017), are the result of so-called megatrends and collectively represent how work and its future are viewed by governments, business leaders and researchers (AISC, 2017). Fundamental changes in work have been impacted by surges in the global mobility of workers, the ageing of indigenous workforces, increases in workforce urbanisation, systemic innovations in digital technologies and their application to and impact on work (including automation, artificial intelligence and robotics, as discussed by Susskind and Susskind, 2015), and increased participation by women and minority workers in traditional markets (AISC, 2017, pp. 10-11). As a consequence, the composition of Australia's workforce, for example, has been transformed over the last century, with acceleration occurring in the last 30 years.

Consider the following two diagrams in Figure 1, which reflect trends in many industrialised countries. Shares of the Australian workforce engaged in five main types of work are presented (left-hand diagram). Over one hundred years ago, 40% of workers were employed in the service sector (i.e., tertiary industries), which included professions such as nurses, psychologists, pharmacists, teachers, police officers, emergency services personnel, consultants, journalists,

architects and accountants among others. The other 60% of the workforce was composed of those working in agriculture and mining (i.e., primary industries) and manufacturing and construction (i.e., secondary industries).

However, by the early 21st century, 80% of the workforce was engaged in providing services rather than goods, with just a combined 20% of the workforce employed in the other four industry groups. Such changes in sectoral shares of the Australian workforce are similar to those of the United Kingdom, which had an 82% service sector and 1.1% agricultural sector in 2017 (Statista, 2019a), and New Zealand, which had a 73% service sector and 6.6% agricultural sector in 2017 (Statista, 2019b). Hence the steady transition over the last century in Western countries to what some have called a 'care economy' (e.g., Dwyer, 2013).

Note that types of work in Australia, which are susceptible to automation (such as agriculture and manufacturing), have declined but construction, which is not, has remained stable. Nevertheless, the most important sectoral share growth in the last 40 years is across industries which are not only largely impervious to automation but are also more dynamically fluid and require significantly higher levels of cognitive, affective and conative input, throughput and output. For example, among the cornerstones of service industries are their reliance on interpersonal trust (Johnson & Grayson, 2005) and loyalty (Manzuma-Ndaaba, Harada, Romle, & Shamsudin, 2015), and thus not only skills and knowledge but attitudes to work become critically important in service-based professions.

Among the so-called 'non-automatable skills' required by workers in the knowledge economy are empathy, sociability, ability to work in teams, social and cultural awareness, persuasive ability and adaptability (AISC, 2017, p. 30). These shifts in *type* of work have been well documented in Australia and the UK over several decades, for example by Jones (1995) who advocated 25 years ago for an extension of tertiary industries into quaternary and quinary industries, and are typically associated with the social and economic transformation from an industrial to a post-industrial era, and subsequently to a service era.
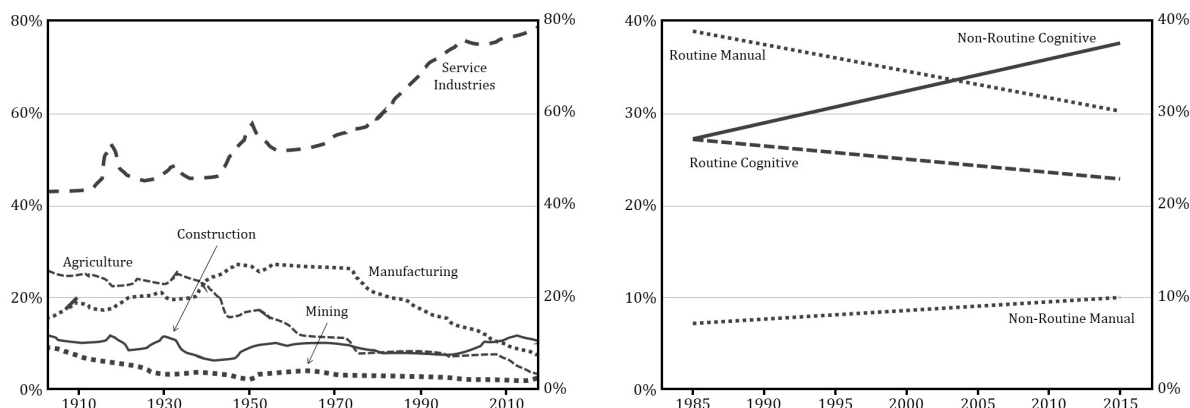
Figure 1: Shares of the Australian workforce by industry sector, 1905-2015 (left); shares of the Australian workforce engaged in jobs which demand routine and non-routine manual and cognitive capacity, 1985-2015 (right) (derived from Heath, 2016).

Perhaps more significantly for this paper, and in parallel to the economic restructuring of Australia's workforce since the early twentieth century, are fundamental transitions in the *character* of work, also well documented in the literature. Figure 1 (right-hand diagram) shows how in the last 30 years a similar seismic shift has occurred in the relation of routine and non-routine work to cognitive and manual work, with the most rapid rise in demand for non-routine work which requires cognitive input, a topic recently discussed in detail by Pennington and Sanford (2019). In this case, 'cognition' means innovation, creativity, problem solving, memory, and attention while working; these cognitive traits are sometimes applied to work in ways "we can never imagine" (Committee for Economic Development of Australia [CEDA], 2015, p. 46).

Of interest is that the demand for non-routine work, which is work done for the first time or performed irregularly (although the term has a different meaning in project management, for example, because non-routine work is non-project work, not irregular work), has increased significantly, with the greatest increased demand being for skills related to non-routine cognitive work. Thus, by 2015 in Australia the need for routine manual work, irrespective of whether or not it required cognitive skill, was declining but nearly 50% of all work performed

was non-routine, and most of that (i.e., 37% of all work) required cognitive input. [Note, some non-routine cognitive work is laborious and does not require advanced skills or knowledge, such as public relations and medical or technical positions, but typically all advanced practice requires cognition and is often non-routine.]

Some researchers have referred to these types of workforce shifts from manual to cognitive and from routine to non-routine as 'job polarisation', although the term has assumed a slightly different meaning when applied in other work contexts (for example in the U.S., where the concept mostly relates to the division of low- and high-paid jobs, Dwyer, 2013). Gratton (2015, p. 33) also explains the phenomenon of job polarisation in the context of routine and non-routine work and what she calls the "hollowing out of work". However, irrefutable is the conclusion that as the type and character of work change the need for different modes of learning, training and education, and the general upskilling of the workforce, become (or should become) national priorities.

