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Mind the gap: DBA students, knowledge generation, transfer and impact

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ABSTRACT

Increasingly higher education institutions are expected to demonstrate their contribution to academia, society, and the economy. This is pertinent for business schools as a key purpose for them is to provide education that enhances management practice, with Doctorates in Business Administration (DBAs) being the highest-level qualification offered in pursuit of this goal. Yet there is scant research that captures the impact of DBAs beyond the individual and academia. This paper focuses on the important role of DBAs in generating and transferring knowledge from academia to practice and in creating wider impact in society and the economy. Based on 36 semi-structured interviews with DBA students and alumni, our research shows how DBA students are able to generate and exchange knowledge between academia and business, enabling a wide range of impacts to be achieved. We show how knowledge transfer is the outcome of a learning process in which DBA students and their supervisors learn to speak each other's language, enabling two-way communication. Facilitated by the power and associated credibility and legitimacy of the DBA students as practicing senior managers, the knowledge can then be transferred. Personal development in the form of analytical skills and increased confidence gained through the learning process results in a personal impact that acts as the precursor to other forms of impact, such as improved organisational performance and broader societal benefits. Research generated by DBAs is thus well-placed to offer opportunities for impact and contribute substantially to the research-practice conversation in higher education.

Introduction

There has been a global proliferation of professional doctoral (PD) programmes (Chiteng Kot and Hendel 2012) and whilst existing studies have explored the evolution, and characteristics of PDs (Jones 2018), there is a need to explore how PD students generate impact and thus serve stakeholders more effectively. Whilst one element of this relates to the skills development, a more significant aspect links to the way in which the knowledge generated from studying for a PD can be transferred to wider society to create real world impact. In this paper, therefore, we seek to explore how knowledge is transferred from academia to practice in the context of PDs and explain the relationship between different forms of impact.

Research with impact, that is 'the demonstrable contribution that excellent research makes to society and the economy', is central to many governments' research agendas (Economic and Social Research Council (ESRC) 2021, online). The need for impactful research has therefore prompted business schools to demonstrate that their research has real-world relevance (MacLean, MacIntosh, and Grant 2002). Namely, that research outputs are not confined to academia but also positively impact organisations, the economy, and/or society (UKRI 2021).

In order to create impact, universities are required to engage in knowledge transfer (KT) leading Moscardini, Strachan, and Vlasova (2022, 815) to state that the roles of an English university are ' … research, education and knowledge exchange'. Reflecting this Johnson (2022, 198) argues 'Knowledge Exchange, or Knowledge Transfer, is a key output of academic research. It conveys how knowledge and ideas move between the knowledge source and the potential users of that knowledge'. In this process information and expertise are exchanged between academics, organisations and wider society through collaborative research, commercialisation projects and partnerships to create 'pathways' to impact (Bullock and Hughes 2016; Vitae 2020). It is through knowledge exchange or transfer, that impact may occur, that is an outcome which has 'an effect, change or benefit' on, for example, society, public policy or quality of life, etc. (UKRI 2021, online). Whilst academics still emphasise impact in terms of contribution to theoretical knowledge (Kougiannou and Ridgway 2022), there is an increasing convergence between government, organisations, universities, and students' views of impact that goes beyond academia to address real-world problems (Anderson, Gold, and Stewart 2015) leading to a third mission for universities concerned with transferring knowledge to the economy (Rossi and Rosli 2015).

We argue that doctoral-level study, particularly PDs, can directly contribute to the impact agenda as students are encouraged 'to master a discourse that bridges both research and professional practice for the benefit of the organisation and for society' (Lundgren-Resenterra and Kahn 2019, 422). As Jones (2018) argues, PDs align with employers' demands for Mode 2 Knowledge, and therefore, represent an essential part of an institution's research strategy for generating impactful research. Here, Mode 2 refers to producing knowledge for practical use in an applied context (Van de Ven 2007). However, up until this point, little research has explored how PDs contribute to the KT and impact agenda. To address this, we examine the experiences of 36 individuals who are currently studying for or have recently completed a PD in Business, that is a Doctorate in Business Administration (DBA).

The DBA, which is the focus of this paper, offers the opportunity to achieve this balance between rigour and relevance (Banerjee and Morley 2013). DBA students are typically industry practitioners working at a senior level who wish to investigate a work-based problem through doctoral-level academic research (Costley and Lester 2012). Thus, we argue, they are in a prime position to facilitate KT and impact between academia and practice. However, whilst DBAs are increasing in popularity and are positioned as research degrees that bridge the gap between academia and professional practice, the nature of the actual impact DBAs have on management practice remains nebulous.

Despite the impetus from governments for HEIs to demonstrate impactful research, the limited studies which consider this in a doctoral setting adopt different positions when exploring impact, reflecting the persistent problem of definition (Boud et al. 2021, 432). Nevertheless, we suggest that existing studies fall broadly into three areas. One area of focus adopts a processual view exploring how impact is created through 'translation' of research into practice, conceptually framed around, for example, stakeholder theory, co-creation and critical reflexivity (Audretsch et al. 2022; Boud et al. 2021; Sharma et al. 2022; Spencer, Anderson, and Ellwood 2022). Other research investigates impact in relation to outcomes but is restricted to the impact doctoral education and learning has on KT and the student's personal development (Boud et al. 2018; McSherry et al. 2019). A final area of research adopts a more practical focus with less emphasis on KT, by exploring the impact doctoral study has on a wide range of programme related elements such as the supervisory relationship, ethical issues and doctorates as a source of institutional income, completions and enrolments (Halse and Mowbray 2011; Lee 2018; Robinson-Pant and Singal 2020). However, few studies consider

both the impact outcomes of doctoral *research* and particularly PDs, have on wider organisational practice, the economy and/or society, as well as the process whereby this happens. We therefore draw upon Carlile's (2004) knowledge exchange framework to explore how impact is achieved through DBAs by considering both the process and impactful outcomes together. In doing so, we elucidate how knowledge is transferred from academia to practice in this context and explain the relationship between different forms of impact. Specifically, we address the following research questions:

1. How is knowledge generated through the DBA research journey?
2. In what ways is this knowledge transferred beyond the individual to wider society?
3. How and in what ways does knowledge generation and transfer lead to impact within the context of a DBA?

