Editorial: The Role of Practice in Doctoral Degrees

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Introduction

In order to explore the ‘role of practice in doctoral degrees’ it is first useful to consider the purpose of doctoral education, and this is likely to vary according to the perspective of the reviewer. For example, a doctorate may be considered by the university provider as enabling the development of high-level knowledge, by the State funder to help solve local, national and international concerns, and by the student to improve their personal standing. In the pursuit of global human development, there are socio-politico-economic aims to harness these in order to make progress. Our interest is in how practice is and can be used in doctorates for these purposes.

The role of practice in doctoral degrees connects with how ‘knowledge’ itself is understood and involves a wider category of knowledge creation inclusive of considerations of practice and also offers more than the application of theoretical knowledge. Concepts of knowledge and what is counted as worthwhile knowledge increasingly incorporate a transdisciplinary approach, which is more inclusive of professional and artistic knowledge and more practice-based. Often, the aim is to achieve practice-based outcomes that make positive changes to practice. This is the case both for PhDs that have a focus on practice and for professional doctorates. A transdisciplinary lens on the world can open our eyes to multiple realities, and in this sense, academic disciplines that break down knowledge into discrete and bounded areas of knowledge (Becher and Trowler, 2001) are necessary, but are not always sufficient to support real world developments.

Over the last 30 years or so, a range of factors have come together to highlight the importance of practice, and a landmark publication in 2001 postulated that there was a ‘practice turn’ (Shatski, Knorr Cetina and von Savigny) in academic thinking. These factors led to the rise of professional doctorates and the inclusion of more practice in PhDs. Inevitably, this has led to deliberation over equivalence between doctorates, and around the idea of ‘doctorateness’, with different stakeholders presenting a diverse range of conceptualisations. As the provider of doctoral education, universities may have the main influence on doctoral curricula and pedagogy, but they must work within the boundaries of their national policies and can be influenced by funding and other more prosaic issues. Also, within universities, faculties and departments in different subject areas may put different emphases on creativity and innovation and its relationship with knowledge and practice.

As Editors of this Special Edition on ‘The Role of Practice in Doctoral Degrees’, we set out to invite contributions that would elucidate these factors. Many of the papers were originally presented at the 7th International Conference on Professional and Practice Doctorates (UKCGE, 2021), and demonstrate a mainly western higher education (HE) orientation with contributions from Portugal and Poland, USA, Australia and United Kingdom (UK). Like us, as Editors, they take a positive, HE practitioner-oriented position regarding the importance of extending and developing practitioner research at doctoral level, which is based on working, creating and researching within these fields of study. That is, their academic culture has influenced their perspective, just as cultural knowledge and issues can influence any doctoral research, including and perhaps especially, that which emanates from practices. But the Covid pandemic prevalent at the time of writing has shown us that while cultures may vary, there is important interconnectivity between peoples, and world problems need understanding from a range of perspectives. Covid has brought about change in our ways of working, especially through technology and this in turn has widened our reach, internationally.

This editorial begins by outlining each of the papers in this special edition and the important themes arising from their work that can provide insights into how practitioner doctorates can
continue to develop and contribute to human endeavours around the world. The following section discusses these themes in more detail, and we conclude with what we consider to be the future research agenda if we are to strengthen the place of practice in doctoral degrees.

Contributions to the Special Edition

The papers in this special issue cover knowledge, policy and practice in the area of ‘practice in doctoral degrees’ in a range of countries and in different forms of doctorate and discipline, subject or professional area. Notably, three papers are from the arts, which has long been involved in recognising practices emerging from researching the aesthetic domain. Arts practices can enrich our outer world and support the creator and recipients personal and professional development. These papers can therefore provide us with a unique perspective on practices which we can review reflexively for significance in our own domains. Two of the papers cover respectively, education and health sciences, which have also embraced practitioner research, through PDs in the last two decades, but also through PhDs. The remaining paper focuses on the criminal justice sector, which has historically been more knowledge based at doctoral level, but with demand from practitioners in professional areas allied to law has led to the availability of more practice-oriented doctorates. In all of the contributions, the authors show how knowledge and practice is combined in doctoral study to improve everyday practices of individual practitioners and the systems and structures in which they work.