Governments, educational institutions and industries around the world have responded differently (and sometimes slowly) to these types of systemic changes in work. One pervasive innovation in Australia designed to address workforce evolution has been the development and implementation of competency frameworks and evidence-based practice competencies (e.g., Carraccio, Englander, Van Melle, Ten Cate, Lockyer, Chan ... & Snell, 2016), such as those embraced by the vocational and education training (VET) sector (e.g., Smith, 2010), which emphasise how the Australian Qualifications Framework (AQF, 2013) can be applied and how, more recently, the Australian Core Skills Framework (Department of Industry, Innovation, Science, Research and Tertiary Education, 2012) has been employed across a variety of industries.

Examples of AQF application have included uniform standards like the National Competency Standards for Project Management (Australian Institute of Project Management, 2008) and the National Competency Standards for Dietitians designed for entry-level practitioners (Dietitians

Association of Australia, 2015), although the latter related more to generalist rather than specialist competencies (Palermo, Capra, Beck, Dart, Conway, & Ash, 2017, p. 328), a differentiator with our model to be discussed later in this paper. Hence, the need to ensure "all stages of the education process focus on instilling competencies rather than the retention of specific knowledge…it is important that the skills being taught are not firm [i.e., organisation] specific, but instill broad competencies that represent a valuable public investment" (CEDA, 2015, p. 15).

As a consequence of these trends, the Commonwealth Government of Australia has in the last ten years also identified as "an urgent priority" the necessity of filling "skill gaps [which] remain in critical fields such as information and communications technology (ICT), high level policy [development], research and project management" (Advisory Group on Reform of Australian Government Administration [AGRAGA], 2010, p. ix); worryingly, in 2010 the Government reported a skills shortage of between 29% and 34% (AGRAGA, 2010) in the Australian workforce, a persistent problem through 2019 in many industries (e.g., Australian Industry Group, 2019).

Moreover, the Australian public service, it has been said in the past decade, must "ensure it has the capability to provide high quality support to government [and therefore] must attract high performing individuals from within and outside the public sector. It must also invest in learning and development and provide pathways for high performing employees to grow and develop…" (AGRAGA, 2010, p. 24). Similarly, according to healthcare industry representatives, Australia must "ensure a capable and qualified workforce—through registration, accreditation, training and development" (Mason, 2013, p. 7). The Commonwealth Government of Australia has therefore recognised that an organisation's worth is not its assets, capital or intellectual property but its people, its intellectual capital. The Government has noted that "the private sector increasingly recognises human capital as a primary source of competitive advantage [and] recognises that investing in people provides significant productivity improvements" (AGRAGA, 2010, p. 24), a challenge which continues (Weise & Troller, 2018).

In considering the nature of its future workforce, in 2010 the Australian Government has acknowledged that private organisations expend an average of 4% of their payroll on employee development (although by 2019 only half these organisations planned to increase spending, according to Pennington and Stanford, 2019, p. 81), which represents an investment in "retention, capability development and talent management" (AGRAGA, 2010, p. 24). However, almost half of Australian public service agencies in 2010 spent less than 1% of their budgets on "staff development" (AGRAGA, 2010, p. 24), although investment in the Government's health sector workforce training and development increased from $286 million in 2004-2005 to $1.8 billion in 2016-2017, a 525% increase in 12 years (Department of Health, 2017). "Critically", according to the Advisory Group on Reform of Australian Government Administration ten years ago, evidence thus suggested that the Australian public service:

> …was not sufficiently or effectively investing in learning and development opportunities for all employees. Only seven per cent of agencies spend more than three per cent of their annual budgets on learning and development opportunities for employees….The quality of learning and development is also a problem. Fewer than one in three employees rated the effectiveness of their learning and development programs as high or very high in terms of helping them to improve performance (AGRAGA, 2010, p. 24).

At the vanguard of Australia's drive to upgrade its workforce is the more recent shift from evidence-based competency models to capability development models (O'Connell, Gardner, & Coyer, 2014), and in some cases to the promotion of advanced practice professionals (e.g., Grace, 2018). Our purpose is to examine the relationship between breadth and depth of competency, capability and professional identity and to propose how this chain of professional development can lead to advanced practice in work-based learning (WBL).

In the following sections we introduce advanced practice professionalism, the Professional Studies program at University of Southern Queensland (USQ) and its relation to professional practice, and two real-world examples which apply these developmental approaches to Australian and German businesses. The two examples we draw from are from project

management and education domains. However, most of the observed economic trends outlined in the paper and the potential contributions of advanced professionalism are not limited to Australia, and where possible we will make links to other educational and work contexts.

Advanced practice professionals

A model showing the relation between context, workforce strategy, workforce competency and capacity, and organisational performance has been advanced by the Australian Public Service Commission (2010), as shown in Figure 2. This model, which has also been broadly identified as central to the strategic development of Australia (AGRAGA, 2010), explains that the human capital of any given workforce is the product of a workforce plan, which itself is embedded in an external work environment and business context. Its applicability, however, is not limited to Australia.