By addressing these questions, our study makes several contributions. First, it identifies the processes of knowledge generation and transfer throughout the DBA. Second, it highlights the role of DBAs in addressing the 'grand challenge' of bridging the academic-practitioner gap (Banks et al. 2016). Third, it offers a deeper understanding of how the DBA creates impact by showing how personal development as a form of impact is a precursor to wider forms of impact, rather than the only impactful outcome of studying at this level (Boud et al. 2018). Fourth, moving beyond the work of Boud et al. (2018; 2021) who identify how PD students hold positional power due to their status, we highlight how other forms of power held by DBA students are critical to KT and impact. Thus, we identify a hitherto unknown feature that is central to effective knowledge exchange and impact. Finally, in contrast to existing literature which explores how *academics* exchange knowledge and create impact (Johnson 2022), we offer a novel contribution to the field of HE by considering a different perspective to this process, that of the DBA student.

This paper is structured as follows. Firstly, we consider knowledge generation and then how knowledge is transferred from academia into practice in a DBA context. Next, we report our methodology and methods, followed by our findings and discussion. Finally, we draw conclusions, highlight the study's limitations, and identify educational research and practice implications.

Generating knowledge

Arguably the first stage in generating impactful research concerns the creation of knowledge. Mode 1 knowledge is defined as 'the knowledge that is traditionally produced in the academy' (Gibbons et al. 1994, 3). It is discipline based, theoretical, and produced 'for its own sake', focused on 'knowing' and understanding 'what is' (Banerjee and Morley 2013, 175). This basic knowledge or, as Aristotle called it, *episteme* is generated in seeking to answer theoretical questions. Mode 2 knowledge, or *phronesis*, on the other hand, is practical knowledge of how to act in any given political or social situation (Van de Ven 2007).

The DBA, like other PDs, is designed to combine Modes 1 and 2 knowledge and provides 'a welcome opportunity for management research to embrace practice-oriented approaches and bridge the so-called "relevance gap"' (MacLean, MacIntosh, and Grant 2002, 203). A review of 72 DBAs offered in the UK, USA, and Australia, for example, found that the programmes featured phrases such as 'solve problems through research' and 'advance business theory and practice' in their aims (Banerjee and Morley 2013, 178). Furthermore, Jones (2018, 821) argues that PDs address limitations faced in more traditional PhDs and reflects a shift in demand from organisations for Mode *2* knowledge production. He argues that the PD meets this by 'endowing students with a mix of academic and professional knowledge' which is applied in an industry context. Thus, DBAs can address the need for management education to bridge the gap between academia and practice (Wildy, Peden, and Chan 2015).

Knowledge transfer

Whilst knowledge generation in a DBA context focuses on Modes 1 and 2, this does not necessarily mean that knowledge is transferred effectively into different contexts. According to Carlile (2004), KT is a complex interplay between difference, dependence, and novelty of domain-specific knowledge between people. This creates boundaries that impede KT, translation, and transformation. The challenge with KT between domains, such as between a higher educational (HE) setting and business, is that such knowledge sharing requires 'some common knowledge of the syntax (structure), semantics (meaning), and pragmatics (use) of language to understand each other's domain-specific knowledge' (Van de Ven 2007, 237). Semantic boundaries relate to the different accepted interpretations and meanings that actors have, and pragmatic boundaries are rooted in the varying views regarding what constitutes useful knowledge in different domains (Carlile 2004). Such knowledge boundaries can be ubiquitous and difficult to navigate and as Johnson (2022, 198) argues, this engagement and KT in HE is cultivated by academics through their ' … relationships with non-academic actors'. Indeed, Rossi and Rosli (2015, 1972) highlight how knowledge exchange is an interactive process and that ' … the specific identities of the parties involved matter for the nature and success of KT [knowledge transfer]'. Furthermore, KT in HE may be formalised, informal, commercialised or teaching-related (Queirós et al. 2022). However, the current literature, does not consider how PD students, as opposed to academics, contribute to this KT process. One exception to this is Spencer, Anderson, and Ellwood (2022) who found that DBA students realise scholarly impact through 'interweaving' research literature with organisational practice. PD students therefore operate in 'boundary zones' (Prøitz and Wittek 2019, 5) which offer a site for establishing common ground. Here, knowledge has the potential to be shared across academic and professional practice boundaries and DBA students with access to different domains (workplace, academia, etc.) are in a prime position to act as 'boundary crossers' (Scaratti, Ivaldi, and Frassy 2017, 14).

A further social boundary to KT, is the power invested in knowledge. As DBA students are typically senior managers (Creaton and Anderson 2021), they possess the power to circumnavigate this boundary and access to organisational resources to facilitate change, particularly compared to full time PhD students who are typically less embedded in industry (Boud et al. 2021). This power may be enhanced once the student graduates and their scholarly credibility is formally recognised through a 'Dr' title (Amran and Ibrahim 2012).

Doctoral research with impact

Whilst Modes 1 and 2 Knowledge may be transferred between different contexts, this does not necessarily lead to impact. Indeed, 'research impact cannot be achieved from the research production side alone' (ESRC 2021, online). Instead, impact is increasingly being defined as research which makes a clear and measurable contribution to academic advances, society and/or the economy (ESRC 2021).

Arguably, well-designed DBAs are in a strong position to facilitate impactful research as learning outcomes and assessment criteria reflect a requirement for impact. These impacts can be documented through, for example, 360-degree appraisals (McSherry et al. 2019) or impact statements (Davies, McGregor, and Horan 2019). However, unlike PhDs which are relatively standardised across institutions (Jones 2018) not all DBA programmes are the same, including if and how impact is appraised (Careers Research Advisory Centre (CRAC) 2016). Furthermore, few academic studies have explored the extent to which research conducted by DBA students has generated demonstrable impact, leading to no real sense of what impact 'looks like' in this educational context. More generally, this may arise from debates about how best to measure impact, with Rossi and Rosli (2015) arguing for composite measures that allow for qualitative evaluation. However, findings from the scant studies that exist, suggest impactful outcomes are restricted to enhancing a student's development with respect to their attitudes and beliefs as learners and their professional careers (Hramiak

2017). Extant research has thus failed to demonstrate if and how DBA programmes contribute to business, society, and the economy, in-line with the demands of recent government agendas. Instead, the current body of knowledge focuses on the process of creating impact *or* impactful outcomes of doctoral education which are limited to student development. Furthermore, these studies are restricted to the PhD experience, rather than PDs, where KT and impact are perhaps less important than demonstrating an academic contribution. Table 1 below sets out the main differences between doctoral programmes in relation to contribution to knowledge highlighting how PhDs are typically restricted to Mode 1 Knowledge generation, thus limiting their potential to create impactful research.

In summary, the current understanding of how knowledge is generated and exchanged to create impact in a PD context is presented in the conceptual framework depicted in Figure 1.

Methodology and methods

To answer our research questions, an interpretivist, qualitative study was conducted. We explored the experiences and perceptions of DBA participants captured in their own words through semi-structured interviews, thus accessing the 'insider' view (Marshall and Rossman 2011). Interviews

Table 1. Doctoral programmes and contribution to knowledge.

