JPHE

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JOURNAL OF PRAXIS IN HIGHER EDUCATION

Journal of Praxis in Higher Education (JPHE) is dedicated to praxis in higher education. A key assumption underpinning the journal is that education is a moral and political activity and that higher education and its practitioners cannot free themselves from moral nor political considerations. However, this assumption comes with several commitments. Rather than standing only from the outside looking in, as in positioning science or research as more valuable or important, this journal recognises the importance of a reflexive inside perspective. This implies taking the present structures, conditions, traditions and values – both internal and external – seriously, but also in situ when researching higher education.

The journal is committed to research aimed at the transformation of existing practices and conditions in higher education. In particular, it is promoting research that has a transformative potential including both practical and theoretical dimensions of educational work and higher education research. It is also committed to the idea that through education research, one can seek to promote justice as well as the capacity of people to express agency, and increase the possibilities provided by society at large to its members.

Research concerning praxis in higher education is thus, in a sense, both a theoretical position and a form of active engagement. This journal welcomes contributions that are directly concerned with praxis in higher education or with research that is manifestly relevant to praxis in higher education. This focus includes the following areas, but is not limited to them:

- Empirical studies of the consequences of particular pedagogies, policies, and development activities in higher education;
- Purposes and implications of higher education;
- Justice and other ethical considerations associated with higher education, including implications for politics, society, and sustainability;
- The concepts of praxis and related concepts (e.g., praxis development, theory in praxis, practical wisdom, practical judgement, *phronesis*);
- What constitutes 'good' practice and 'good' professional practice in further/higher education? (and 'good' for whom?);
- Comparative studies regarding the enactment, contexts, and/or outcomes of praxis in higher education;
- Leading and governance in higher education; standardisation;
- Professional learning in higher education;
- Studies on changing conditions for practice and praxis in higher education;
- Transformative and responsive education;
- Research approaches as and for praxis in higher education;
- Praxis-oriented higher education pedagogies;
- Power and agency in higher education;
- Inclusive education and practices in higher education;
- Criticality and/or fostering critical thinking in higher education;
- Academic identity and living spaces in higher education.

Exploration of key issues and topics from a range of theoretical viewpoints and intellectual and methodological traditions is encouraged. For further information, please visit www.jphe.org.

Journal of Praxis in Higher Education is fully peer-reviewed and applies a triple blind review system in order to ensure the integrity of the review process. As a web-only journal committed to the widest possible dissemination of research, the journal is fully open access and does not demand publication or subscription fees.

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From the Editors

Another higher education journal: *Really?*

Does the higher education research community really need another research journal? Have we not reached a saturation point, with numerous well-established, highly regarded journals, and continuous announcements about new journals appearing in our email inboxes? Why would any scholar consider becoming involved in yet another review, special issue, or especially another 'most recent APA update'? What could possibly be gained from aiming for the introduction of another international, higher education research journal?

Such questions are not to be taken lightly. The *JPHE*'s[1] editorial team, comprised of scholars who share a concern for the current state of affairs in higher education, has deliberated seriously over these questions. We recognise the longstanding contribution of many existing journals but also suggest that there are neglected challenges and tensions requiring deeper and far more critical dialogue than is typical within many higher education settings across the globe. We have come to the conclusion that there is a need for a journal dedicated to creating a forum for, and informing, such dialogue. This is arguably important if new possibilities, insights, and pathways are to emerge that can help us address and/or negotiate those challenges we see, experience, and face in higher education practices today.

In this editorial, we aim to elaborate on some of the problems and tensions that have prompted us to establish *JPHE*, and use this as a backdrop for outlining the journal's ambitions, focus, and choice of 'praxis' as a central concept and base. We also provide some brief comments on the first issue contributions, and offer some hopes, possibilities, and perhaps provocations for future issues.

Tensions across global higher education

Higher education studies have long been a feature across many disciplines. In addition, they have also established traditions, institutional grounding, and several professional associations across the globe serving policy-makers, scholars, and stakeholders focused on higher education (Clark, 1983; Schwarz & Teichler,

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2000; Tight, 2012). However, despite the sustained focus on higher education as a social institution, its unique set of organisations, and interrelated professions, highly challenging tensions pervading higher education at an international level remain. They include the contrast between higher education as part of critical scholarly ecosystems *versus* higher education as uncritical echo chambers (Zackaria, 2017; Barnett, 2019); higher education as an inclusive and open public good *versus* higher education as an exclusive commodity existing for the profit of very few (Angervall & Beach, 2017; Robertson, 2018; Gibbs, et al., 2019); higher education experienced as neo-colonial and culturally racialised *versus* higher education experienced as a space in which postcolonialism is embodied in decolonial scholarly practices (Balibar & Wallerstein, 1991; Lentin, 2008; Takayama et al., 2017); and higher education as taking into account multipolar and multiple knowledge claims *versus* higher education as increasingly adhering to Euro- and US-centric biases in all aspects of scholarship (Danvers, 2018; Naidoo, 2016; Shahjahan, 2016).

These tensions are currently being exacerbated by a twin set of inward-looking conflicts that are not difficult to locate in higher education studies. First, there is a tension caused by an absence of dialogical scholarly respect across generations. Where this exists, we note it remains exacerbated by unwarranted expectations of one-way deference, grounded in paternalistic hierarchical logic (Hoffman & Horta, 2016; Pashby, 2015). Second, despite pretensions of scholarly cosmopolitanism, it is not difficult to find this squarely at odds with methodological nationalism (Beck, 1992, 2007; Shahjahan & Kezar, 2013). These complex tensions cannot be wished away by higher education policy makers, researchers, or stakeholders. Most importantly, their complex juxtapositions obscure a widely recognised and perhaps the most enduring tension within higher education systems: transformational social justice *versus* the reproduction of social inequalities. This tension is also paradoxically unifying in the sense that it is increasingly felt across continents, in countries, cultures, and communities. Related to these points, an interesting, and often ignored, question is the role that higher education currently plays in causing these very tensions (Gibbs et al., 2019; Robertson, 2015). Introducing a journal focused on engaging with these tensions and raising important critical questions about higher education seems like the least we can do.

The journal's mission

The key ambition of *JPHE* is to facilitate a wider discussion of the tensions we have highlighted above, contextualising and connecting local and national arenas,

as well as conversations within interest groups, practice communities, scholarly traditions, and disciplines. Our aim is to contribute to critical debate by creating a forum for problematising current higher education practices and conditions: highlighting injustices and unsustainable arrangements, from a variety of perspectives. A more global debate is important, even crucial we suggest, in order for higher education communities and interested parties to better understand, navigate, and engage in unconstructive tensions; in other words, to evolve in terms of situated societal relevance, along with allowing for being appropriately and imaginatively responsive.