Human capital is composed of the competency and capacity of the workforce but is embedded in the culture, conditions, design and leadership of the collective workforce. In this sense, workforce capacity refers to an "organisation's ability to perform work or the enabling factors that allow an organisation to perform its functions and achieve its goals" (Cox, Jolly, Van der Staaij, & Stolk, 2018, p. 7). In the case of the public service, it is a government's ability to "marshal, develop, direct and control its financial, human, physical and information resources" (Cox et al., 2018, p. 7). The model presented in Figure 2 suggests that organisational output (i.e., an organisation's overall performance) is the product of these various workforce interactions.
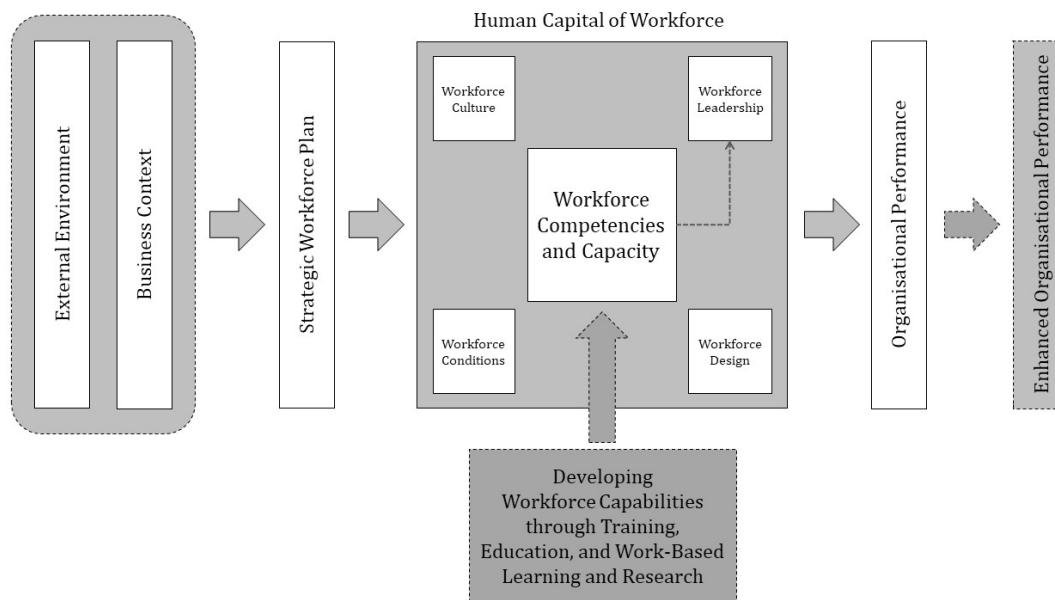
Figure 2: Relationship of human capital of a workforce to organisational performance.

In this paper we argue that to enhance the human capital of an organisation and hence its performance, not only will new workforce competencies, skills and knowledge be required as a result of training, professional development, education, work-integrated learning and research, but entirely new human capabilities must be developed, particularly in the leaders of work domains, as represented by the dotted line additions made to Figure 2 by these authors. Workforce capabilities in government, for example, encompass "the skills, knowledge and abilities that employees of a high performing public service must possess" (AGRAGA, 2010, p. 24). As proposed in the following sections of this paper, such capabilities are the product of advanced practice.

However, it should also be noted that ten years ago the Australian public service (APS), by its own admission, "is blurring the capabilities and skills development required by [its] employees" (AGRAGA, 2010, p. 27). For example, in addition to a blurring between capabilities and skills (i.e., competencies) development, in the context of a government's ability to deliver 'large projects and programs', Shergold (2015) pointed out that for the APS, problems associated with

poor and ambiguous decision making, a paucity of support for key decision makers, a lack of clear understanding within the workforce of a minister's appetite for "risk on individual programs and across their portfolio, and [the commitment to] reach agreement on how implementation challenges [should] be identified, accepted and managed within agreed resources" (Shergold, 2015, p. vii), and a need to enhance program management, all play a part in the failure of governments. Moreover, it is evident on close inspection that these failures bear directly upon the issues of competency and the capability development contemplated by this paper in relation to advanced practice.

Advanced Practice Professionals (APPs) are described in the international literature as those who have an opportunity to learn, study, and thrive in 'advanced practice' because APPs are considered workforce contributors who extend knowledge and skills within a practice environment, such as a workplace or community of practice (e.g., Lowe, Plummer, O'Brien, & Boyd, 2012). Leading practitioners drive practice forward and are often 'thought leaders' within their organisations. APPs have therefore been said to make a valuable contribution to productivity and organisational output and indeed to society as a whole (e.g., Newhouse, Stanik-Hutt, White, Johantgen, Bass, Zangaro ... & Weiner, 2011).

Key benchmarks of an APP include their ability to act with autonomy. As such, they have a sense of their own identity and an ability to act independently and exert control over their environment, including a sense of task mastery, internal locus of control, and self-efficacy (APPFSC Secretariat, 2012, p. 4). APPs also gain peer recognition as a leader, although we suppose APP leadership involves leading with 'humility', as recently examined by Chiu, Owens and Tesluk (2016), and an ability to influence the professional practice of others and their discipline as a whole.

Such APP benchmarks somewhat dovetail with the earlier work of Stuart Dreyfus and Hubert Dreyfus in their five-stage model of adult proficiency (Dreyfus, 2004). However, the Dreyfus model is built exclusively around, and therefore relies heavily on, theories of competence and

skill. For example, Dreyfus proposes that a 'novice' learner is someone for whom work is broken down into a set of tasks and the skills needed to carry out the task; an 'advanced beginner' is someone for whom repeated, situational work experiences as a novice can lead to the recognition of so-called maxims, and thus "learning can be carried on in a detached, analytic frame of mind, as the student follows instructions and is given examples" (p. 177). The Dreyfus third stage is 'competence' in learning and work, which Dreyfus uses to mean:

> With more experience, the number of potentially relevant elements and procedures that the learner is able to recognize and follow becomes overwhelming. At this point, because a sense of what is important in any particular situation is missing, performance becomes nerve-wracking and exhausting, and the student might well wonder how anybody ever masters the skill. To cope with this overload, and to achieve competence, people learn, through instruction or experience, to devise a plan or choose a perspective that then determines those elements of the situation or domain that must be treated as important and those that can be ignored. As students learn to restrict themselves to only a few of the vast number of possibly relevant features and aspects, understanding and decision making becomes easier (p. 178).

'Proficiency', the fourth stage of learning and development, occurs when the individual is not only familiar with rules, but based on more extensive experience begins to understand different situations and how to make informed decisions about them. Finally, 'expertise', which can be likened to advanced practice professionalism, in the Dreyfus model means the proficient individual, "immersed in the world of his or her skillful activity, sees what needs to be done [and can] decide how to do it" (p. 179), often in non-routine work situations requiring advanced cognitive traits to successfully achieve a constructive outcome. Thus, "the ability to make more subtle and refined discriminations is what distinguishes the expert from the proficient performer" and "allows the immediate intuitive situational response that is characteristic of expertise. (180). The word 'intuitive' being the key to non-routine cognitive work for the advanced practitioner.