The first paper by Creaton includes research focused on candidates’ perceptions of the impacts that they had made from their professional doctorate research in the criminal justice sector. As she discusses, what is meant by impact can vary, but there is a general expectation that professional doctorates, with their focus on practice, will generate some direct impact. That said, Creaton finds that a range of practice related issues have influence on whether or not impact is made. The motivation of the candidate, including her desire to change or develop practices is important, but others also play a role. For example, the amount of employer engagement there is with the project at its inception, but importantly, also at the implementation stage, which is often sometime later, towards the end of the research. Also, how well the doctoral programme supports research designs that enable impact on practice is important, and Creaton finds that HE tends to colonise the research process. Clearly, if the focus of all stakeholders is on doing research that will develop practical outcomes, there is more opportunity for impact. The research showed that notwithstanding some restrictions to this best-case scenario, candidates reported making a range of organisational, public, policy, practice and individual developments. Creaton argues that to improve the opportunity for impact an alignment between the stakeholders involved is required. In many circumstances, this would be difficult to achieve fully, however, there is more that HE could do to encourage and support this process. For example, in curriculum design and supervision that supports planning a project focused on practice.

The paper by Alves, Lopes, Menezes and Kowalczuk-Waledziak provides an interesting exploration of the research-practice nexus across two diverse cultures; Portugal and Poland. In this study of PhD students and graduates who have undertaken doctoral research spanning the academy and industrial settings, the participants were questioned on the outcome of their research in terms of benefit to their professional practice and research outcomes. The majority cited positive outcomes, though some respondents cited negative
impacts. The authors describe the relationship as multidimensional in terms of stakeholder connections and tensions, where practice in the PhD nexus comprises ‘the increasingly enmeshed involvement of professionals in doctoral education’. The findings overall express the heightened level of complexity involved in managing such an enterprise, extending the role of the university from the traditional role of education provider.

Despite potential cultural differences between Portugal and Poland, where the studies were located, the PhD structures were very similar; oriented towards university led research. The paper demonstrated the potential for university–industry research collaboration and successful outcomes with lasting impact. The research study was important in sharing and introducing approaches for these universities to more formally recognise industrial linkages in PhD’s and allowed the cross-cultural sharing of experiences. It seems that where no formal professional practice doctorate exists, this paper illustrates how a more traditional PhD can be developed around work-based research objectives. The paper captures some of the lived experiences of the doctoral candidates and goes some way to illustrating the additional emotional intelligence required of the research student in managing the day-to-day relationship with the employer organisation. There are examples cited where the employer became concerned at the amount of time that the research student was spending at the university, which underlines the delicate nature of such relationships. Potential benefits to the student, university and employer for managing the high level of complexity, weighted heavily on the student, divided between two organisations, include responsibility for impact potential in the form of profitable innovation to the organisation and research advances attributed to the university. Student benefits are mentioned in the form of potentially enhanced employability and in some cases employment opportunity with the employer or the chance to secure an academic role.

Ceballos, Vitale and Gordon’s paper on their doctoral candidates’ choice of topic in Educational Leadership examines why doctoral researchers who work in schools believe that certain elements of their practice should be prioritised for their research. The 65.9% of the doctoral research that had focussed upon school improvement and school effectiveness, suggests that the doctoral candidates were influenced in their choice of research by their own professional roles. Their roles were in turn effected by government policy which identifies student outcomes and student performance as key performance indicators that also fall into the general category of school effectiveness and school improvement. The doctoral candidates focused on academic interventions, innovations, school practices and subsequent effects on student outcomes. The paper concludes that the doctoral candidates were predominantly intending to meet the accountability demands of the roles they undertook in their professional practice They demonstrate the influence of education authorities' policy preferences and thus how stakeholders can influence what changes and influences can be made in doctoral research. Furthermore, faculty in the Education doctorate itself followed the guidance of the Carnegie Project on the Education Doctorate (CPED) which had been found to favour professional doctorate dissertations focused on existing practitioner needs. Therefore, some of the accountability demands of the researchers in their educational leadership roles were met by focussing most of the research on improvement and effectiveness. A question from the authors concerned the range of research issues which were therefore not attended to regarding other issues in educational leadership. Understanding the motivations for practice-based research of this kind can have influences on change and innovation in practice settings.
Vaughan’s contribution raises the significant issue of exactly what format a doctoral submission should take. In the creative arts in which she works, the importance of artefacts being included has been fairly well agreed on, but there are also arguments for inclusion of other than written media in a range of other subjects, disciplines and types of doctorate. The arguments for and against allowing different media are well rehearsed, but Vaughan’s research reviews the university regulations that underpin these permissions and the enablement of such submissions, with a view to exploring models of good practice that could be applied in any doctorate. Her research illustrates the frameworks in HE that can support practice-based doctoral education. The findings show that there is little coherence across the whole range of UK universities reviewed in the relationship between written and other forms of submission. While this might be expected, as universities have autonomy to set their own regulations alongside the level criteria set down by the UK’s Quality Assurance Agency, it illustrates the add-on nature of the idea of non-written forms. Similarly, she finds that practice-based research often requires an approval process, and this process may also consider what is submitted for examination, and the weighting and significance of written work and other products. It seems that since there has been a ‘practice turn’ in doctoral education, some universities have begun to review the place of practice and diverse forms of products in PhDs and PDs in a range of subject areas. Regulatory frameworks once used mainly for the creative arts are slowly being extended to meet the demand for practice-based doctorates in a range of disciplines. But progress is slow and held back by conservative views in HE about the place of practice in doctorates.