We have chosen the central theme of 'praxis' with this in mind. The very idea of the journal was originally driven by the hopes and potential of creating possibilities for enacting and critiquing praxis. Higher education has historically changed—and continues to be changed by—society (Bourdieu, 1988). This is nothing new, but we argue that re-centring a wider discussion of praxis within higher education is needed if we want to engage, in generative ways, in issues, topics, ideas, and potentials that are increasingly missing or missed in contemporary higher education.

So what is praxis? We acknowledge that 'praxis' is a contested term, not least because it is used interchangeably with 'practice' in some contexts, or strongly associated with particular kinds of research, such as action research. Rather than risk narrowing debate about praxis, however, we refrain from providing a single definition. Instead, we raise what we see as key elements of human activity that the term praxis captures, and that we wish to facilitate in this journal. One concerns thoughtful (see Freire, 1970/2008) or informed action (Kemmis & Smith, 2008).[2] Another concerns' moral-social-political aspects of human activity[3], which takes into account, for example, power, policy, social regulations, and agency.

The journal's focus on the theme of praxis is intended to reignite debate about the moral-social-political dimensions of higher education and attention to the consequences of what has been and is being done, as well as the role of refection, reflexivity, and different kinds of knowledges in enabling informed and morally-sensitive and socially just action. In this sense, the theme of praxis in higher education is arguably relevant for all disciplines and cuts across all higher education practices. Our open invitation to broadly think about or even re-think praxis aims at what we believe is currently missing from established 'discourses in place' (Scollon & Scollon, 2004, p. 14) and higher education's 'practice architectures' (Kemmis et al., 2014; see also Kemmis & Mahon, 2017). Lastly,

[2] Intentional, reflexive or theoretically informed action (see Carr & Kemmis, 1986). Some also see this as connected to practical wisdom or *phronesis* (see Aristotle, 2011).

[3] See Durkheim, 2006; Bourdieu, 1988, Harding, 1994.

praxis, as a theme, has implications for the way we can understand universities as a public 'good' (Nixon, 2011; Pusser et al., 2012), and/or keeping alive debates about what constitutes the 'good' (and for whom) in any given society and historical moment.

The first issue contributions

This is the first issue of *JPHE*. We have reached the point where we have to ask whether this first issue offers what we intended, or even if the contributions vouch for 'the need of another higher education journal'. More submissions went through the reviewer process than we expected. Therefore, we hope that several, which were not quite ready for the first issue, will be re-submitted. These articles represent an exciting mix of focus areas, research objectives, theoretical lines, and conceptions. They are all critical, nuanced, and one could say daring, but in very different ways.

The first article, 'A conceptual enquiry into communities of practice as praxis in international doctoral education' by Liexu Cai, Dangeni, Dely L. Elliot, Rui He, Jianshu Liu, Kara A. Makara, Emily-Marie Pacheco, Hsin-Yi Shih, Wenting Wang, and Jie Zhang embodies 'communities of practice' in a well-sourced, highly accessible conceptualisation. This well-written collaboration sheds light on a key topic that many doctoral-level coordinators may be missing, especially when it comes to the support of doctoral students, in general, and international doctoral students in particular. This article is a 'must read' for doctoral students, doctoral program coordinators, and research team leaders leaning heavily of doctoral students. Further, the highly intuitive conceptualisation offers a solid point of departure for higher education specialists and doctoral programme coordinators alike who want to push back the boundaries and test assumptions about the difference between cutting-edge doctoral support and 'everything else'.

The *second article*, 'Organising the "industrialisation of instruction": Pedagogical discourses in the Swedish Primary Teacher Education programme' by Lena Sjöberg, explores the relationship between policy and praxis through an interesting analysis of pedagogical discourses and material conditions in a particular teacher education context. It usefully highlights how teacher educators' practices within this context are mediated by neoliberal and bureaucratic rationalities, using some striking examples which university educators in other contexts may recognise, such as lecturers being 'traded' between departments, and the commodification and atomisation of courses. The implications for student learning and collaborative work amongst teacher educators make this an

important contribution to knowledge about the conditions and possibilities for praxis in teacher education, and potentially, higher education more broadly, especially with respect to policy and policy enactment.

The third article, 'The work of research administrators: Praxis and professionalization' by Sandra Acker, Michelle K. McGinn, and Caitlin Campisi, is based on a highly relevant study about a relatively new group of professionals in higher education. The article offers interesting insights into research administrators' perceptions of their professional identity and into this field's professionalisation efforts. The results illustrate how research administrators have defined for themselves a praxis dedicated to easing the burdens of academics, helping one another, and contributing to the greater good of the university and the research enterprise. The discussion serves to broaden our understanding of the pressures and demands in contemporary higher education institutions but also of how this particular group is actively establishing a new, but also complex, professional field. For example, the research administrators in this study help academics to conform to expectations of performance, even though they also make working life more bearable and rewarding.

The digitalisation of society and education are in focus in the *fourth article* by Anna Roumbanis Viberg, Karin Forslund Frykedal, and Sylvana Sofkova Hashemi, titled 'Teacher educators' perceptions of their profession in relation to the digitalization of society'. Studies on the affordances and challenges of teaching in a digital age are not new. However, this article particularly highlights the demands on a particular group of university educators—namely teacher educators–whose pedagogical work traverses two educational arenas, and two sets of teaching practices: their own and the teaching practices of the students in their teacher education programmes. The article offers important insights into tensions experienced by teacher educators related to their sense of isolation, lack of support, and their relationship to digital tools. The discussion prompts readers to consider what these tensions mean for the teacher educators' sense of self and their possibilities for engaging with technology in a critically reflective way. In this respect, and many others, the article is relevant beyond the teacher education context.

On future issues

When creating something new, we always start from something familiar. There is of course a value in tradition and convention, as it is the continuities of higher education that explain and form its unique, institutional, organisational, and professional character across the globe, as well as its strengths and potential

(Hoffman & Välimaa et al., 2016). However, the key tension highlighted by continuity, convention, and tradition in higher education (and research) is discontinuity, challenges, and change. Therefore, *JPHE* will inevitably evolve, based on our own understandings of higher education, and our editorial team taking tensions in our focus genuinely. We hope the evolution of the journal entails attention to tensions found in higher education that are often reproduced in its journals, either through content or editorial and review processes (or both). Thus, our ambition is that *JPHE's* style, process, and content will, over time, push the boundaries of 'the academic journal' in the interests of promoting scholarly integrity and debate, broadening access to important ideas and research, and encouraging diverse and interesting perspectives.

To this end, we have established the journal as an online, open access, not-for-profit journal with a triple blind review system and a commitment to quick 'turnarounds'. We are currently considering possibilities for future issues, such as the opportunity for authors to publish in both English and other languages, or to present their research/scholarly work in novel ways. In the near future, we also hope to broaden both our editorial team and reviewer base. These features and aims are necessary if our intentions and ambitions with this journal are to be taken seriously.