Using the example of Australian social work, the hallmarks of advanced practic, which go well beyond competence and skill, are thus defined as:

> The ability to deal effectively with complexity in ways consistent with core social work values. Within this context, advanced practice involves the ability to see beyond the presenting problem, to understand the uses and limitations of standardised assessments, diagnostic classifications, history taking, third party reports and other sources of information.
>
> Advanced practice then involves the ability to prioritise issues; to be able to work with the client to identify the goal or goals of intervention in ways that affirm their self-determination while balancing this with other competing concerns….Advanced practice involves delivering interventions with a high level of knowledge and skill, with selection of intervention approaches informed by an understanding of both the strengths and limitations of evidence-based practice.
>
> In approaching these tasks, advanced practice displays sensitivity to the vulnerability and powerlessness of many clients, to cultural and indigenous issues, as well as an awareness of the ethical dilemmas and dimensions of practice situations (Simpson, nd, p. 2).

Moreover, "advanced social work practice shows the practitioner's greater capacity for a flexible use of self, for reflexivity, and for a more autonomous and independent reflective practice" (Flaskas, 2011, p. 4). In these ways, APPs have gone beyond competency and even capability to a developed sense of professional identity and have done so via two possible routes: a broadening of competence or a deepening of competence in the direction of greater capability. [For the purposes of this paper, we equally weigh the significance of broadening or deepening competence and experience in relation to advanced practice, but it can be argued that deepening knowledge, as in 'specialization', is more valuable than broadening it. Nevertheless, other theorists support our position in relation to expertise and advanced practice (e.g., Mangione, Borden, Nadkarni, Evarts, & Hyde, 2018).]

In Figure 3 we therefore show the relationship of competency, capability and professional identity to the development of advanced practice in a model we have adapted from an earlier advanced pharmacy practice framework (APPFSC Secretariat (2012, p. 7), a model somewhat aligned to the Australian Institute of Project Management's (2019) professional certification

model of: practitioners > managers > senior managers > directors and executive managers for portfolio, program and project management.

We agree with the APPFSC Secretariat's (2012, p. 9) earlier assessment that competency is "a complex construct where the attributes contributing to [it] include the individual's values, beliefs, motives, attitudes and personal traits", and therefore we define competency to mean what Boyatzis originally intended it to mean in the 1980s when he first popularised the term, namely an underlying characteristic of a person, as opposed to later uses which either inexorably link competency to leaders and high-performance individuals or apply it as an umbrella term to mean "almost anything that might directly or indirectly affect job performance" (as stated 30 years ago by Woodruffe, 1993, p. 29), such as role-specific competencies (Ghasemy, Hussin, & Daud, 2016, p. 218).
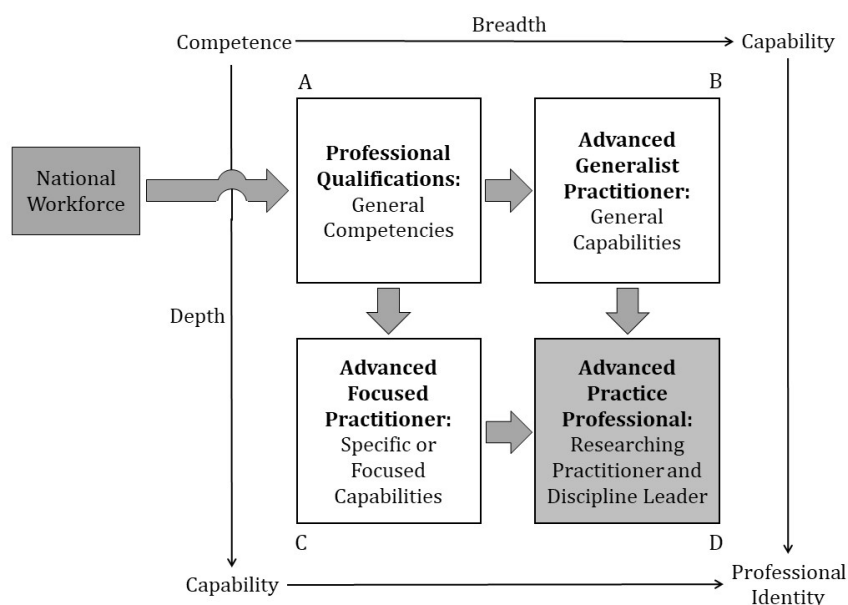

Figure 3: Advanced practice professionalism and its relation to breadth and depth of competence, capability and professional identity.

The characteristics associated with competency in its earliest incarnation could include a "motive, trait, skill, aspect of one's self-image or social role, or a body of knowledge which he or

she uses" (Woodruffe, 1993, p. 29), and have subsequently been extended to include characteristics like social competence (Wight & Chapparo, 2008) and cultural competence (e.g., Garneau & Pepin, 2015). Thus, competencies in work mean those underlying human characteristics (or latent cognitive and affective traits or abilities) which an individual possesses and applies to his/her job. In our model, general competencies relate to Box A of Figure 3, which refer to the minimal or basic professional qualifications an individual in the workforce would be expected to possess when working. Such an attribution is common, for example, in contemporary nursing (Melnyk, Gallagher-Ford, Long, Fineout-Overholt, 2014).

Capability, on the other hand, refers to a higher order level of thinking and behaving, and can be reflected in both broader and deeper expertise. However, like competency, the capability construct has evolved significantly over the last 30 years, and in some cases has become ambiguous, with what Gasper (2007, p. 336) called "unclear boundaries", but may be associated with higher order competency. To this end, Ghasemy, Hussin and Daud (2016) point out that researchers have regarded capabilities "as related to leadership qualities of planning and implementing successful transformations" whereas "competencies [are] related to managerial abilities of delivering or performing at the highest possible level in a particular setting" (p. 218).

Thus, by this definition, capability can be associated with leadership and organisational transformation and competency with managerial abilities in specific work contexts, although both may occur at a high level of cognitive, affective and conative functioning. The cognitive domain includes knowledge and skills to be acquired and learnt and the affective domain includes attitudes and behaviours to be acquired and learnt, whereas conative skills help APPs determine future courses of action—not only when interacting with data and skills, but also when interacting with people. Conative functioning thus also deals with feelings and emotions and how to harness them in order to be more productive, and includes the ability to interpret complex work-based situations and circumstances and how best to respond to them. Such a conclusion about cognition, affect and conative functioning, however, is contentious because

the level of deliberation and reflective thinking required in expert problem solving when associated with normal and abnormal work circumstances and decision making may or may not require critical thinking to be successful (e.g., Gobet, 2018).