Bendrups paper uses an in-depth examination of three established artists’ understanding of their motivation to undertake a practice-based doctorate to help consider how HE might support their development. All candidates had been involved in commercial work for many years, but this did not drive their interest in undertaking a doctorate. Some familiarity with universities, and their ways of operation appears to have been helpful to the candidates. But more than anything, the candidates’ desire to extend their existing rich, multidisciplinary experience in the arts appears to have driven their journey. By extending their ability to make meaning from experiences, Bendrups suggests that they are developing their practice and further building their identity as artists. This illustrates a clear positioning of practice in the doctoral process and means that supervision might need to focus more on areas that could support practice development, such as theory or collaborative work.

The paper by Pott explores the need for learning, research and scholarship in the arts to be recognised in a wider form than the conventional ‘black book’ doctoral thesis. Pott draws upon her experience in the creative arts to examine examples of arts practice, in the form of artefact(s), a painting and a sculpture, to form the basis of what she defines as:

‘research to consider ‘the process of knowing…. a new embodied cognition’ view of knowledge (Johnson, 2010, 144)’. (cited in Pott, 2021).

She explores the potential for incorporating practice into the stage of review and search, which is normally considered in terms of literature. This paper challenges convention through following two examples of arts research students in examining how they incorporate their artworks. Through making the case for equivalence with the traditional literature review, the paper marks an important contribution, which could be seen as extending the parity of esteem (Burgess, Weller and Wellington 2011) across all types of doctorate and essentially grappling with the issue of how to incorporate and recognise practice at doctoral level.
‘For practitioners is it enough to show mastery over a specific body of knowledge gained through searching and reviewing literature at an early stage of the process? Perhaps it is more desirable, or even necessary, for them to begin to develop an ability to speak about the practice of others and, ideally, their own practice’. (cited in Pott, 2021)

This paper presents a new agenda to doctoral research pedagogy through proposing the place of artefacts as the focus for the research literature / review stage. It is currently limited to arts oriented doctoral study, though this message could have potential across all doctorate sectors to consider drawing upon iconography from art objects through to organisational emblems and signs that may demonstrate / convey semiotic meaning.

Themes in Practice-based Doctoral Degrees

The place of practice
All six papers resonate with the idea that doctoral degrees internationally have become more engaged with knowledge production in practice settings (Boud and Lee 2009, Kot and Hendel 2012, Armsby, Costley and Cranfield 2018). Other examples are industrial PhDs where students are located within an enterprise undertaking research directly relevant to the needs of that organisation, and in ‘Practice-based PhDs’ such as the Arts, Health, Engineering, Psychology and Education. The six papers discuss practice research in PhDs: Alves et al, Vaughan, Bendrups, and Pott, and in Professional Doctorates, that have developed in some countries and tend to be part-time doctorates developed for full time professionals researching into their own practices: Creaton and Cebellos et al. These papers illustrate the gradual and ongoing changes in the nature of doctorates and indeed the changing international reach of HE that influences the ways in which doctorates put their research into practical and innovative action that seeks to have a positive effect on society.