For future issues, rather than coming down on one side or another of the tensions we highlight above, we are actually hoping for articles that are well-argued, including those that make a case for what might be considered outdated conventions, that highlight the necessity of unpopular policies, or with which the editors do not agree. We are especially interested in contributions that address the tension between what higher education *all too often is* versus what it *could be* in a curiosity-driven, constructive, yet critical and creative way. Therefore, we encourage and seek out sustained dialogue regarding different contested spaces of higher education that are relevant and responsive to praxis. The voices of actors often missing from, or marginalised in, higher education debate will be particularly welcomed. Such contributions, we believe, will serve as essential resources for helping those in higher education communities rethink the current state of affairs, and imagine how higher education might be otherwise, in their own settings, and globally. Hence, and to conclude, we return to our opening question: 'Does the higher education research community *really* need another higher education journal?' Our answer must be *Yes*!

The Editorial Team

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A conceptual enquiry into communities of practice as praxis in international doctoral education

Liexu Cai, Dangeni, Dely L. Elliot, Rui He, Jianshu Liu, Kara A. Makara, Emily-Marie Pacheco, Hsin-Yi Shih, Wenting Wang, and Jie Zhang[1]

Abstract

Undertaking a PhD entails diverse and multi-faceted challenges as doctoral researchers enter a distinct academic culture that requires transition to a new level and threshold of learning – with both knowledge acquisition and production at the core. While doctoral researchers are expected to secure different dimensions of knowledge, which necessitates meaningful 'dialogue' with experts, the colossal task is still ironically associated with isolated doctoral experience and somewhat limited postgraduate supervision provision. With the extra concerns typically confronting the international doctoral cohort, the pressure tends be intensified, and may lead to psychological well-being concerns. Nevertheless, there is evidence from the literature that highlights the often unacknowledged forms of learning opportunities and support mechanisms via community participation. By employing communities of practice as the main framework, this conceptual paper exemplifies the crucial role played by these communities – how these communities serve to scaffold doctoral researchers' academic progress, support their psychological adjustments, and reinforce the crucial, but perhaps limited, formal doctoral support provision. By featuring effective examples of educational praxis via these communities, our paper offers a holistic understanding of formal and informal infrastructures as part of the wider doctoral ecology with a view to achieving a more holistic and meaningful doctoral experience.

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The present conceptual paper offers several distinct contributions to research on international doctoral researchers. First, this paper is a product of a collaboration among a group of international doctoral scholars, which draws upon an examination of original studies contextualised in international doctoral

[1] Each author is an equal contributor to this paper.

researchers' engagement in communities of practice (CoPs), and their role as active embodiments of education-based practice (praxis) (Wenger 2000; 2010). Second, this paper reflects the group's engagement in its own casual community, which entailed active participation in an authentic writing exercise that offers a novel, supportive, and transformative academic experience (i.e., Wilmot & McKenna, 2018). Third, this paper contributes to timely discussions concerning the increasing psychological well-being concerns among doctoral researchers (see Barry et al., 2018; Levecque et al., 2017; Schmidt & Hansson, 2018). We employ the term 'doctoral researchers' as it is not only more inclusive, but it also reduces the power differential between supervisors and supervisee, especially since we argue that tacit learning can be acquired in various contexts, for example, different communities.

This paper clarifies the common challenges for international doctoral researchers and then explores the implications of these challenges (e.g., psychological well-being) using a CoP framework. Overall, this paper argues for the strong interconnections among the different aspects constituting doctoral ecology, highlighting the role of CoPs as an effective praxis. This paper also presents a model as a means of synthesising the knowledge hereby contributed, as a better understanding of the utility of these communities may inspire improvements of the overall international doctoral learning experience at the institutional level. Ethics approval was not necessary to undertake this research.

Pressures of doctoral education

Doctoral researchers are faced with the intellectually demanding task of undertaking an original piece of research, with the intention of offering a contribution to existing knowledge. Doctoral studies necessitate mastery of various forms of knowledge and skills (e.g., subject, research, or discipline-related) both in formal and tacit ways (Delamont & Atkinson, 2001). Wisker, Robinson, and Shacham (2007) propose that all research is a form of 'dialogue' with others, yet the doctoral experience often remains an isolated experience despite postgraduate supervision and some courses. Wisker et al. (2007) also argue doctoral education is inherently high-pressure, which may contribute to the increasingly explicit links between undertaking such programmes and the poor mental health of doctoral researchers (see Barry et al., 2018; Levecque et al., 2017). The literature also acknowledges specific issues that may predominantly affect the international PhD cohort, such as studying in a second or foreign language, operating in a different academic culture, enormous pressure to succeed, and isolation being away from major social support (e.g., Elliot,

Baumfield et al., 2016, Elliot, Reid et al., 2016; Holliday 2017; Lee, 2017; Li & Zizzi, 2018). These extra layers of complexity facing international doctoral researchers could also exacerbate the PhD effect on their psychological well-being, at times, even to the point of dropping out (Laufer & Gorup, 2019). An authoritative report on (UK) international doctoral researchers' well-being highlights the probability that this cohort is more 'vulnerable to developing poor mental health' and that they are 'likely to experience a combination of risk factors', 'including their ability to adjust to a new culture, their existing cultural mores, finance, visas, family circumstances and potentially less access to family and friend support.' (Metcalfe et al., 2018, pp. 23, 25).

Taking Metcalfe et al.'s (2018) argument on the greater mental health risk from which international doctoral researchers may suffer, and then linking it to Wisker et al.'s (2007) assertion of the importance of 'dialogue', we will investigate the role of communities as channels for developmental learning interactions and supportive relationships. These communities may be formal or informal, structured or unstructured, focused on personal and social aspects or on academic and disciplinary aspects, and they may exist within, between and/or outwith higher education institutions. In the next section, we review Etienne Wenger's concept of communities of practice (CoPs) and describe how and why CoPs can foster participants' general learning, adjustment to a new setting, and psychological well-being.

Communities of practice as praxis in education

Wenger (2010) defines communities of practice (CoPs) as social learning systems and as existing *in* social learning systems. Put simply, CoPs are 'groups of people informally bound together by shared expertise and passion for a joint enterprise' (Wenger, 2000, p. 139). It is worth noting that not all communities are CoPs. Wenger (2000) presents a helpful differentiation of communities of practice from other types of social groups within organisational settings. Since CoPs are conceptualised as social learning systems, their purpose is to develop members' skills and help members build and exchange knowledge. This is in contrast to informal networks where the goal is only to transfer knowledge; it is also opposed to formal groups or project teams that aim to deliver a specific product or accomplish specific tasks (Wenger, 2000). Wenger purports that what makes CoPs unique relative to other types of groups is that the members individually determine their level of passion, commitment, and identification with the group, which ultimately holds the CoP together.