In the 1980s, Sen (1999) and Nussbaum (2011) introduced the capability construct via what they called the 'Capability Approach', which has continued to evolve in the last 30 years. According to Gasper (2007, p. 336), capability is:

> The full set of attainable alternative lives that face a person; it is a counterpart to the conventional microeconomics notion of an opportunity set defined in commodities space, but is instead defined in the space of functionings. 'Capabilities', in contrast, conveys a more concrete focus on specific attainable 'functionings' in a life, and connects to ordinary language's reference to persons' skills and powers and the current business jargon of 'core capabilities'.

The primary constituents of the Capability Approach are thus functionings and capabilities, or what can be called the ability to be and the ability to do. As explained by Kettle, Wells and Fergusson (2017) 'functioning' is an achievement whereas a 'capability' is one's ability to achieve the functioning, and thus a functioning relates to the quality of life (for example in this context, the quality of one's life at work) and capability relates to one's ability to remove obstacles so they have more 'freedom' to live the kind of life they have reason to value (Robeyns, 2005). In the workplace, this means developing the ability to do (i.e., the capability of doing or what can be called the 'effectively possible opportunity') in order to achieve the desired outcome or state of being (i.e., the function, achievement or the 'realised').

Functionings can vary from such elementary things as being adequately nourished and being in good health, to more complex achievements such as having a valuable job, not suffering from a lack of self-respect, and being a valued member of a learning or social community. Indeed, the Capability Approach should be understood in terms of human development (Krishnakumar, 2007), and the "ends of well-being, justice and development should be conceptualised in terms of people's capabilities to function; that is, their effective opportunities to undertake the

actions and activities that they want to engage in, and be whom they want to be" (Robeyns, 2005, p. 95). Gasper (2007, p. 337) pointed out that because the Capability Approach is "attentive to issues of responsibility and diversity of aims, it contrasts favourably with views that focus on achievements (however understood), because it is attentive to diversity in abilities to transform means into achievements, it is preferable to views that focus on equality of means", both important issues when considering diverse and multicultural workplaces and a rapidly changing, disrupted workforce. The fact that capability is "attentive to" these types of issues, makes our model of competency > capability > professional identity that much more relevant as these issues are of central concern to higher education in general (e.g., Lozano, Boni, Peris, & Hueso, 2012), and to Professional Studies in particular, as will be discussed below.

The concept of capabilities is particularly relevant in the current work-based context, because at the heart of what it means to be an APP is not only the clear demarcation of achievement, including goals, objectives and key performance indicators (KPIs) but also the means and abilities (i.e., one's workplace capabilities) required to achieve them. In this way, the human capacity to function in a specific workplace or at work generally can be framed along a continuum of abilities from basic competency, as reflected in professional qualifications, to higher order capabilities as reflected in the Capability Approach.

However, we recognise that the competency > capability construct is a disputed one (for example in the contexts of society and education, as discussed by Lozano, Boni, Peris and Hueso, 2012), although philosophers of education like Lozano et al. have shown the association of competency and capability as we propose it, and Walker (2005) has considered competency specifically in the context of higher education and professional capability. We also note that while not all authors agree with the association (let alone the continuum) of competency and capability, such an association has been earlier endorsed within the work and learning contexts (e.g., Lester, 2014; Lester & Chapman, 2002).

In our model shown in Figure 3, there are two possible continuums on the path to developing greater capability in work: 1) from Box A > B, which represents a broadening of capability; and 2) from Box A > C, which represents a deepening of capability. Such pathways are comparable to those proposed by Palermo et al. (2017, p. 327), who said in the context of advanced dietetics that higher levels of practice may relate to "generalist and focused specialty practice areas, [that is] profession-specific areas and situations relating to specific client groups or geographic settings".

Pathway 1) represents a broadening of one's capability such that the practitioner develops general capabilities (i.e., leadership, empathy, understanding, insight, foresight, etc. related to 'profession-specific areas') and thereby becomes an *advanced generalist practitioner*. Pathway 2) represents a deepening of one's capability such that the practitioner develops specific or focused capabilities (i.e., specialist skills and knowledge, such as forensic accounting for an accountant, multi-strand curriculum evaluation for an educator, or the theories and methods of restorative justice for a police officer related to 'specific client groups or geographic areas') and thereby becomes what we call an *advanced focused practitioner*. In nursing, this evolution from competency to capability can be seen in the example of a nurse training to become a nurse anesthetist (Waugaman & Lu, 2018), and thereby become an advanced focused practitioner. Thus, advanced practice not only refers to 'specialisation' but also to "expansion and advancement" (Palermo et al., 2017, p. 328). Note that, in keeping with the inclusiveness of the Capability Approach, we do not limit application of our model of advanced practice to managers or executives but believe it relevant to every individual in a workforce who wishes to advance their professional practice and identity.

The promotion of advanced practice thus represents a developmental move along two other pathways, as shown in Figure 3 by Box B > D and Box C > D. APPs extend knowledge, display both competency and capability, are discipline, practice and/or workplace leaders, and have a developed sense of professional identity; they are what we call 'researching practitioners' in the WBL context and are discipline leaders or leading professionals. APPs define advanced

practice as "practice that is so significantly different from that achieved at initial registration [i.e., Box A in Figure 3] 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).

Of note for an APP is their sense of professional identity (e.g., Johnson, Cowin, Wilson, & Young, 2012; Moss, Gibson, & Dollarhide, 2014), an advanced trait apparently associated with resilience (Wald, 2015). Professional identity can simply mean self-identification with a profession, but we expand this basic meaning to mean not only the link to a profession but also the embedded sense of personal and professional worth gained from work when the practitioner: a) recognises they are influenced by and in turn influence their work environment and/or community of practice; b) becomes aware of and recognises the value and meaning of their profession; c) gains a positive influence from education and recognises their lifelong learning status; and thus d) incorporates their professional responsibilities into an overall sense of self.

As acknowledged above, APPs demonstrate a sense of task mastery, have a well-developed internal locus of control, and identify as a self-efficacious professional. These among other personal traits distinguish an APP from those with mere competence or even advanced capability. For example, having a well-developed internal locus of control means an APP does not see the events of their professional circumstance as random and outside their control, but rather associates both 'good' and 'bad' events as entirely controllable by changes in attitude, reflection, reflexivity, effort and preparation. Such personal traits applied professionally to work are obviously not the sole domain of leaders, managers or executives but reflect a well-developed sense of self and of professional identity regardless of who possesses it (Ten Hoeve, Jansen, & Roodbol, 2014).