One example of these recent changes is the Carnegie project on the USA education doctorate that set out to bridge research and practice (Storey and Hesbo 2014). Ceballos et al’s paper reports on aspects of this development and in common with several of the other papers, shows that candidates’ doctoral work and the parallel development of their professional practice is seen as a purposeful and affective way of developing self, and aspects of their professional area, with the ability to stimulate significant meaning. However, as Creaton’s work shows, a candidate’s professional context and their situatedness can significantly influence these, and Alves et al note that there can also be a negative effect on professional development.

The papers also show that academic practices such as curriculum, pedagogy, administration and management are required to support this research. Research is also a practice, requiring a range of personal characteristics, as defined in VITAE’s (2010) Researcher Development Framework (RDF), and while at doctoral level the place of knowledge creation and theory is currently much more clearly understood in HE than the place of practice, these papers show that HE practitioners are developing effective approaches to support their practitioner candidates. For example, in Pott’s contribution we see new ways of working with arts candidates to help them develop excellence in their personal practice.

Knowledge, disciplines and the practice turn
Research knowledge is accommodating a greater practice-oriented view through adoption of practice theory and the role of researching professionals. This has led to developments in
doctoral curricula and caused changes to both academic and professional practices. Alves et al’s paper demonstrates how some universities in Poland and Portugal had enabled more practice-oriented routes to PhD studies crafting pedagogical and methodological approaches that allowed a more practice-focussed approach to doctoral research.

Theories of practice that we may draw upon deal with activities and actions often in the sphere of work and focus on individual actions which have social and corporeal realities that are structured, emergent and creative. The theories stress the complexities of these situated practices and significance of power relations, conflicts, interests and imperatives. Current circumstances are therefore situationally tied to theories that consider practice, making practice theory valuable as an inseparable package of theory, method and vocabulary (Nicolini 2017).

Practice theory has become and may continue to be, a more helpful and compelling engagement for doctoral candidates whose focus upon practice often demands ‘real world’ change. Many practice theorists give a steer as to how we might approach research-in-practice. Kemmis (2019) for example suggests we should respond with sensibility and this can be an opportunity to build a better future. Much that can be found in practice-theory is relevant to apply and consider within our new set of changing practices brought about by the global pandemic. For example, a more practice-conscious understanding of the nature of knowledge, its justification, and the rationality behind how it is understood by practitioners is now even more valuable.

Research knowledge can be understood in Aristotelian terms as where knowledge is constructed as foremostly having wisdom in theory, and this became an unchanging ‘truth’ where theory has often still been valued over practical wisdom. These entrenched historical beliefs have been embedded in our institutions even in administrative and managerial practices, protocols and policies and has sometimes placed practice-based doctorates as second order. There is a relatively new focus upon professional knowledge, creativity and knowledge and creativity in doctoral education along with, knowledge exchange and transfer, and with more engagement with organisations outside HE institutions. Although there are now changes in thinking towards recognizing practice knowledge there is sometimes unease that it may not fulfil requirements for doctoral research especially in professional doctorates. Gibbs (2021, p160) refutes this, demonstrating that there is no epistemological or educational reason to distinguish by some notion of importance or quality between professional doctorates from PhDs.

Alves et al’s paper demonstrated how a PhD was organised round work-based research, a practice-based approach which is inherently transdisciplinary. This concurs with Costley and Pizzolato (2018) who demonstrate that practice-based doctorates usually have transdisciplinary qualities because practitioners who research, draw from principles recognised in the literature as transdisciplinary. These are, perspectives of their work practices, the theorisation of those practices, experiential learning, multiple disciplinary knowledge and approaches as well as communications and networking with appropriate stakeholders. The transdisciplinary qualities enable doctoral researchers to develop research projects that have creative and beneficial relevance for practice.
International equivalence and ‘doctorateness’

The classification of higher degrees, and consideration of the place of practice within them, varies in different countries. For example, in the UK, descriptors for doctoral level qualifications focus on the creation of knowledge through original research at the forefront of an academic discipline or area of professional practice (QAA 2014; 30). Thus, the place of practice is included as one alternative. In contrast, the Australian Qualifications Framework, differentiates professional and academic forms of doctorates, but the level is the same for both: ‘The emphasis in the learning outcomes and research may differ between the different forms of Doctoral Degree qualifications but all graduates will demonstrate knowledge, skills and the application of the knowledge and skills at AQF level 10’. (AQF 2013, p. 63). Across Europe there are continued efforts to align doctoral degrees, including consideration of the place of practice.