We propose that the concept of CoPs can be understood, within the context of the international doctoral study, as modes of education-based praxis. The means of transforming theory into practice is often referred to as praxis. The term *education as praxis* refers to the manifestation of educational theory and pedagogy as lived and experienced practice, such as in classroom settings or as exhibited by the lived roles and responsibilities of doctoral researchers (McKerrow, 1989). Praxis is also cyclically reflexive, as it 'starts with an abstract idea (theory) or an experience, and incorporates reflection upon that idea or experience, and then translates it into purposeful action' (May & Sleeter, 2010, p. 110). In this way, praxis may be understood as the 'development of the personal lens through which one sees the world' (May & Sleeter, 2010, p. 116), and as a lens that continuously develops in response to environmental factors and lived experience (e.g., Shaffer, 2004). As education's primary objective is often to develop the mind through which a learner understands and engages with the world, the notion of praxis well encompasses the reflexive process of internalising knowledge developed through education; this then informs the practice and experiential education of learners – such as through CoPs (see Freire, 1970; May & Sleeter, 2010).

CoPs may be understood as mechanisms of the 'hidden curriculum' – also referred to as the 'informal tacit learning through socialisation' with other people (Elliot, Baumfield, Reid & Makara, 2016, p. 738) – which foster a bridge between theoretical knowledge and practical knowledge in any learners, at even the most basic levels. For example, doctoral researchers are assigned to a team of supervisors that belong to a particular school, department, or institute within their university. They may also have friends that share similar interests or life situations with whom they regularly meet, as well as new neighbours and new communities while studying abroad. Further, they may use social media to connect to other researchers in their discipline, join a variety of professional disciplinary organisations, and have particular roles or projects they are working on with other people (e.g., teaching classes, working on collaborative research projects). However, simply being formally nested within a community (e.g., a researcher who is supervised by someone within a department) does not ensure that one is a member of the communities of practice that may exist in that department. It is only when doctoral researchers join communities that share a common enterprise, actively choose to participate, have a shared repertoire of language, norms, and artefacts, and mutually engage in the building of new knowledge, that they then become part of a CoP (Wenger, 2000). This notion is consistent with the literature concerning the practice of education, which suggests learners must engage in *mutuality* through involvement and engagement with informal constructs of

education (e.g., CoPs), as these engagements are the core of education as praxis (i.e., Meurs, 2012).

Several important elements of CoPs have implications for international doctoral researchers' experience. Firstly, when international students join CoPs, they further develop their identity. Wenger (2010) proposes that learning within CoPs transcends simply acquiring new skills and understanding, but also involves 'becoming a certain person – a knower in a context where what it means to know is negotiated' (p. 2). When international students 'become' doctoral researchers, they begin to identify with their new role, such as a scholar 'becoming' an expert in their discipline. However, the process of 'becoming' may also present psychological challenges (e.g., imposter syndrome) and perpetuate 'the sense that one is not good enough to be in academia' (Keefer, 2015, p. 20).

Secondly, Wenger (2010) proposes that one's identity within CoPs is a trajectory that accumulates experiences, events, stories, and relationships over time. By joining CoPs, international doctoral researchers experience ongoing identity development before, during, and after the doctoral journey. Doctoral researchers may self-identify (or not identify) as part of the CoP at different levels (e.g., lab, institution, country of study, discipline). Thus, CoPs may not only support general knowledge creation, but also support the learning and well-being of those nested within them. Through membership in CoPs, doctoral researchers' well-being is supported via: 1) increased competence as a result of social learning and adopting tools of intellectual adaptation; 2) autonomy in choosing to engage within a CoP; and 3) relatedness as a result of regular interaction and engagement with others within CoPs.

Aims and rationale

Although the concept of CoPs has been previously explored in relation to doctoral study, these investigations have typically focused on individual communities (i.e., case studies; see de Laar et al., 2017; Thein & Beach, 2010). By contrast, there has been less research specifically on international doctoral researchers' multifaceted CoPs involvement. Some relevant contributions emphasise the challenges and benefits of communities. As an example, Elliot, Baumfield, et al.'s (2016) investigation of the unique social spaces endorses the importance of having a 'third space' in supporting international doctoral researchers' experience of academic and societal acculturation.

This paper therefore makes a contribution to knowledge by using the concept of communities of practice as praxis through reviewing the literature on selected communities. By doing so, this paper aims to present an understanding of

how learning can be acquired within these communities during doctoral study. This discussion then highlights the benefits and challenges posed by each of these social learning contexts. Having equally considered the increased concern about doctoral researchers' psychological well-being as well as the potential benefits from communities of practice, our exploratory research questions are:

- What are the different forms of communities available to international doctoral researchers?
- How do these communities affect international doctoral researchers (e.g., academically, professionally, psychologically)?

Methodology

The different communities and activities in which doctoral researchers engage throughout their study abroad seem to comprise formal, semi-formal, and informal activities, and are further categorised into either 'doctoral specific' or 'academic general' (McAlpine et al., 2009). Weidman and Stein (2003) similarly note that doctoral researchers are socialised via 'professional, higher education institutional, and personal communities' during their academic journey (p. 643). To date, however, the existing research tends neither to consider the benefits and challenges that arise from simultaneous engagement in several CoPs, nor to consider how each of these communities relates to the social, cognitive, or overall psychological well-being of international doctoral researchers.

Taking existing research literature into account, we (two academics and eight international doctoral researchers) then brainstormed a list of CoPs from our personal observations and lived experiences. We considered this an important preliminary step leading to the identification of four CoP categories: institutional communities, disciplinary communities, cultural communities, and communities of common interests and needs. These four identified CoPs then served as the basis for conducting a review of research literature, using a variety of key words and Boolean operators (e.g., 'doctoral researchers' OR 'PhD students') on the EBSCOHost multidatabase. This was supplemented by scanning recently published research from thematically relevant journals for additional relevant studies. While we did not limit ourselves to reviewing only literature on international doctoral researchers, we were more focused on literature about different types of communities that have potential implications for international doctoral researchers. The following shared questions guided our literature review and writing: 1) How is the community defined in the literature and how structured is the community?; 2) What role does the community play for international

doctoral researchers (e.g., what outcomes does it influence)?; 3) What are the mechanisms through which this community influences international doctoral researchers?; 4) What does the literature suggest are 'best practices' for international doctoral researchers to join and thrive within that community?; and 5) Are there any interesting findings, unexplored questions, or debates in the research literature emerging in this area?