For the purposes of this paper, we do however associate leadership with being an APP. In other words, a leader may not be an APP, but an APP is typically a workplace or domain leader. Thus,

"given the critical role of leaders in embedding…reforms within their organisations…strong leaders devise effective strategic directions, enunciate them clearly, then build support for them within their organisations" (AGRAGA, 2010, p. 20). In our model, leadership is thereby derived from not only a range of well-developed competencies and capabilities as applied in the workplace, but also from a strong sense of professional identity as expressed through an ability to research professional practice, lead a community of practice, and articulate the parameters and meaning, through theory, advanced concepts and evidence, of work and workplaces as applied to one's profession. Such APPs, we propose, can be found in work-based educational programs which are founded on action research and problem solving, such as those embodied by the principles and spirit of WBL. Moreover, participation in such work-based programs is typically driven by altruism, a concern for the well-being of one's profession and workplace, and a desire to advance professional practice.

Our thesis, as illustrated in Figure 3, is therefore based on the following precepts: competency > capability > professional identity, which equates to and can be operationalised as: professional qualifications (Box A) lead to advanced generalist practitionership (Box B) or advanced focus practitionership (Box C) which are both pathways to advanced practice professionalism (Box D).

Thus, an APP embodies both competencies and capabilities and has a well-developed sense of professional identity and is, as a result, in a position to lead an organisation or community of practice, set strategic direction, embed practice in theory and evidence, and articulate the scope, nature and value of a profession and its work context, thereby potentially enhancing the performance of their organisation and wider community.

Professional studies and examples of advanced practice

It is not within the scope of this paper to present the detail of work-based higher education degrees designed to develop the capacity of governments, private organisations and APPs through learning. However, space does allow an overview of the Professional Studies program at USQ because its Masters and Doctoral postgraduate degree programs have been designed

expressly to help train mid- to senior-career professionals in developing the skills and knowledge of work-based research, higher order cognitive thinking, and workplace change and problem solving. This program is therefore consistent with Australian government and workplace initiatives that acknowledge "teaching styles, education approaches, and questions relating to the role of the educator [which] continue to be present in discussions. Systems that enable knowledge exchange and two-way learning within education and training settings are increasingly preferred" (AISC, 2017, p. 26) in a world of so-called "fluid education" (p. 27).

Elsewhere we have documented the structure of the program (Fergusson, Allred, & Dux, 2018), explored its relation to advanced practice (Fergusson, Allred, Dux, & Muianga, 2018) and reflective practice in work-based research (Fergusson, Van der Laan, & Baker, 2019), and examined its ethos and transformational dimension (Fergusson, van der Laan, White, & Balfour, 2019) and use of first principles of science (Fergusson, Shallies & Meijer, 2019). Moreover, van der Laan and Neary (2016) have investigated the program in the context of access and equity and van der Laan and Ostini (2018) have done so in relation to foresight and university leadership. While not immediately obvious from this published literature is the program's original foundation in principles of WBL as derived from the curriculum of Middlesex University.

We have shown that the program is composed of two strands of learning: (A) a work-based project strand; and (B) a research strand, as shown in Figure 4, with each strand built on the identification of personalised learning objectives. Learning objectives are centrally important in this program because they ground the project (A) and research (B) strands in personal functionings for which extant competencies must be advanced into capabilities in order for the topic of investigation to be fully actuated in what is referred to in Australia as a Higher Degree by Research (HDR).

On these bases, a work-based project (often conducted by what Costley, Elliott and Gibbs, 2010, call 'insider-researchers') leads to the generation of an artefact; that is a work-based product which contributes to organisational improvement (for example a model or framework

for policy direction) and thus leads to not only a postgraduate qualification but other benefits associated with the organisation and discipline as a whole (i.e., the so-called 'triple dividend' [Fergusson, Allred, Dux & Muianga, 2018] of Professional Studies), as shown by (C) in Figure 4. In parallel to the work-based project, a rigorous research design is developed to investigate the veracity of the project. As a result of implementing the research strand, empirical results, often based on mixed methodologies, are used to converge with the work-based artefact resulting in a complete work-based investigation of a relevant phenomenon or problem.
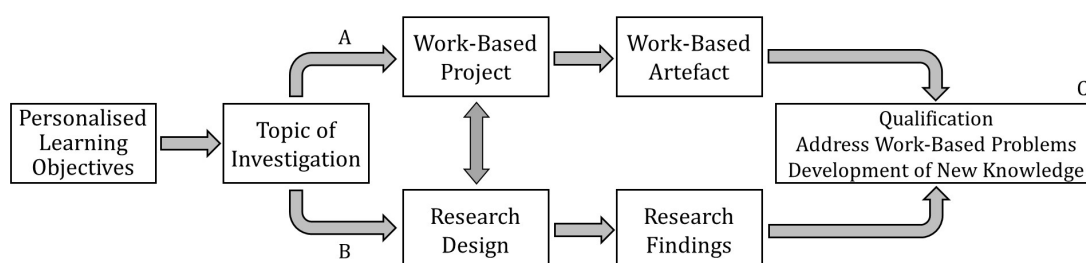

Figure 4: The two-strands of Professional Studies—work-based project (A) and research project (B)—which lead to a triple dividend (C).

Examples of research questions driving such practice-based research include: "What is the organisational impact of disseminating operational intelligence using new software application technology to consolidate and improve information flow in the Queensland Police Service (QPS)"; "What critical business situations do senior managers in multi-national corporations work on, and what are the competency behaviours they use to reach a desired outcome in each critical business situation?"; and finally, "What is the impact of resilience training on recruits in emergency service volunteer organisations in Queensland"? In topics like these, the relevance of both professional competency and capability development as well as organisational improvement is evident. For example, coupling mixed methods research with a work-based project means investigative practices in work can be evidenced by multiple lines-of-inquiry and rigorous data gathering techniques from diverse sources of primary and secondary sources of

evidence (Fergusson, Harmes, Hayes, Rahmann, 2019), not something always associated with WBL.