The products of practice can satisfy doctoral criteria, including originality, but as Vaughan’s UK based paper discusses, must usually be accompanied by analytical text that demonstrates a contribution to knowledge. The question of equivalence is significant in ensuring that practice is not considered an easy route to doctoral status. How a practice-based doctorate meets doctoral standards with doctoral level criteria can be held as a key issue yet Gibbs (2021) argues this as a non-issue finding only marginal epistemological differences between PhDs and PDs, so perhaps it is only difference and resistance to change that is causing concern.

The changes in doctorates and their classification have brought about an examination by numerous authors of the common qualities for all doctoral awards. This ‘unclarified concept’ of doctorateness has recently been reviewed (Yazdani, and Shokooh, 2018) and noted to include a range of conceptual areas, such as the purpose, product and impact of doctoral work, and concludes that ‘doctorateness, as a personal quality is demonstrated in graduate of a doctoral program as an independent scholar and doctoral dissertations (and presumably other products) can be seen as outputs of this personal quality’ (p 43). Doctorate level is therefore in the individual candidates’ skills, knowledge, and abilities, as for example, defined in VITAE’s RDF, rather than solely in the research or new knowledge produced. This perspective supports the place of practice in doctoral degrees because it recognises the importance of the development of expertise, a topic central to several papers in this Special Edition. However, the focus on individual practice still appears to be a contested in HE, as Creaton notes in her paper, even in a professional doctorate some supervisors steer their students away from practice and towards theory. Previous research (Proitz and Wittek 2019) has shown that candidates are often left alone to manage the difficulties involved in bridging theory and practice. Similarly, Alves et al’s paper notes that in the two European countries they studied, more needs to be done to strengthen the link between research and practice.

Stakeholder perspectives

Clearly, the individual candidate’s expertise at the end of the doctoral process is important in deciding whether or not an award is merited, but as these papers show, providing the context for this to take place can involve a complex interplay of the various stakeholders involved in the practice context (Armsby et al. 2018). The candidate’s motivation is a key starting point, and is noted as key to success in the different professional areas discussed here, including Criminal Justice (Creaton), Education (Ceballos et al) and the Arts (Bendrups). The university provider is also a major influence (Mellors-Bourne et al 2016), and as Creaton’s paper suggests can colonise the research process. Interestingly, the
importance of an employing or commercial organisation is less evident for those studying the arts, whereas the papers focusing on criminal justice (Creaton), education (Ceballos et al) and social and health sciences (Alves et al) all reflect on the importance of alignment with organisational and wider stakeholder objectives in order to undertake practice-based research, and successfully implement findings. The papers suggest that to achieve this, universities need policies and practices that support practice-based research and developments, and that it is important to align organisational objectives, and wider national or international policy. Another stakeholder could be the respective professional body, but none of these were mentioned by the authors, perhaps signifying their relatively insignificant influence for most professional groups.

Curricula
There are pedagogical and curricula implications that have brought about developments in doctoral programmes that are based in artistic / practitioner research activities. For example, methodological approaches to research have become more practice-based, with more attention paid to developing practical, real-time recommendations not just for further research but also for practice. See for example, papers from Cebellos et al, where a doctorate has a key focus on positive workplace reform through doctoral research by researching professionals and Bendrups who demonstrates motives for pursuing a doctorate were to develop themselves personally and in their professional capacity, not to become academics in their fields.

Practice as Research (PAR) has become a recognised methodological pathway within Arts doctorates. Boyce-Tillman (2012, p.81) considers that ‘Rather than being ‘a’ methodology, PAR is an artistically-derived space, inclusive of poetics and metaphor…. [which]… challenge traditional knowledge generation systems, and the surveillance to which they are subject.’

Boyce-Tillman (2012) considers there are a synthesis of different ways of constructing PAR that is helpful for creators who are also researchers drawn from their own standpoints. In a similar way, practitioners who are not artists can refine a complex area of practice through contemporaneous and retrospective reflection, synthesis and insight that is the result of their experience in practice. Reflection in and action on experience is followed by the composition of an artefact (for example, a workplace document) and an exegesis that can bring a powerful and constructive legitimacy to practice contexts.