Doctoral degree	Types	Characteristics
Professional Doctorates	Professional Practice Doctorates (Zusman 2017) Professional Doctorates, e.g. Education (EdD); Psychology (PsyD); Engineering (EngD); Music and Art (DMA); Dental Surgery; Judicial Science (SJD); Public Health (DPH) (Kot and Hendel 2012); Psychology/psychotherapy (DClin Psy or DPsych); Pharmacy (DPharm); Practical Theology (D Prac Theol); Linguistics; Computing; Agriculture (CRAC 2016); Social Practice (DSP) Legal Education (LLM); Legal Practice (DLP)	Specialist doctorates with an emphasis on a contribution to practice only (Mode 2 knowledge) Specialist doctoral degrees with an emphasis on a contribution to academic knowledge, professional practice and impact (Modes 1 and 2 knowledge)
Doctorate in Business Administration (DBA)	Professional Practice DBA (Zusman 2017) Doctorate in Business Administration/Doctor in Management/Executive Doctorate in Management/Executive PhD (Banerjee and Morley 2013) Specialist Doctorates in Leadership e.g. Doctor of Strategic Leadership; DBA in Values-Driven Leadership (Banerjee and Morley 2013)	Specialist doctorate in Business and Administration with an emphasis on a contribution to practice only (Mode 2 knowledge) Specialist doctoral degrees in Business and Administration with an emphasis on a contribution to professional practice or professional practice and academic knowledge and/or impact (Modes 1 and 2 knowledge) Specialist doctoral degrees with an emphasis on a contribution to professional practice or professional practice and academic knowledge and/or impact (Mode 1 or Mode 2 or Modes 1 and 2 knowledge)
Doctorate of Philosophy (PhD)	Traditional thesis-based PhD Via publication/published works Integrated/NewRoute PhD (Stoten 2016) Practice-orientated PhDs (Banerjee and Morley 2013)/Professional PhD (De Meyer 2012); 'Flex PhD' (Kot Chiteng and Hendel 2012) Dual-route PhDs (Banerjee and Morley 2013)	Emphasis on contribution to academic knowledge (Mode 1 knowledge) Emphasis on contribution to academic knowledge, but structured like a professional doctorate with formal lectures (Mode 1 knowledge) PhDs with an emphasis on practice-orientated research for professionals (Mode 1 and 2 knowledge) PhDs aimed at those pursuing a professional career or those aiming for an academic career (Mode 1 or Mode 2 knowledge)
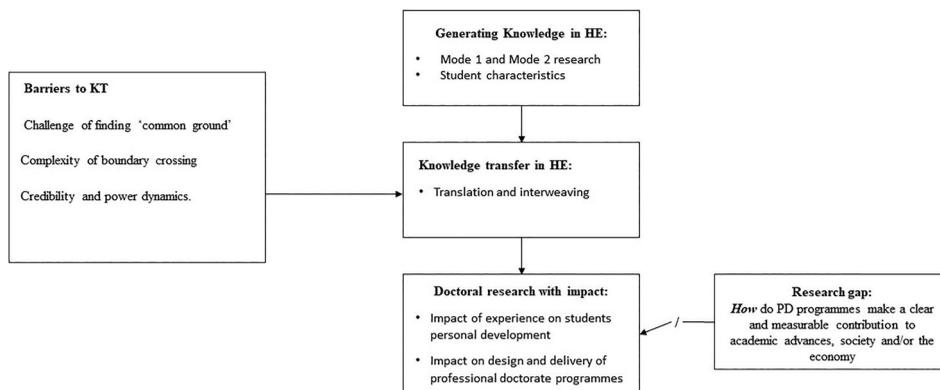
Figure 1. Conceptual framework for impactful professional doctoral research.

gave a rich insight into participants' level of knowledge generation attributed to their studies, the ways in which this was achieved and how this impacted their practice. Each interview lasted between 45 and 60 min and was conducted either face-to-face, over the phone or through digital means. All interviews were digitally recorded and transcribed.

Unlike other qualitative studies of doctoral students, our aim was not to compare participants in terms of, for example, their organisational backgrounds, but to explore a wide range of DBA experiences. Purposive sampling was used to select participants and this process continued until data saturation was achieved as is common with qualitative samples (Kvale and Brinkmann 2009). Interviewees were approached based on their stage of studies on one UK based DBA programme. To be able to capture knowledge generation, transfer and the level of impact generated we targeted participants at the early stage (within the first year of study), mid-stage (between 1 and 3 years of study), the writing-up phase and DBA alumni that had been recently awarded their degree. In total 36 interviews were conducted creating approximately 680 A4 pages of transcripts. Out of 36 participants, 13 were alumni, nine were at the writing-up stage, 10 were at the mid-stage, and four were at the early-stage of their DBA journey. Table 2 below shows our participants' given pseudonyms, professional position, and DBA stage at the point of interview.

Using NVivo to aid analysis, we adopted an abductive approach to theory generation. Abduction allowed for a tight but evolving framework, where we moved between theory and data, each informing the other to answer our research questions (Dubois and Gadde 2002). We looked for responses and/or signals of knowledge generation and for KT, our focus was on identifying different ways the domain-specific knowledge was exchanged. In relation to impact, we focused on participants' evidence of being able to influence the development of organisational, societal and/or economic policy/practice.

The coding process was initially undertaken independently by three of the researchers. The coding schemes were then compared, resulting in the final analytical template which was then used to identify the themes explored in the next section. This process of researcher triangulation can help to reduce analytical bias (Lincoln and Guba 1985). We used Brooks et al.'s (2015) approach to thematic analysis to identify and refine codes from the transcripts. Tentative broad themes were identified *a priori* and these are depicted in Figure 2 (not in bold). Other codes were derived from the empirical data (highlighted in bold in Figure 2) for example, diverse methods of communication and relative power of the knowledge developers. Themes were organised into related clusters in NVivo, with some emerging as second order themes. The final codes and themes appear in Figure 2 below.

Table 2. DBA participant profile.