We conclude that this transdisciplinary approach to WBL and research not only aims at knowledge and skills development but can be applied to worthwhile research projects which seek to solve work-based problems and drive innovative knowledge on a foundation of altruism leading to organisational improvement and social advancement.

In the present context, the proposed shift from competency > capability > professional identity in the development of advanced practice through Professional Studies can be seen in the example provided by Fergusson, Allred, Dux and Muianga (2018, p. 28) in which one doctoral student described his expectation that WBL would be "a linear learning process—a step-by-step process of building knowledge and skills" (hence associated with competence) but he found it actually to be "nonlinear and non-sequential, as a result of the self-paced, learner-centred pedagogy" (requiring the development of capability). According to this student:

> The doctoral journey has been one of continual learning; everything which has preceded it has helped prepare [me] for the journey—each life-stage has presented its own learnings, and each has supported subsequent growth and opportunity. I therefore liken the 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 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' (p. 29).

Figures 5 and 6 operationalise our APP model using the work-based projects and research of two Professional Studies doctoral students. In each case, the model provides evidence of competencies leading to capabilities and subsequently to professional identity, with each exemplifying a more professional attitude and approach to work. As the Professional Studies program only attracts mid- to senior-career professionals, most with many years' experience in government, private practice or sole practitioner work environments like insurance, energy,

project management, health and safety, and coaching, students already have a reasonably well-developed set of competencies and capabilities and sense of professional identity when they enter the program. Practice domains for whom WBL is attractive in the Professional Studies program include nursing and allied health, education, policing, correctional services, and fire and emergency services, among many others. However, student competencies, capabilities and identity in relation to scholarship at the postgraduate level—particularly critical thinking and logic, academic writing and publishing, and mixed methods research—is somewhat limited, and these are among the areas where we would expect the greatest advance in professionalism as a result of conducting the following work-based projects.

The business and learning context for the example in Figure 5 is project, program and portfolio management (P3M). In order to operate effectively within this context, a basic qualification, such as a bachelor's degree in business management (specialising in project management or a professional VET certification), is required, although some managers may have a master's degree or higher-level specialist technical expertise. However, to operate at higher levels within P3M practice, the practitioner is required to develop either broader or more focused sets of capabilities related to specific corporate or business strategies and results. The choice of P3M practitioner by a company or government agency is therefore critical in improving and sustaining an organisation; hence, in most P3M cases, it would be a senior manager who is involved in executive decision-making.

To this end, a more general P3M capability would be the skills and knowledge associated with involvement in strategic business planning, forecasting and managing programs and project prioritisation, managing workforce expertise through professional development pathways and coaching, managing organisational change and liminality, managing benefits realisation, and/or an ability to utilise cultural competence in the workplace. Similarly, a more specific or focused capability might involve the ability to work with supply chain management and logistics, or to understand, interpret and apply knowledge related to a return on investment (ROI) in any given

project or program. These types of capability are not generally found in entry-level or even established P3M practitioners and represent a broadening or deepening of basic competencies.

An APP, on the other hand, must have the ability to integrate and apply holistic P3M management systems for sustained project, program, portfolio, and/or organisational functionings as measured against expected strategic and business performance indicators. These key performance indicators are typically devised at personal, program, project and business-specific levels, and are almost always linked to organisational maturity (Bourne, 2016). Thus, an important component of our APP model when applied to P3M is a well-formed and agreed incentive program. Such a program should not be understood simply as a bonus scheme, rather it relies on acceptance of a professional development pathway that is framed and sponsored by the organization (i.e., what we are calling an 'APP' in this paper).
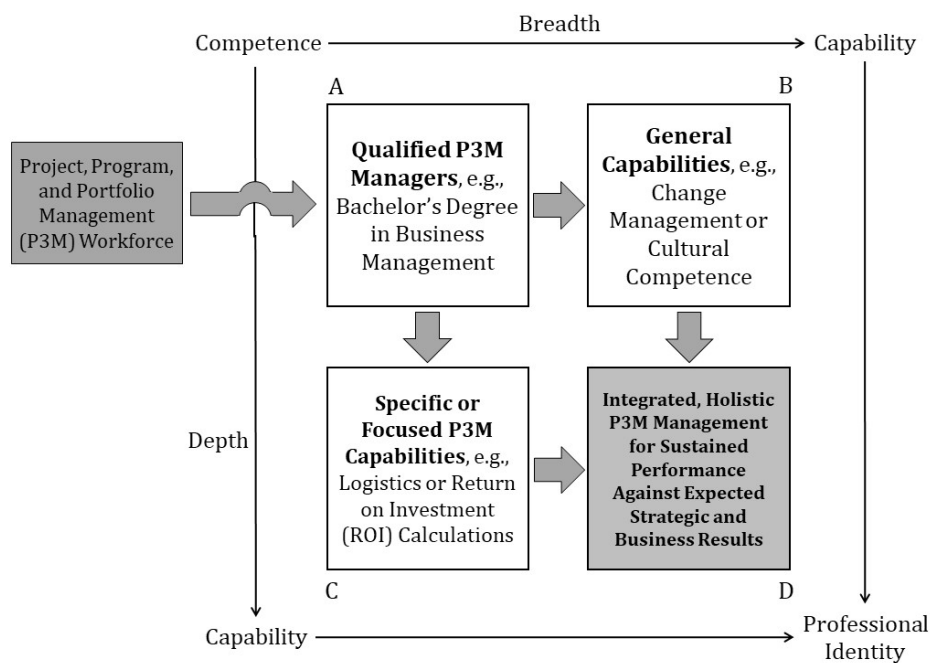

Figure 5: Example of advanced project, program and portfolio management practice.

The five case studies associated with this P3M doctoral study involve both the private and public sectors. Although based in Australia (i.e., including case studies in Queensland, New

South Wales, and the Australian Capital Territory), the study includes government departments and agencies in Malaysia and Sri Lanka. The participating organisations have been chosen because they embody how improvement needs to be contextualised rather than sought through the simple application of standardised, inflexible P3M models in that one sector. Of note also are the three levels of management (i.e., portfolio, program and project) which are involved in an integrated P3M improvement initiative. For example, general and regional managers (i.e., portfolio managers) are involved in this research.