Whilst new ways of operating have emerged through university administration and management working practices. Neoliberal reforms have led academic practitioners and often doctoral candidates themselves to consider their agency as a series of complex power relations that occur during everyday working practices and Vaughan’s paper reveals a management preference, across the sector for the more established ways of viewing doctoral work that do not favour practice-based approaches. One of the issues for a practice focus is more engagement with agencies outside academia and Creaton’s paper demonstrates how universities could engage more meaningfully with external stakeholders to support doctoral research in practice situations. Those supportive of practice-based doctorates may therefore encounter issues about regulations, modularisation, nomenclature, examinations and above all ‘equivalence’ especially between doctorates labelled PhD or PD, as discussed above.
Practice-based doctorates are arguably developing high level developments to provide opportunity to research more practice-based subjects. These activities provide a variety of scholarly work for research in and for practices in all doctorates. With the evolution of academic disciplines, increasing diversity of candidates, and as practice theory develops more rigorously will practice in doctoral degrees become a norm? In which case, policy positions will change.

**Pedagogy**
Practices are emergent and cannot be planned as in a classroom experience which intends to prepare individuals for work. That the knowledge being passed on in a classroom setting is not the same as the learning from unplanned, emergent knowledge and understanding may be why practitioners and artists who research on the doctoral landscape have brought about much innovative thinking in relation to learning from practice. The study by Bendrups, provides an interesting insight into artist practitioners who draw upon pre-existing expertise as the focus for more emergent practice learning. Indeed, it could be argued that through concentration on a pedagogy of practice, change underpins what may be considered as a curriculum of transformation.

Doctoral candidates engaged in professional, arts or industrial doctorates, who may be working in organisations or as portfolio workers, seek to make improvements in their practice, based upon research informed by the practitioners themselves and fuelled by academic know-how such as research methodology, reflexivity, criticality and so on. These pedagogic interventions can lead to positive, ethical, forward-looking innovation, often creating innovations in practice.

However, the place of integrity in practice learning is important in ensuring that originally intended research outcomes cannot be misused. In this respect, a key component of the pedagogy for practice-oriented doctorates must be the importance of research integrity, which considers all stakeholder views (Volante, Weller and Portwood 2017). This can be difficult where, for example, an employer may be funding doctoral research, as was noted in the study by Alves et al. The ability to speak truth to power would seem to be an important feature of practice learning and a key additional skill set, see for example Burgess, Weller and Wellington (2013) and Coffield (1999). Concerns about different institutional structures are voiced in the paper by Bendrups, where he notes a plethora of different university processes in creative doctorates, which may constrain potential practice learning where students and possibly examiners are unsure of the standard to be achieved. Similarly, Pott considers the place of artefacts in the review stage for arts doctoral students, which could involve a review of the supervisory role in supporting practice-oriented research.

**Creativity and innovation**
There is much accepted difference concerning variation in the length and format of doctorates between disciplines. In Arts subjects, the thesis can take the form of an exhibition often with limited written explanation and occasionally without a contextual written element. Vaughan’s paper around artefacts of practice looked at how regulatory systems within a range of universities in the UK dealt with research outputs that were not written and found many different sets of rules and regulations which treated artefacts as an anomaly rather than part of a coherent research outcome.
In the paper by Pott there are considerations of how to incorporate Arts practice in a search and review stage of a doctorate. While none of the practitioners would necessarily reject opportunities for university work, none of them described their doctorate as a pathway into academia (as the doctorate is often characterised). This is a worthy reminder that people pursue doctorates for all manner of reasons.

Should we re-consider the relationship of artefacts of practice, for example works of art, to academia, practice to theory, or indeed the nature of academia itself? To maintain that artefacts of practice need to be underpinned and clarified by written commentaries deems practices, including those in the arts, to be competent as research only through theoretical elucidation and thereby keeps a traditional image of academia in place. Moreover, such a formulation retains the oppositional relationship between practice as predominantly unintellectual and written work as appropriately academic.

Theory does not need to be accompanied by practice, but practice is deemed to require theory. In effect, it does not open out the boundaries of academia to acknowledge different ways of thinking and working, or different disciplinary characteristics, but reduces practice to the conventions of academia. This point links to the purposes for undertaking a doctorate which are not necessarily to become an academic. Bendrups found that the reason for undertaking a doctorate gave creative artists the opportunity to develop their creative practice concluding that creative and performing arts doctorates may have a particular role to play in serving a wide range of social, artistic, personal and professional needs.