	Pseudonym	Position	Stage at interview
1	Geoff	SM (Senior Manager)	Awarded MPhil
2	Ian	SM	Alumni
3	Christy	SM	Alumni
4	Mary	MD (Managing Director)	Mid-stage
5	Will	SM	Alumni
6	Philippe	CEO	Alumni
7	Joe	SM	Alumni
8	Henrietta	SM	Writing-up
9	Yusef	SM	Mid-stage
10	Annie	SM	Mid-stage
11	Malek	SM	Writing-up
12	Mani	SM	Writing-up
13	Mia	MD	Writing-up
14	May	Consultant	Writing-up
15	Jerry	SM	Early-stage
16	Frederica	SM	Writing-up
17	Amy	SA (Senior Academic)	Mid-stage
18	Anwar	CEO	Writing-up
19	Gavin	SM	Writing-up
20	Aiguo	SA	Mid-stage
21	Zane	SM	Writing-up
22	Talal	SM	Mid-stage
23	Sofia	SA	Early-stage
24	Mick	SA	Early-stage
25	Haakim	SM	Mid-stage
26	Gill	SM	Early-stage
27	Sian	Director	Alumni
28	Sebastian	SA	Mid-stage
29	Myla	SA	Alumni
30	Theo	SA	Alumni
31	Eric	Consultant	Alumni
32	Sienna	Director	Mid-stage
33	Rafael	SM	Alumni
34	Rudolf	SM	Alumni
35	David	SM	Mid-stage
36	Dylan	SM	Alumni

Findings and analysis

Knowledge generation

All participants felt the DBA provided an opportunity to combine academic and professional knowledge to enhance management practice (Jones 2018). As Ian, a Senior Manager, explained:

> The DBA is like collecting both professional and academic knowledge together. And both I need in my work.

As the students' studies progressed, they described being better able to understand what they were learning and could see the links to practice. For instance, Rafael described how he was able to grasp the concepts he was being taught and was able to operationalise what he had learnt:

> I can now understand the narratives, the signals, the meaning, I can see the construction of reality to work language and I use this framework.

Others felt the DBA ' … should bridge the gap between academic and practice' (Haakim, Senior Manager). Rudolf, a senior executive, told us, on the other hand, how his studies led to new ways of thinking about issues. He said:

> From a value perspective it's really opened my eyes to – how can I blend practice and theory? So truly it opened other avenues that I would have not bothered about if I would have not started the DBA.
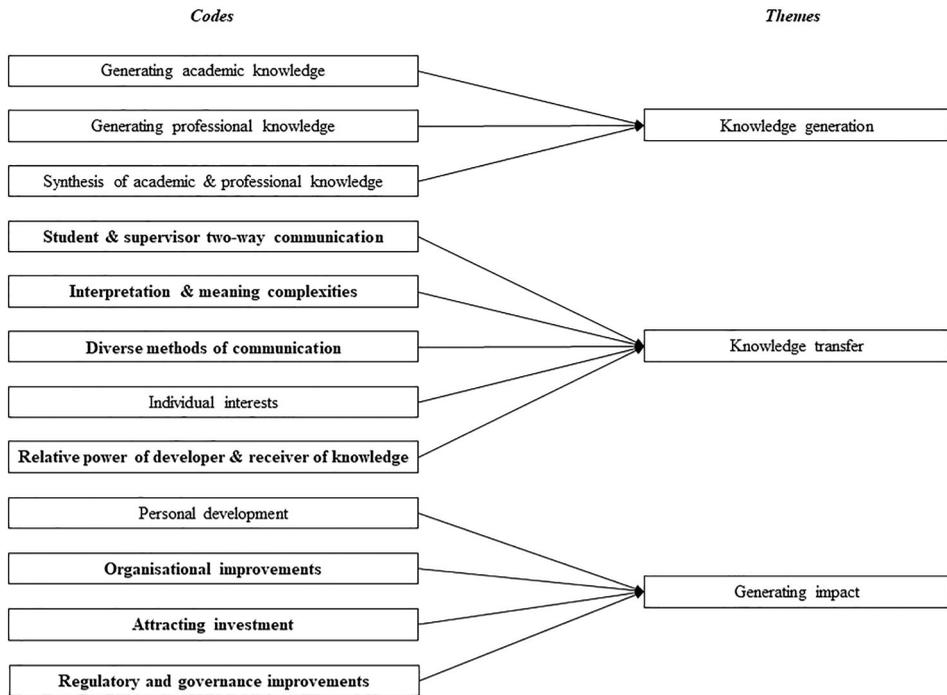
Figure 2. Analytical codes (first-order) and themes (second-order).

Some participants, such as Philippe, a CEO, described this knowledge generation process as an interplay between theory and practice. He explained how he perceived that this iterative process differed from that of a PhD:

> I think the DBA you depart from practice; you go to theory, and you return to practice. And the difference was that in the PhD you depart from theory, go to practice, and return to theory.

Knowledge transfer

After exploring the nature of knowledge generation, participants then went onto discuss how they transferred this knowledge into practice. Participants' accounts highlighted that KT was a learning process which had two dimensions based on their interactions with others.

Two-way communication

As Van de Ven (2007) argues, to understand each other's knowledge a common understanding of the structure, meaning and use of language on both sides needs to be developed. This is a pre-requisite to successful knowledge transfer. Students had to interact, communicate, and exchange ideas with their supervisors (Rossi and Rosli 2015). This required an understanding of academic language and conventions (Bastalich 2017) which constituted the first knowledge boundary they needed to cross. This proved challenging for some students as Sian, a senior director, explained how she initially struggled to communicate with one of her supervisors because of differences in language and willingness to engage:

> I couldn't understand his language and I couldn't make him understand mine and no matter how I tried he never altered his language.

Others also experienced challenges around communication with their lecturers, especially in the initial stages:

> There was a bit of a mismatch between being very academic and the business practitioners because of course, when you start your DBA, you don't speak the same language. It takes a couple of workshops before you can start speaking the same language. (Rudolf)

Finding a way of bridging the academic-practice language gap over time appeared to be central to achieving KT but so too was persuading others to listen to the message. The notion of power emerged as key to overcoming this challenge.

Power

Students, as senior managers, were in a privileged position to transfer knowledge between academia and practice. Having a position of power in their professional life meant that they were able to implement outcomes from their research directly into management practice, as Anwar explained:

> I believe the DBA is like a fast, very smart way of mixing knowledge with practice. I'm going to give a presentation to the cabinet minister telling them what the outcome of my study is and how it will help the national economy and what are the recommendations. I am even thinking to create a website. And allow people to read it, interact with it, download it.

Anwar was therefore using different methods of communication to transfer academic knowledge into practice, at several levels. He was also providing opportunities for listeners to ask questions and exchange interpretations of the meaning and utility of the knowledge being transferred. In this way, they become participants in the co-construction of 'a common knowledge for sharing' (Van de Ven 2007, 240).

Eric, explained how doing the DBA had enhanced his confidence and enabled him to exchange knowledge via his business networks (Jones 2018) and his academic work:

> I teach, I research, I publish, I disseminate my research, I work with industry, so I think I do a broad remit in terms of what I suppose somebody who works in an applied university does.