The study also attempts to highlight that no one tier of management produces corporate and cultural change, and thereby aims to reinforce how the Professional Studies program uses WBL and research in a number of settings to contribute to the acceleration of advanced practice in both the researching practitioner and in P3M practitioners operating in these three countries. Importantly, it provides a flexible formula for organisational change and a well-framed formula for personal improvement as well as the transformation of team leadership.

Correspondingly, in Figure 6 advanced practice work-based research being conducted with supervisors, leading hands, business owners and their apprentices in Germany's Mittelstand (a type of small- to medium-sized enterprise) Handwerk (or craft) industries seeks to explore the efficacy of communication between supervisors and apprentices through a combination of visual and verbal techniques, and to thereby enhance organisational culture. At its most basic, the practitioner is required to have qualifications and work experience, and hence a degree of socio-cultural competency in frontline management training and change management processes.
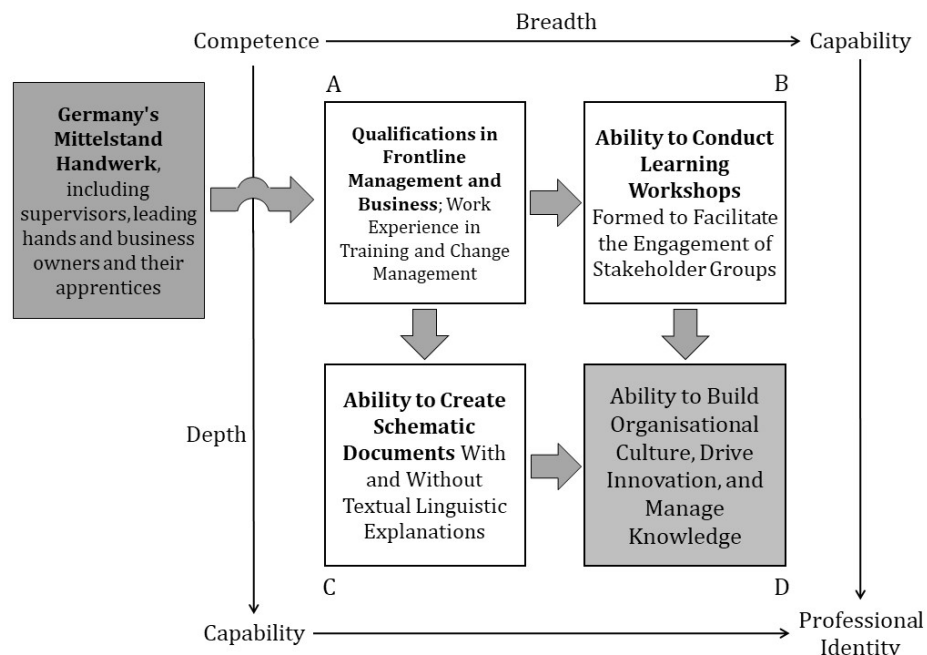
Figure 6: Example of advanced WBL and communications practice in Germany's Mittelstand Handwerk industries.

To develop a more comprehensive capability in communications, the practitioner will in this case conduct workshops to facilitate engagement of stakeholder groups, but in parallel is also required to establish and apply focused capabilities associated with the development of advanced work-based documentation relevant to each Handwerk business, which may or may not include textual, linguistic explanations. These two pathways of learning represent the broadening and deepening of competence which will be required to successfully conduct the work-based research in Germany.

However, to fully advance his professionalism, the researching practitioner in this project will also be required to develop the ability to build organisational culture (i.e., through the application of socio-cultural competence), drive innovation, and foster the creation and management of new knowledge. In this case, the advanced functioning as a result of the work-based project and research will not only include an enhanced professional identity for the practitioner but also (possibly) a contribution to the organisational performance of the

Mittelstand Handwerk businesses themselves. This type of WBL project leads to what in this paper we have called advanced practice professionalism.

Conclusion

We have explored the relationship between competency, capability and professional identity and explained how the Professional Studies program at USQ apparently contributes to the development of advanced practice in Australia, specifically how it relates to non-routine cognitive work. We have shown that capability is a conceptually higher order practitioner ability than competence, and thus parallels the need for non-routine cognitive job capability. According to Woods (2013), capable advanced practitioners not only know 'what' but also 'how' to learn, and such capabilities allow practitioner-led learning reflection and reflexivity, driven by holistic considerations and a self-motivated desire to improve (Lozano, et al., 2012). Such earlier views in a work-based context now suggest advanced practitioners are "leaders who can influence, inspire and innovate to solve practice problems, to change practice and show evidence of their impact [on work environments]" (Palermo et al., 2017, p. 332).

As cases in point, for nursing in Australia, "it is clear that advanced practice nurses are working to the extent of their scope of practice, demonstrating the skills and capabilities required to meet the complex health care needs of the communities in which they practice" (Parker & Hill, 2017, p. 197) and for educators such advanced practice "sees teachers' research and enquiry skills and predispositions as helping to renew [their] professional identity and practice…[with the conclusion being] that a culture needs to be encouraged where engagement in and with research becomes an everyday part of teachers' professional identity and practice" (Lindsay, Kerawalla, & Floyd, 2018, p. 2321).

Furthermore, according to published data from both government and industry sources, Professional Studies programs, such as the one offered at USQ, are meeting an 'urgent' national priority of filling skill gaps within the space of policy development, research and project management (e.g., AISC, 2017). Those mid- to senior-career professionals from around the

world who undertake the Professional Studies Master's and Doctoral HDR programs are engaged in innovative work and authentic research and thereby academically contribute to new knowledge production while addressing problems in the organisations, industries and governments with which they work. This, we noted above, is called the triple dividend of Professional Studies; hence, feedback from candidates indicates "the doctoral journey has been one of continual learning; everything which has preceded it has helped prepare [me] for the journey—each life-stage has presented its own learnings, and each has supported subsequent growth and opportunity" (cited in Fergusson, Allred, Dux & Muianga, 2018, p. 27).

It is for these and other reasons outlined in this paper that we propose the shift from competency standards to capability development is a precursor to enhanced professional identity and higher order thinking, and ultimately to the status of an advanced practice professional on the basis of which the researching practitioner can lead and guide constructive change at work. This shift is made possible by higher education programs which focus on WBL and research, and thereby fulfill the goals of, in this case but probably also applicable elsewhere, the Australian Government and broader worlds of work in Australia which have identified the need for individuals who can navigate and successfully perform non-routine, higher order, cognitive work.

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