Four small groups initially led the review for each of the four communities. Given the wealth of information that emerged for each community, we strategically focused on only one or two examples of communities per category. Upon sharing and peer-reviewing each of the four communities, we revisited the literature as appropriate to add examples, definitions, and clarifications. Finally, our several collective group discussions informed the key messages conveyed in this paper.

Four communities of practice and praxis

As detailed in the Methodology section, our categorisation of different communities and discussion of a variety of labels led to a final list of four types of CoPs: institutional communities, disciplinary communities, cultural communities, and communities of common interests and needs – each with a wide range of aims and purposes, levels of formality, inclusivity, and degree of structure. In this section, we will critically review the extant research on these four broad types of international doctoral researchers' CoPs, and their embodiment of educational practice – including the hidden curriculum. Whereas some CoPs are related to disciplinary traditions and methodological interests, others are a matter of personal choice and need. By virtue of the term *communities of practice*, there is an inclination to think that these communities are solely founded on educational premises, but that is not necessarily the case.

Institutional research communities

While often overlooked, higher education institutions provide international doctoral researchers with many foundational relationships which are not only central to their integration within their fields, but also contribute to their overall development as academics. Institutional research communities or communities inevitably formed as a result of joining a department within an institution arguably serve as social networks, which connect individuals within a specific organisational and/or professional environment. Where international doctoral researchers are concerned, the roles of institutional research communities within their academic research institutions are particularly important in shaping their

academic and research experiences. Specifically, engagement at the school level (e.g., department, specific subject area, peer-group) and at the college level (e.g., faculty, focused academic discipline, advisors), which can also be informed by other support provision, for example, mentoring, have been documented as greatly beneficial to international doctoral researchers (e.g., Ku et al., 2008). The ensuing sub-section highlights the significant role institutional research communities play in shaping international doctoral researcher development, while also contributing to an investigation of the mechanisms that facilitate these interactions.

An in-depth review of the literature suggests that these communities operate more effectively when they facilitate a sense of belonging amongst members, especially if done across multiple social domains (e.g., He & Hutson, 2018; H. Y. Kim, 2011; Roberts, 2006; Wenger, 2000). Considering that international doctoral researchers are particularly sensitive to feelings of isolation and estrangement, engagement with research communities at both the school and college levels of host institutions via regular participation at seminars, workshops, peer reviews and writing retreats, among others has notably been found to be most effective in stimulating a sense of membership amongst this population (e.g., Roberts, 2006; Wenger, 2000). Likewise, working in cohorts of like-minded doctoral peer groups, while also maintaining strong relationships with supervisors, not only empowers doctoral researchers, but also promotes their transition from learners to field-experts (e.g., Hung et al., 2005; H. Y. Kim, 2011; Palmer, 2016; Posselt, 2018). As a case in point, the monthly PhD Roundtable organised by Shan (2019, April) with her fellow international doctoral researchers is a platform for discussing social issues. Apart from aiming to gain an appreciation of the local culture and events, the discussion is intended for mutual development of participants' intercultural communication skills in a friendly and informal setting. Engagement with peer communities can be extremely effective. It serves as an ideal space for peers sharing knowledge via a friendly 'debate', challenging other participants' views and even offering critical feedback that not only sharpens analytical thinking but may also lead to improving the quality of writing.

Moreover, supervisors are often regarded as ambassadors beyond their faculties, and often act as brokers between doctoral researchers and the university; for this reason, supervisory relationships are classified as departmental level communities. At the departmental level, supervisory relationships foster feelings of belonging amongst international doctoral researchers and their relevant communities by actively engaging with them as in-group members, thereby reinforcing their identity as researchers and facilitating their connections within relevant groups (Roberts, 2006). Thus, these communities harboured within each of these institutional domains (i.e., school, college) are supported by the literature

as central mechanisms for international doctoral researchers' development and success (e.g., Rodwell & Neumann, 2008; Shacham & Od-Cohen, 2009).

Overall, international doctoral researchers are likely to benefit from engaging with institutional research communities within their host institutions across various social levels – whether in facilitating academic growth and research experience, promoting a supportive research environment, supporting doctoral transition, and/or providing practical support (e.g., linguistic competence, autonomous learning). The literature advocates that international doctoral researchers benefit the most from their working relationships when they are simultaneously engaged (e.g., contributing to, networking, etc.) with their institutional communities at various levels (e.g., H. Y. Kim, 2011; Palmer, 2016; Shacham & Od-Cohen, 2009). Interactions at these levels are particularly important in shaping the experiences of this cohort, as these communities often promote feelings of belonging between international doctoral researchers and their new professional, academic, and social environments. In this way, it can be argued that international doctoral researchers' engagement with the communities within their host institutions is not only invaluable to their scholarly development, in reducing imposter syndrome, and increasing a sense of belonging, but equally, to their further development as academics and/or independent researchers.

Disciplinary communities

International doctoral researchers often seek opportunities to join disciplinary communities that suit or are aligned with their research interests. Previous literature on disciplinary communities, however, has primarily discussed these communities in vague terms. A potential definition of 'disciplinary community' is a community in a particular field that can provide both established and emerging scholars with space and opportunity to motivate others and learn more about their respective research areas (Taylor, 2011). Engagement in disciplinary communities may include participating in annual conferences in one's subject area or attending research methods seminars/workshops. It is worth noting that these communities are not restricted to face-to-face interactions; participation in social media (e.g., Twitter) can also characterise a type of disciplinary community. This section discusses the specific roles that a few disciplinary communities may play for each doctoral researcher.

As one of the widely acknowledged and traditional types of disciplinary community among academics and doctoral scholars, communities formed through conferences have been widely discussed in the literature. Attending conferences provides opportunities for all doctoral researchers to interact with fellow researchers, leading to enhanced knowledge in the field and at times, even raising their professional profile within the research community that may assist career

progression (Avison et al., 2005). Improved confidence, increased understanding of methodological considerations and even of presentation styles gained through conference participation have been highlighted (Joshua, 2017). As Ai (2017) reflected on his experience of conference participation, it led him to appreciate its role in constructing and strengthening his academic identity. His identity reflected a gradual transition from being a novice learner to becoming a scholar, supplying him with more energy and confidence as he moved forward on his PhD journey. This then played an essential role in both his well-being and research productivity.

Interestingly, international doctoral researchers may play a variety of roles through attending conferences – from being a delegate, a presenter or even a session chair in doctoral consortium events (Avison et al., 2005). Irrespective of the role they play, their attendance allows them to meet with and listen to some of the 'big names' (or authorities) in their field and, in turn, become at ease with the conference atmosphere and social practices in this context. Conference attendance and participation can also help transform doctoral researchers from being passive attendees to being motivated and more engaged scholars – assisting their overall professional development (Ai, 2017; Joshua, 2017).