Eric recognised the power inherent not only in academic knowledge but also in practitioner knowledge (Costley and Lester 2012). Philippe, a CEO, had appeared on television to promote his doctoral research. He had published eight texts on the subject and lectured at private business schools. He chaired forums with other CEOs in which they exchanged ideas and information, thus transferring knowledge. By interacting and exchanging knowledge with individuals who may be seen to be socially similar (Adler and Kwon 2002), Philippe was able to deliver a persuasive message using a common lexicon amongst those in powerful industry positions.

Similarly, Gill, a senior manager, explained how he exchanged his knowledge through his business networks and through trade publications: 'I have written a couple of articles for business magazines, more notably with an Irish magazine called *Business and Finance*'. Other doctoral students had published their work in academic journals. For example, Rafael, a senior manager, published in a change journal with his supervisor. Similarly, Mia, a managing director, had published papers with her supervisors in peer reviewed journals. Both continue to work in industry whilst lecturing in universities on a part-time basis. In this way, they combine their expert power (French and Raven 1959; Kovach 2020) which draws on knowledge gained as a doctoral student and a senior manager, with their configurational power gained from their organisational networks and relationships, with their causal power, i.e. their capacity to bring about change (Lundgren-Resenterra and Kahn 2019) enabled by their status and access to resources. This resulted in KT and translation (through exchange) that had the power to create impact (transformation) through informal and formal means (Queirós et al. 2022). We then explored the nature of these impacts that resulted from this KT process with the interviewees.

Impact

Through interacting with academic and non-academic audiences, impact occurred in several ways. Participants recognised how the DBA created personal impact, which is well documented in the

education literature (e.g. Creaton and Anderson 2021). Importantly, however, there was an appreciation amongst the participants that the DBA had led to wider impacts, beyond the individual, reflecting HE and government agendas.

Personal impact

All interviewees explained that studying for a DBA had impacted their personal development. Studying at this level had not only led to practical improvements in their skills but had also impacted their thinking at a more profound, innate level in relation to, for example, how they viewed knowledge and themselves as managers. Rudolf explained how his studies had improved his managerial capabilities, made him thoughtful about his practice and more aware of his own approach to learning. This in turn impacted positively on the organisation:

> I became even more reflective than I already was. And that has helped me in managing the change management programmes in my professional career … But more and more I'm also applying learning styles and techniques that basically I have acquired through the DBA.

Similarly, Sian, after having been initially uncertain the course might help her, remarked on how she gradually realised that she had the power to challenge opinion in a new, more persuasive way (Creaton and Anderson 2021):

> … at the beginning you're not quite sure how you're going to benefit … I think suddenly you do find yourself conversing differently … using you research skills and analytical skills.

Increased confidence was also a common theme, with many participants explaining how studying for the DBA had made them more self-assured. As Eric stated,

> In terms of my research … I will share that with a network of 250/300 managers at a forum … so that stems immediately from the DBA and having the confidence to do that, which might not have been there before.

Others explained how their interpretation and analytical skills had been enhanced because of the DBA. Rafael explained: 'I can now understand the narratives, the signals, the meaning. I can see the construction of reality through work language'.

Interviewees had also raised their personal profiles because of studying. Rafael, for example, had been promoted to COO because of the successful changes he had implemented from his DBA research. Frederica, a senior manager, ran for election in her home country and believed that the DBA had made her more credible in the political arena. Similarly, Annie explained that studying for a DBA ' … serves as a major point of attraction for the media as they do like their academics to be 'experts' and the title suggests being well qualified to speak about issues'.

This reveals how the impact of a DBA can extend beyond graduation and enable a relatively enduring link to be forged between academia and professional practice. Importantly, we argue, it shows that personal impact is an essential precursor to other forms of impact as it serves as a vehicle through which students develop their credibility, extend their expertise, and hone their communication skills. We argue that this results in superior expert power (French and Raven 1959; Kovach 2020), improved relationships with stakeholders and an enhanced ability to effect change (Lundgren-Resenterra and Kahn 2019).

For some, the impact of studying for a DBA went beyond personal and organisational outcomes, as the next section shows.

Organisational, economic and social impact

Significantly, many participants reported that their research had led to demonstrable organisational impact, typically in the form of operational and strategic improvements (Boud et al. 2021). For some participants, the organisation was in fact a university with the impact related to improvements in pedagogy. Sebastian, who was a senior academic, explained that:

> It's helped my supervision, particularly of master's students. I believe I can guide them through the methodological issues and also help them to establish clarity in their phrasing of their research questions …

Philippe, a company director, explained how his research had led him to identify a gap in the market which he subsequently filled with a new company. He stated that his research identified a difference between 'strategic thinking and strategic execution' and that there was a need to help organisations work through this to support organisational growth.

Similarly, Aiguo described how a decision support system, based on his DBA findings, was developed, and implemented in industry, leading to demonstrable impact:

> … it has more than halved the operation costs, and more than doubled its production throughout. It has also changed the organisation's culture from 'individual' to 'team', empowerment, confidence shown in the system developed, and increased employees' pride and accountability in the workplace.

Some participants identified economic and societal impacts and whilst these were less common than personal and organisational impacts, they nevertheless had significant, far-reaching consequences. For example, Sian recounted how her DBA study into critical care led to the development and implementation of a national governance framework to improve standards in the country's healthcare system. Anwar described how through his increased power and influence as a DBA student, he was able to attract a government investment in his business of over $2.5 billion. Jerry, who was a senior manager working for an international humanitarian organisation explained how his DBA study in anti-corruption mechanisms in a country in South America would serve as a pilot for other countries across the globe.

Discussion

Impact can be generated when collaborative doctoral partnerships exist between business schools and industry. As noted in a report by the Association for Business Schools (Thorpe and Rawlinson 2013), such partnerships facilitate KT between academia and professional practice. PDs can facilitate this KT and impact by informing organisational policy and improving personal practice (CRAC 2016). However, existing research does not sufficiently explain how research from PDs goes beyond the personal sphere and contribute to business and society.

If we consider the process of creating impact, the first stage concerns knowledge generation. Our findings support the notion that knowledge generation in a DBA draws upon both Modes 1 and 2 Knowledge and this approach is of value as it brings different management perspectives together to bridge the academic-practitioner divide. With academics and practitioners 'thinking together' (Pyrko, Dörfler, and Eden 2017, 389), management scholarship is enhanced by combining both *episteme* (scientific, universal knowledge) and *phronesis* (practical wisdom for developing action).