Rather than making practice as scholarly as possible, the practice-based doctorate whether it be labelled Doctor of Philosophy or Professional Doctorate could be an opportunity to re-think some established academic norms.

Culture, equality, diversity and inclusivity
There may be ethical considerations that are related to the practitioner’s practice and choice of research focus as much as for considerations about the processes of the research. A focal point for those involved in professional and practice-oriented doctorates both within the developed and developing worlds is the integrity that is demonstrated in understanding stakeholder views. Issues of equality, diversity and inclusivity are markers of the sensitivity within which the study is conducted. The paper by Alves et al. illustrates some of these points, in terms of inclusivity for male and female participants in their research. However, there would seem to exist potential for the individual projects carried out to encapsulate the ethical values of equality, diversity and inclusivity and the hope is that these values are enshrined within the doctoral practice and permeates the host employer organisation.

To this end, new and novel ways of conceptualising and incorporating doctoral research and practice are included in this special issue including for example, through the medium of artworks, artefacts, drama and community reach out to disadvantaged and minority groups. Culture has long been a recognised variable in doctoral research and this theme is considered as a cornerstone in work-based research in understanding formal and informal life in social settings. Issues around competition, globalisation, resourcing, inequality and transformation are often encountered when considering culture in the practice-oriented doctorate. Such values could be seen as more transparent in light of the coronavirus pandemic, where many talk of a re-evaluation of values and opinions, towards greater equity and well-being in society (Hongwei He and Lloyd Harris 2020).
Conclusions, and the future research agenda

This selection of papers captures some of the complexity that is evident in understanding and defining doctoral level research and especially those doctorates that aim to encompass a practice orientation that reifies real world impact in human activity systems of the type that is needed to solve global problems such as the Covid pandemic. The range of types of practice doctorates all aim to make some kind of change, enhancement or creative development in practice situations. Examples of some individual candidate case studies, can be found on the UK Council for Graduate Education’s website (UKCGE, 2021) where there can also be found a range of other resources related to practice doctorates, including a summary of ICPPD7.

We have acknowledged that the work presented here has a western, even UK focus. In many respects these papers present a future research challenge to extend and expand the understanding of impact from professional and practice-oriented doctorates beyond the western HE system. Moreover, there is a dearth of literature around examples of practice-oriented doctoral education in the developing world, which currently emulates the traditional doctorates offered by western institutions. There is therefore potential for the papers comprising this special edition to form a catalyst for influencing wider change towards practice-oriented doctorates globally.

The stock of research represented here should be considered in light of new research agendas for academics and students from all pedagogic fields, to unpick and reference practice in the wider sense in order to be more culturally relevant and meaningful. It is hoped that employer organisations may also be influenced towards supporting collaborative research ventures, and view this as a worthwhile, though possibly longer-term investment.

A key point in general is that doctorates where the main focus is on practice (usually a particular set of practices) are popular, and programmes have developed pedagogies and curricula that greatly support the candidates to make doctoral level achievements in their practices and significant professional/personal development. Many programmes run in western countries have candidates from across the globe because there is limited opportunity for practice-oriented research in their countries.

Arising from the pandemic situation practices in research have changed. There has been more opportunity to accelerate developments in; online learning and supervision, international collaboration, the risk environment and environmental and sustainability concerns. These issues bring to the fore global inequalities, highlighting differences with direct consequences for Equity, Diversity & Inclusion including heightened awareness and balance in participation from minority groups, in light of the inspirational Black Lives Matter campaign. Approach and methods to doctoral research may need to change, such as collection of data at a distance, technological crashes and cyber threats and of course an increased focus on ethics in for example, weighing competing values like public safety and personal freedom, less focus on profit and more on humanitarian concerns.

We are now universally steered towards new behaviours and new needs, and as researchers engaged in practice, we need an awareness of these new research imperatives. Reflecting on our practice within the new wider context is needed and requires organisational cultures and techniques for creating community, addressing the challenges of digitally mediated working and learning environments, through relational networks both
human and technological. For doctoral research purposes this may mean that a new curriculum and pedagogy of personal engagement is required and this fits well with the practice agenda we have discussed. This editorial, has aimed to outline the meaningful themes arising from these papers. The collective power of these articles should be considered by the reader and where possible taken forward in research and practices and reviewed at future conferences.

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