Despite the limited literature on the extent to which disciplinary communities can be of specific benefit to international doctoral researchers, it is fair to say that being part of disciplinary communities often extends beyond one's institution and is likely to benefit all doctoral researchers – local and international alike. Compared to the traditional disciplinary communities, participating in online disciplinary communities, on the other hand, tends to serve similar functions and is also often found to be beneficial to all doctoral researchers. Social media is regarded as a loose term for web-based tools that involve participation and knowledge contribution (Hemsley & Mason, 2013) in which there is an increasing presence among academic communities, for example, Facebook, YouTube, and Twitter (Xu & Mocarski, 2014). Twitter will be discussed in detail as doctoral researchers increasingly use this platform as a way of engaging with their respective disciplinary communities.

Whereas Twitter offers a new platform for doctoral researchers to present themselves, their work, and their research ideas to a wider community (Bennett & Folley, 2014), it also helps develop virtual networks. These online networks can even complement traditional institutional networks and assist in coping with the loneliness associated with doctoral education (Rainford, 2016). Using Twitter during conferences can facilitate building a broad and rich scholarly network and, gradually, help develop a reputation as a highly skilled and competent researcher. By identifying novice and experienced academics with similar research interests, doctoral researchers can start interacting with these scholars, learning from them

while offering ideas, and keeping in contact during and even after the conference (Coad, 2017).

Nevertheless, attention needs to be paid to the potential drawbacks of using Twitter for academic purposes. Using Twitter could unintentionally lead to misinterpretation or simplification of ideas due to its restricted length, that is, 280 characters (Rainford, 2016). With the indefinite wealth of resources and fascinating ideas provided by other Twitter users, participation might also lead to doctoral researchers' mishandling their time. This section has demonstrated that some of the approaches to facilitating doctoral researchers' journey could be through joining disciplinary communities, for example, attending conferences or using Twitter. By joining these communities, international doctoral researchers are likely to gain confidence in the short term and also help build their academic identity in the long term.

Cultural communities

International doctoral researchers are exposed to cultural-related challenges that can have an impact on their sense of self. Unsurprisingly, this prompts them to seek support from people who share the same culture – referred to as 'co-nationals', or 'students from the same ethnic background or country' (Bodycott, 2015, p. 247). A larger community formed by those who regard themselves as co-nationals can then be considered a cultural community. These interpersonal relations between international doctoral researchers and their co-nationals are viewed as supportive of international doctoral researchers' social networks, acculturation, and their personal and professional development (C. Haslam et al., 2008; Jindal-Snape & Rienties, 2016; Ng et al., 2018). Generally, co-national groups may provide a means for international doctoral researchers to maintain their own cultural practices while studying abroad as well as for discussing and sharing within this group their views, their understanding, and experience of the new culture (Berry, 1997; Muldoon et al., 2017; Woolf, 2007).

On the positive side, contact within a co-national group enables international doctoral researchers to enjoy shared cultural identity and support – emotionally, academically, and socially. S. Haslam et al. (2005), for example, argues that individuals are more likely to give and receive support from others with whom they share a similar or the same social identity. Within this context, support is also more likely to be interpreted positively. According to Taha and Cox (2016), having a common language and general cultural similarities are likely to increase the chances of building friendships and international students' networks. As found in a number of empirical studies (e.g., S. Haslam et al., 2009), an investigation of overseas students' experiences and sense of belonging and membership suggests that these factors impact positively on both their learning

experiences and social lives, especially through offers of emotional support (e.g., friendship and adjustment to the host country). Affiliation in cultural communities generally helps the international student cohort alleviate potentially negative stressful emotions that overseas study could bring (Ng et al., 2018; Reicher & Haslam, 2006). In sum, membership in a cultural community can arguably have positive implications for international doctoral researchers' mental health and well-being thus facilitating academic adjustments and life transitions during overseas study.

At the same time, co-national groups can lead to conflict within the group. For example, Jehn's (1995) study highlights two types of 'intragroup conflicts' (p. 268). The first one is the conflict arising from having different perspectives, ideas, and interpretations of certain studying tasks (i.e., task conflict). The other conflict concerns the incompatibility of interpersonal relationships observed through being irritated or annoyed by other members in the same group (i.e., relationship conflict). As Y. Y. Kim (2001) noted, while studying abroad, international doctoral researchers' stress could be aggravated by intragroup conflicts (e.g., task conflict or/and relationship conflict) and can result in psychological distress. Y. Y. Kim (2001) argues that although these cultural communities may offer short-term language, academic, and social support, potential negative impact may likewise occur because this international student cohort may be encouraged to rely on the comfort of being in a co-national group rather than explore integration into the host culture and learn novel ideas and practices. In this respect, although cultural communities may help maintain or reinforce students' social-ethnic identity, group members may become less inclined to adapt to the customs and traditions in host countries, which might also contribute to intragroup conflict (Ward & Searle, 1991). As Bodycott (2015) has argued, intragroup conflict occurs due to 'personality differences, personal identity, expectations and goals, and stresses associated with acculturation' (p. 247). A number of studies indicate that even a positive transition when moving to a new country can have a negative impact on individuals' psychological well-being since the process of adjustment can create upheaval, challenge, and/or uncertainty (C. Haslam et al., 2008; C. Haslam et al., 2016; Ng et al., 2018). Paying attention to reducing possible conflicts, particularly for international doctoral researchers is, therefore, arguably essential.

Taken together, being part of cultural communities is likely to be beneficial to international doctoral researchers' psychological well-being as well as their general progression and academic performance. Equally, it can serve as a barrier to gaining new knowledge and skills that are pertinent in understanding how things operate in the new environment while studying abroad. Therefore, a better understanding of the role of a co-national group and factors leading to intragroup

conflict has potential practical implications for facilitating successful overseas study-related transition among the international doctoral community.

Community of common interests and needs

As overseas educational sojourners, international doctoral researchers are likely to face more challenges and difficulties than their domestic counterparts, both emotionally and psychologically (Metcalfe et al., 2018). Such challenges may include acculturative stress and societal adjustment, as well as double loneliness and isolation (Elliot, Baumfield, et al., 2016; Sawir et al., 2008; Yeh & Inose, 2003). This section discusses how groups may spontaneously gather in informal communities based on their shared interests and/or needs, as a way of contending with these challenges. There is no specific recognition of the community of common interests and needs from the previous literature. The 'third space' concept that was proposed by Elliot, Baumfield, et al. (2016) towards international doctoral researchers' academic acculturation is one of the nearest conceptualisations of this type of community. 'Third space' refers to 'the informal spaces that foster personal learning, enjoyment and development through friendships, social activities and wider support networks' (p. 1189). The community of common interests and needs echoes the third space notion by seeking personal learning and enjoyment, not individually but as part of a group, enabling the formation of a community. In particular, two communities in relation to religious participation and physical activities are the most prevalent communities that have been discussed in the literature making them ideal examples of the fourth type of community.