The ability to transfer this knowledge successfully between academia and practice however is dependent upon students being sufficiently proficient in language skills to cope with the complexities of interpretation and meaning and in this sense, act as 'boundary crossers' (Scaratti, Ivaldi, and Frassy 2017, 14). KT therefore involves crafting a rich message, conveying this via novel medium(s) and then engaging in an exchange of different views to reach a shared understanding of the message (Carlile 2004). This aspect of KT in a HE context is frequently overlooked in the literature with the assumption being that (a) knowledge can simply be 'translated' or exchanged and (b) it only concerns academics and not PD students.

We suggest therefore that both the student and the supervisor need to express themselves in ways that are sensitive to the different lexicons that prevail within the academic and business domains and develop a shared repertoire for negotiating meaning (Ehrenreich 2017). Only if this is achieved will it be possible for students to attempt to transfer the knowledge they gain from academia into practice and vice versa. Key in achieving this goal is to encourage two-way dialogue between supervisors, to guide students in using different modes of communication when transferring knowledge into the workplace and to advise students on how to utilise their power as senior

managers to communicate with and influence key stakeholders. Arguably, this a more pressing concern for DBA students as the knowledge transfer is more immediate as they are senior managers seeking to resolve a work-based problem at the same time as studying.

Successful transfer of the knowledge is also influenced by different stakeholder interests and the power of both the developer and receiver of the knowledge (Van de Ven 2007), yet power is often overlooked in the KT and impact literature. In our study, the perceived power and status of DBA students in practice meant that they were in a unique privileged positioned to transfer knowledge and create impact (Boud et al. 2018). This reflects Bozeman's (2000) and Rossi and Rosli's (2015) arguments that the success of KT is dependent upon the identities of those involved. As senior leaders, DBA students had credibility in their professional practice and expert power gained through their doctoral studies (French and Raven 1959). Findings from our study show how DBA students could facilitate KT from academia to practice due to the power they possessed through access to resources, their causal power and via the status hierarchies with which they were connected (Boud et al. 2021; Creaton and Anderson 2021). These students therefore acted as boundary spanners (Scaratti, Ivaldi, and Frassy 2017) between academia and practice. The downside to this is that there is perhaps more pressure on the DBA student, in the light of their seniority, to rapidly resolve the organisational problem through knowledge transfer.

However, KT does not necessarily lead to impact. Impact requires a demonstrable outcome which suggests that a positive 'change' has taken place because of KT. At an individual level, the DBA led to personal impact amongst all participants. This included increasing confidence, learning the ability to reflect on practice and shifts in thinking concerning what constitutes knowledge. This finding supports existing studies which highlight how doctoral studies can lead to significant personal development (Creaton and Anderson 2021). However, personal impact is frequently overlooked by policy makers concerned with evaluating impact since their focus is on wider impacts and typically ones that can be quantified through metrics, in organisations and society (Rossi and Rosli 2015). We argue that this is a limited view as our findings show that only when personal impact happens can wider impacts occur. Personal impact thus acts as a precursor to other impacts. This highlights an important pedagogical issue namely, that senior managers need to be educated in a way that challenges their current thinking. Furthermore, whilst the existing academic literature does consider the demonstrable impact doctoral study has on the student, these studies do not go beyond the individual student to consider wider impactful outcomes (Boud et al. 2018). Our study contributes to knowledge by demonstrating that DBA students were indeed able to create further impact in their organisations, but perhaps less so in society and the economy. Yet when societal and economic impacts were demonstrated, these were significant. Thus, we propose that a new, more holistic definition of impactful outcomes is required in a PD context which goes beyond a sole focus on personal development to one that aligns with impact government agendas. Course leaders should then evaluate the impact of student's research based on this definition, throughout the programme rather than limiting this to the thesis stage, encouraging supervisors to support students in this process of knowledge generation, transfer and creating personal and wider impactful outcomes.

The revised conceptual framework depicted in Figure 3 shows both the process of creating impact but also the outcomes of this process in a DBA context, according to our findings. This framework offers a more explicit understanding of how impact is generated beyond merely personal impact and the design and delivery of PD programmes as illustrated in Figure 1. It demonstrates that DBA students achieve wider organisational, economic and societal impacts. It also shows how common ground can be found through developing a shared language and boundaries can be crossed by these senior managers who have status, access to resources and causal power.

Whilst personal impact, we argue, acts as a precursor to other impacts, in-line with Ward et al. (2012), this process is not completely linear as each of the aspects of knowledge generation, transfer and impact may be happening at the same time throughout (and beyond) the DBA programme. This lends further support to our recommendation that impact should be explored and captured throughout the DBA programme, rather than just at the end.
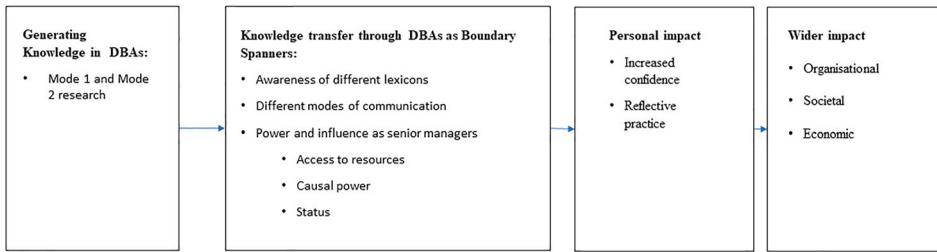
Figure 3. New conceptual framework for exploring how *DBAs* make a clear and measurable contribution to academic advances, society and/or the economy.

Conclusions

Our study shows that the DBA acts as a mechanism through which knowledge is generated and transferred based on a collaboration between industry and academics in which theory and practice are blended. Furthermore, we demonstrate that KT is the outcome of a learning process in which DBA students and their supervisors establish a two-way communication, enabled by learning to speak each other's language. Our analysis extends existing understandings of the role of positional status, by demonstrating the importance of power and associated credibility of the DBA students as practising senior managers, on the transfer of the knowledge. Our findings also reveal how personal development (such as improved analytical skills, increased confidence, etc.) gained by DBA students through the learning process results in personal impact (evidenced by promotion, etc.) that acts as the precursor to wider forms of impact, such as improved organisational performance and societal benefits.

We offer several contributions to knowledge. We contribute to the field of doctoral education by identifying the processes of knowledge generation and by showing how, as DBA student's skills develop, they can then leverage the power they hold as a senior manager to facilitate impact and KT between academia and practice, and vice versa. We also demonstrate how DBAs can play a key role in enabling the academic-practitioner gap to be bridged. By showing how personal impact is a precursor to other forms of impact, we offer a contribution to the impact agenda. To date, the KT and impact literature has instead focused on how academics can contribute to this important government and HE agenda (Van de Ven 2007), rather than PD students who have been the focus of our study.

The DBA provides long-term opportunities for impact due to the direct connections the students have with industry which are maintained throughout their studies and beyond. Future research could use quantitative measures to examine the longitudinal impacts of DBA research on the economy and society. We argue that management educators should seek to include opportunities for Mode 2 Knowledge generation and transfer within all doctoral programmes and consider how to embed the documenting of impact during and beyond the DBA. This would help bridge the academic-practitioner gap (Bartunek and Rynes 2014) and offer opportunities to demonstrate not only academic impact, but economic and wider societal impact too.

Disclosure statement

Ethics statement

The project was approved by [anonymous] Ethics Committee. Informed written consent was received by all participants prior to their involvement in the study.

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References

Adler, P.S., and S.W. Kwon. 2002. "Social Capital: Prospects for a New Concept." *Academy of Management Review* 27 (1): 17–40. https://doi.org/10.2307/4134367.

Amran, N., and R. Ibrahim. 2012. "Academic Rites of Passage: Reflection on a PhD Journey." *Procedia - Social and Behavioral Sciences* 59: 528–534. https://doi.org/10.1016/j.sbspro.2012.09.310.

Anderson, L., J. Gold, and J. Stewart. 2015. *A Guide to Professional Doctorates in Business and Management*. London: Sage.

Audretsch, D., M. Belitski, M. Guerrero, and D. Siegel. 2022. "Assessing the Impact of the UK's Research Excellence Framework on the Relationship Between University Scholarly Output and Education and Regional Economic Growth." *Academy of Management Learning & Education* 21 (3): 394–421. https://doi.org/10.5465/amle.2021.0240.

Banerjee, S., and C. Morley. 2013. "Professional Doctorates in Management: Toward a Practice-Based Approach to Doctoral Education." *Academy of Management Learning and Education* 12 (2): 173–193. https://doi.org/10.5465/amle.2012.0159.

Banks, G.C., J.M. Pollack, J.E. Bochantin, B.L. Kirkman, C.E. Whelpley, and O'Boyle. 2016. "Management's Science-Practice gap: A Grand Challenge for all Stakeholders." *Academy of Management Journal* 59 (6): 2205–2231. https://doi.org/10.5465/amj.2015.0728.

Bartunek, J., and S. Rynes. 2014. "Academics and Practitioners are Alike and Unlike: The Paradoxes of Academic–Practitioner Relationships." *Journal of Management* 40 (5): 1181–1201. https://doi.org/10.1177/0149206314529160.

Bastalich, W. 2017. "Content and Context in Knowledge Production: A Critical Review of Doctoral Supervision Literature." *Studies in Higher Education* 42 (7): 1145–1157. https://doi.org/10.1080/03075079.2015.1079702.

Boud, D., C. Costley, S. Marshall, and B. Sutton. 2021. "Impacts of a Professional Practice Doctorate: A Collaborative Enquiry." *Higher Education Research & Development* 40 (3): 431–445. https://doi.org/10.1080/07294360.2020.1765744.

Boud, D., A. Fillery-Travis, N. Pizzolato, and B. Sutton. 2018. "The Influence of Professional Doctorates on Practice and the Workplace." *Studies in Higher Education* 43 (5): 914–926. https://doi.org/10.1080/03075079.2018.1438121.

Bozeman, B. 2000. "Technology Transfer and Public Policy: A Review of Research and Theory." *Research Policy* 29 (4-5): 627–655. https://doi.org/10.1016/S0048-7333(99)00093-1.

Brooks, J., S. McCluskey, E. Turley, and N. King. 2015. "The Utility of Template Analysis in Qualitative Psychology Research." *Qualitative Research in Psychology* 12 (2): 202–222.

Bullock, A., and R. Hughes. 2016. *Knowledge Exchange and the Social Sciences: A Report to ESRC from the Centre for Business Research*. Cambridge: University of Cambridge.

Careers Research Advisory Centre (CRAC). 2016. *Provision of Professional Doctorates in English HE Institutions: Report by HEFCE by the Careers Research Advisory Centre (CRAC), Supported by the University of Brighton*. Cambridge: CRAC.

Carlile, P.R. 2004. "Transferring, Translating, and Transforming: An Integrative Framework for Managing Knowledge Across Boundaries." *Organization Science* 15 (5): 555–68. https://doi.org/10.1287/orsc.1040.0094.

Chiteng Kot, F., and D. Hendel. 2012. "Emergence and Growth of Professional Doctorates in the United States, United Kingdom, Canada and Australia: A Comparative Analysis." *Studies in Higher Education* 37 (3): 1–20.

Costley, C., and S. Lester. 2012. "Work-based Doctorates: Professional Extension at the Highest Levels." *Studies in Higher Education* 37 (3): 257–69. https://doi.org/10.1080/03075079.2010.503344.

Creaton, J., and V. Anderson. 2021. "The Impact of the Professional Doctorate on Managers' Professional Practice." *The International Journal of Management Education* 19 (1): 1–14. https://doi.org/10.1016/j.ijme.2021.100461.

Davies, J., F. McGregor, and M. Horan. 2019. "Autoethnography and the Doctorate in Business Administration: Personal, Practical, and Scholarly Impacts." *The International Journal of Management Education* 17 (2): 201–213. https://doi.org/10.1016/j.ijme.2019.03.001.

Dubois, A., and L. Gadde. 2002. "Systematic Combining: An Abductive Approach to Case Research." *Journal of Business Research* 55 (7): 553–560. https://doi.org/10.1016/S0148-2963(00)00195-8.

Economic and Social Research Council (ESRC). 2021. "Impact Toolkit". Accessed 1 December 2021. https://www.ukri.org/councils/esrc/impact-toolkit-for-economic-and-social-sciences/defining-impact/.

Ehrenreich, S. 2017. "Communities of Practice and English as a *Lingua Franca*." In *The Routledge Handbook of English as a Lingua Franca*, edited by J. Jenkins, W. Baker, and M. Dewey, 37–50. London: Routledge.

French, J., and B. Raven. 1959. "The Bases of Social Power." In *Studies in Social Power*, edited by D. Cartwright and A. Arbor, 151–157. Michigan: University of Michigan.

Gibbons, M., C. Limoges, H. Nowotnyu, S. Schwartzman, P. Scott, and M. Trow. 1994. *The New Production of Knowledge – The Dynamics of Science and Research in Contemporary Societies*. Los Angeles: Sage.

Halse, C., and S. Mowbray. 2011. "The Impact of the Doctorate." *Studies in Higher Education* 36 (5): 513–525. https://doi.org/10.1080/03075079.2011.594590.

Hramiak, A. 2017. "The Impact of Doctoral Studies on Personal and Professional Lives." *Work Based Learning e-Journal International* 7 (1): 20–39. https://doi.org/10.4018/IJGBL.2017010102.