With respect to religious participation, the literature has indicated two examples of international students' active engagement in religious communities (see Ding & Devine, 2017; Gardner et al., 2014; Hsu et al., 2009; Yu & Moskal, 2019). The first group represents the religious international students who are actively engaged in local religious communities. Both Hsu et al. (2009) and Gardner et al. (2014) have investigated Muslim students studying abroad in non-Muslim countries. Drawing upon their research, they suggest that spirituality and affirmative religious practices are positively related to Muslim students' perception of a high quality of life, stress alleviation, and cultural acculturation in New Zealand universities. The second group represents the non-religious international students who engage in church communities abroad. Research indicates, for example, that some Chinese students have been actively engaged in church activities, and even converted to Christianity during their PhD study abroad (Ding & Devine, 2017). Accordingly, experience of internal challenges common among the international student cohort, for example, suffering from negative mood due to loneliness or cultural adaptation, as well as external

circumstances, including intercultural engagements in the university – matched with the openness of Christian groups – are contributory factors for their participation (Ding & Devine, 2017; Yu & Moskal, 2019).

Another example of such a community relates to physical activity, which is widely recognised for its many physiological and psychological benefits. For example, participation in sports and physical activities can lower the risk of certain types of disease (Myers et al., 2004), reduce stress, depressive and anxiety symptoms, and instead increase one's self-esteem (Callaghan, 2004). Although there is existing research on physical activity participation among students, it is seemingly less common among international students (Suminski et al., 2002; Yan & Cardinal, 2013). In this context, the creation of a suitable social network in which international doctoral researchers are able to interact with either domestic, co-national, or other international students can help promote not only engagement in physical activity but also enable socialisation opportunities while harnessing their potential (physical and psychological) health benefits. Further, this kind of programme may not only provide social support for doctoral researchers' transition into the host culture, but also enable them to experience positive intercultural exchanges with both domestic and international groups. Potentially, joining a community of common interests and needs could then enhance international doctoral researchers' intercultural competence.

Yan and Cardinal (2013) describe the Peer Education System – a system for delivering knowledge that can improve not only international students' social learning but may also provide psychosocial support for various groups of students (Abdi & Simbar, 2013). A fully functioning peer education system is available in various formats and offers a number of activities, for example, participation in physical activities, development of self-efficacy, and peer counselling, where counselling with peers can provide social support and encouragement, and identify strategies for overcoming barriers (Dorgo et al., 2009). Cooperation between peers can be used to resolve the problems and further build peer interaction (d'Arripe-Longueville et al., 2002). Such a system exemplifies an ideal physical activity type of CoP.

As international students have become a significant group in the global higher education environment, promoting communities that can assist their academic and societal acculturation is arguably more important than ever. Finally, through interaction, via communities of students' common interests and needs, with other international doctoral researchers, local doctoral researchers, and even staff members, international doctoral researchers may be prompted to refresh their own interests, enhance their intercultural competence, and further develop their ability for greater and higher quality interactions in an increasingly pluralistic environment.

Discussion and conclusion

Wenger's (2010) communities of practice has provided a helpful framework in crystallising the features of these communities and the implicit roles that various communities available to international doctoral researchers could play during their journey. As 'social learning systems', CoP membership is characterised by self-selection and driven by shared passion and commitment that subsequently leads not only to identity and skills development, but also to shared creation of knowledge (as opposed to mere transfer of knowledge). Recognising that participation often starts at the periphery, eventually leading to full-blown engagement, it is to be stressed that active engagement rather than mere membership is central to each CoP. Reiterating these characteristics is pertinent in connection with each of the four communities we conceptually investigated in this paper.

Each of the four communities discussed conform to Wenger's communities of practice. In these communities, no participation or membership is forced. In fact, we strongly argue individuals' selective and informed strategy is key to participation since there are generally a large number of communities that international doctoral researchers could consider joining. In employing a strategic approach to selecting communities, consideration may vary based on their research discipline, subject, expertise, and specific areas of interest within and outwith academia. Nonetheless, our conceptual exploration of the direct and indirect effects of these communities has highlighted specific areas of growth and development: a) identity development, b) scholarly growth, c) psychological well-being, and d) personal and professional growth. This is synthesised in Figure 1 and is further elaborated in Table 1.

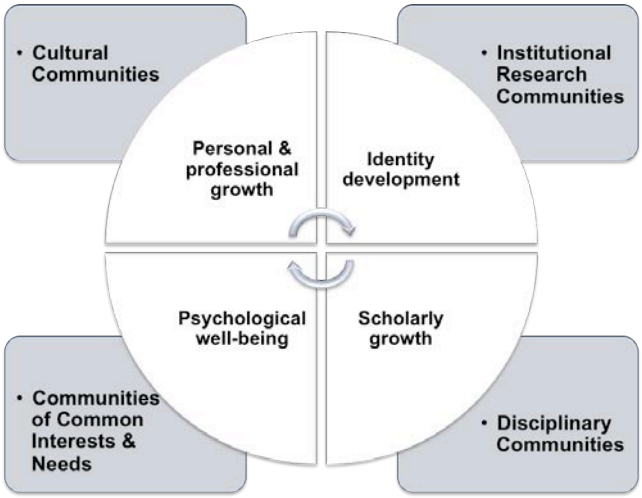

Figure 1. Direct and indirect impact of CoPs on international doctoral researchers' journeys.

Impact on international doctoral researchers*	Institutional research communities	Disciplinary communities	Cultural communities	Communities of common interests & needs
Direct effects	• Scholarly growth • Stronger relationships with staff and doctoral community • Supporting doctoral scholarship • Confidence building	• Enhanced knowledge via interaction with scholars & experts • Personal and professional growth • Research dissemination and communication	• Affiliation with familiar home cultural practices • Emotional, social and academic support • Supportive way of understanding a new culture	• A sense of belonging • Physical and psychological well-being benefits; stress alleviation • Better self-esteem
Indirect effects	• A sense of academic membership • Foster feelings of belonging • Reinforcing identity as researchers	• Academic identity development • Confidence building • Expanding networks • Building reputation in the field • Receiving academic support	• Creating comfort zone based on friendships and networks • Supports psychological well-being • Affirming social-ethnic identity	• Intercultural engagement and competence • Socialisation opportunities • Opportunities for spoken language practice
Positive implications	• A supportive research environment • Academic-modelling - source of inspiration • Preliminary exposure to post-PhD work	• Motivation for future academic work • Professional development • Membership in the disciplinary community	• Facilitates overseas transitions and academic adjustments	• Facilitates overseas transitions and academic adjustments • Challenge to refresh one's interests
Potential conflicts	• Active engagement is essential, not an option • All CoP members being ready to engage, contribute knowledge (irrespective of benefit received)	• Misinterpretation or simplification of ideas on Twitter • Mishandling of time	• Intragroup conflicts arising from interpersonal relationships • Less preference to interact with the host culture/people is a learning obstacle	• Potential conflicts with community members

Table 1. *Impact, implications and potential conflicts of CoPs on international doctoral researchers' journeys.*

*Various areas of growth and development—identity development; scholarly growth; psychological well-being and personal; and professional growth—are interlinked. Equally, they can manifest themselves as either 'direct' or 'indirect' effects of joining any of the four communities of practice.