Johnson, M. 2022. "The Knowledge Exchange Framework: Understanding Parameters and the Capacity for Transformative Engagement." *Studies in Higher Education* 47 (1): 194–211. https://doi.org/10.1080/03075079.2020.1735333.

Jones, M. 2018. "Contemporary Trends in Professional Doctorates." *Studies in Higher Education* 43 (5): 814–825. https://doi.org/10.1080/03075079.2018.1438095.

Kot Chiteng, F., and D. Hendel. 2012. "Emergence and growth of professional doctorates in the United States, United Kingdom, Canada and Australia: A comparative analysis." *Studies in Higher Education* 37 (3): 345–364.

Kougiannou, N.K., and M. Ridgway. 2022. "How is HRM Research (Not) Helping Practice? In Defence of Practical Implications." *Human Resource Management Journal* 32(2): 470–484.

Kovach, M. 2020. "Leader Influence: A Research Review of French & Raven's (1959) Power Dynamics." *The Journal of Values-Based Leadership* 13 (2): Article 15. https://doi.org/10.22543/0733.132.1312.

Kvale, S., and S. Brinkmann. 2009. *InterViews: Learning the Craft of Qualitative Research Interviewing*. 2nd ed. Thousand Oaks, CA: SAGE Publications.

Lee, A. 2018. "How Can we Develop Supervisors for the Modern Doctorate?" *Studies in Higher Education* 43 (5): 878–890. https://doi.org/10.1080/03075079.2018.1438116.

Lincoln, Y., and E. Guba. 1985. *Naturalistic Inquiry*. Beverly Hills: Sage.

Lundgren-Resenterra, M., and P. Kahn. 2019. "The Organisational Impact of Undertaking a Professional Doctorate: Forming Critical Leaders." *British Educational Research Journal* 45 (2): 407–424. https://doi.org/10.1002/berj.3503.

MacLean, D., R. MacIntosh, and S. Grant. 2002. "Mode 2 Management Research." *British Journal of Management* 13 (3): 189–207. https://doi.org/10.1111/1467-8551.00237.

Marshall, C., and G. Rossman. 2011. *Designing Qualitative Research*. 5th ed. Thousand Oaks: Sage Publications.

McSherry, R., E. Bettany-Saltikov, K. Cummings, K. Walker, K. Ford, and K. Walsh. 2019. "Are you Measuring the Impacts and Outcomes of Your Professional Doctorate Programme?" *Studies in Continuing Education* 41 (2): 207–225. https://doi.org/10.1080/0158037X.2018.1555801.

Meyer, De. 2012. "The Future of Doctoral Education in Business Administration." *Journal of Management Development* 32 (5): 477–486.

Moscardini, A., R. Strachan, and T. Vlasova. 2022. "The Role of Universities in Modern Society." *Studies in Higher Education* 47 (4): 812–830. https://doi.org/10.1080/03075079.2020.1807493.

Prøitz, T., and L. Wittek. 2019. "New Directions in Doctoral Programmes: Bridging Tensions Between Theory and Practice?" *Teaching in Higher Education* 25 (5): 560–578. https://doi.org/10.1080/13562517.2019.1577813.

Pyrko, I., V. Dörfler, and C. Eden. 2017. "Thinking Together: What Makes Communities of Practice Work?." *Human Relations* 70 (4): 389–409. https://doi.org/10.1177/0018726716661040.

Queirós, A., T. Carvalho, M. Rosa, R. Biscaia, M. Manatos, P. Videira, P. Teixeira, et al. 2022. "Academic Engagement in Portugal: The Role of Institutional Diversity, Individual Characteristics and Modes of Knowledge Production." Studies in Higher Education, Online.

Robinson-Pant, A., and N. Singal. 2020. "Beyond Authorship and Accountability? The Ethics of Doctoral Research Dissemination in a Changing World." *British Educational Research Journal* 46 (4): 859–877. https://doi.org/10.1002/berj.3590.

Rossi, F., and A. Rosli. 2015. "Indicators of University–Industry Knowledge Transfer Performance and Their Implications for Universities: Evidence from the United Kingdom." *Studies in Higher Education* 40 (10): 1970–1991. https://doi.org/10.1080/03075079.2014.914914.

Scaratti, G., S. Ivaldi, and J. Frassy. 2017. "Networking and Knotworking Practices: Work Integration as Situated Social Process." *Journal of Workplace Learning* 29 (1): 2–23. https://doi.org/10.1108/JWL-06-2015-0043.

Sharma, G., A. Greco, S. Grewatsch, and P. Bansal. 2022. "Cocreating Forward: How Researchers and Managers Can Address Problems Together." *Academy of Management Learning & Education* 21 (3): 350–368. https://doi.org/10.5465/amle.2021.0233.

Spencer, L., L. Anderson, and P. Ellwood. 2022. "Interweaving Scholarship and Practice: A Pathway to Scholarly Impact." *Academy of Management Learning & Education* 21 (3): 422–448. https://doi.org/10.5465/amle.2021.0266.

Stoten, D. 2016. "Discourse, Knowledge and Power: The Continuing Debate Over the DBA." *Journal of Management Development* 35 (4): 430–447.

Thorpe, R., and R. Rawlinson. 2013. *The Role of UK Business Schools in Driving Innovation and Growth in the Domestic Economy*. London: The Association of Business Schools.

UKRI (UK Research and Innovation). 2021. "REF Impact." Accessed 4 January 2022. https://www.ukri.org/about-us/research-england/research-excellence/ref-impact/#contents-list.

Van de Ven, A. 2007. *Engaged Scholarship: A Guide for Organizational and Social Research*. Oxford: Oxford University Press.

Vitae. 2020. Accessed 28 November 2021. https://www.vitae.ac.uk/doing-research/leadership-development-for-principal-investigators-pis/intellectual-leadership/demonstrating-research-impact/knowledge-exchange.

Ward, V., S. Smith, A. House, and S. Hamer. 2012. "Exploring Knowledge Exchange: A Useful Framework for Practice and Policy." *Social Science & Medicine* 74 (3): 297–304. https://doi.org/10.1016/j.socscimed.2011.09.021.

Wildy, H., S. Peden, and K. Chan. 2015. "The Rise of Professional Doctorates: Case Studies of the Doctorate in Education in China, Iceland and Australia." *Studies in Higher Education* 40 (5): 761–774. https://doi.org/10.1080/03075079.2013.842968.

Zusman, A. 2017. "Changing Degrees: Creation and Growth of New Kinds of Professional Doctorates." *The Journal of Higher Education* 88 (1): 33–61.