Although many of these communities may not even be acknowledged at the end of a successful doctoral journey, Figure 1 and Table 1 both indicate their strong contribution in promoting, maintaining, or enhancing international doctoral researchers' identity, scholarly growth, and psychological well-being during the doctoral study – stressing the strong connections between academic and social life through engagement in meaningful activities within these communities. Whereas engagement with far too many CoPs may lead to doctoral researchers being overwhelmed and/or time mismanagement, a careful selective and strategic harnessing of the CoP resources via exploration and active participation can pave the way to personal and proactive building of knowledge and skills. Such engagements can subsequently maximise international doctoral researchers' overall learning experience. Through CoPs, they can experience a deeper sense of belonging and even assist their understanding of what a PhD entails. In turn, this can help sustain their academic engagement. Altogether, this 'community participation' component is also arguably significant in maintaining international doctoral researchers' physical health and psychological well-being.

Finally, understanding the impact of their engagement in CoPs can contribute to a broader appreciation of the notion of 'doctoral ecology' or the various interrelations between institutional, professional, societal, and private aspects in doctoral education (Barnett, 2018; Bengtsen, in press). Such understanding offers reciprocal benefits since gaining a holistic perspective on doctoral ecology could also prompt an examination of the interconnections among these different aspects, generally leading to an improved doctoral learning experience—especially where the embodiment of educational practice (i.e., praxis) is concerned.

Accepting the premise of doctoral ecology can have practical implications for practice and further research. Starting with international doctoral researchers themselves, openness to how active engagement in these communities can impact on the quality of their doctoral experience is arguably worthy of consideration. It can be observed that, to date, a lot of institutional support provision is centred on formal communities, but less on informal ones. It would then be helpful to raise awareness of the hidden benefits of participation, even from 'non-academic' or 'social' communities as they impact on international doctoral researchers' overall well-being and access to the hidden curriculum, and ultimately on their academic and professional success. By doing so, supervisors and other staff members can assist in spreading this message through induction events, seminars, workshops, or via supervisory meetings. With this paper advocating the value of international doctoral researchers' greater engagement with CoPs to bring forth a holistic doctoral development, there is warrant for a concerted effort from doctoral researchers themselves, with their supervisors and/or with support from the

institutions to realise an active organisation, pursuit, and engagement in differing forms of CoPs.

As for the limitations of this conceptual paper, although we endeavoured to be thorough in the whole conduct of this review, this is *not* a systematic review. Whereas we acknowledge existing differences concerning the needs, challenges faced, strengths, and passions of international doctoral researchers, we treated international doctoral researchers as one whole cohort for this review of the literature. As for future studies, a systematic review is a possibility. Also, exploring further the first-hand effects of CoPs can be undertaken through pursuit of empirical research. One design could explore comparative experiential perspectives when engaging in CoPs (i.e., groups based on disciplines, gender, or countries of origin, as well as comparison with local doctoral researchers). Another design may consider taking a longitudinal approach to explore the extent of CoP participation's impact on various doctoral phases (beginning, middle, end phase). There may even be a possibility of researching higher education institutions' extant examples of best practice to support CoPs, the mechanisms that maximise their impact on various levels (e.g., personal, academic, professional), as well as the impact arising from engagement in multiple CoPs.

Although CoPs may not be a panacea for all international doctoral-related concerns and challenges, there is ample evidence from the reviewed literature to suggest that participation in these communities of practice is a crucial element of the doctoral support mechanisms that can help alleviate the challenges that this particular cohort encounters. Through these communities, international doctoral researchers' motivation, creativity, resilience, and momentum during the long and intense doctoral journey are often informally sustained by such structures through powerfully providing emotional, social, pastoral, and academic support. More than that, doctoral researchers' psychological well-being and their academic progress (leading to successful completion) are arguably intertwined. It is therefore arguable that CoPs are indispensable networks in realising a better quality of experience for the whole doctoral community. This notion is eloquently illustrated by C. R. Milne's metaphor:

> We are like trees whose roots divide and spread outwards. Our neighbours are the same. Their roots too spread out and interlace with ours. Like trees in a wood, our trunks are quite separate but beneath the soil an inextricably tangled network.

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Organising the 'industrialisation of instruction': Pedagogical discourses in the Swedish Primary Teacher Education programme

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Abstract

This study examines the organisation of the Swedish Primary Teacher Education (PTE) programme by studying a local educational policy practice. The empirical material consists of policy documents and interviews with teacher educators at a large university. The study focuses on the pedagogical discourses in teacher education, by studying whether the examinations, courses, and education are based on insulation or integrating principles, that is, strong or weak classification. The results of the study show that both the national policy text and the local organisation are based on principles and rationalities of strong classification, where the local policy practice is both constructed through and affected by commodification and market rationalities.

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Introduction

This article explores how national higher education policy is transformed into educational practice and what material conditions influence implementation and praxis in higher education. The study is based on the Teacher Education programme, which is the largest of all Swedish university professional programmes. Furthermore, Teacher Education is the higher education programme that is most regulated and evaluated by the Swedish government. Strict regulation of teacher education (TE) is, however, not unique to Sweden; similar discursive governing mechanisms operate in other parts of the world as well. Another worldwide governing discourse is the focus on how teacher education is responsible for training highly qualified teachers as well as teacher education's significance in terms of progress of the educational system in general. This trend

is rooted in 'think tanks' as well as international organisations such as the Organisation for Economic Co-operation and Development (OECD) and the World Bank (Ball, 2012; Barnes & Cross, 2018; Darling Hammond & Bransford, 2005; European Commission, 2015; Grek, 2009; McKinsey & Co., 2007; OECD, 2005, 2015). For example, when the Swedish teacher education system was reformed in the beginning of the new millennium, the policy texts (SOU 2008:109) were based upon the so-called McKinsey Report, written by the global management consulting company McKinsey & Company. This report pointed out the teachers as the single most important factor in determining the success and quality of the school system. The report claims that selecting the right individuals and training them to use effective teaching methods are the two most important factors in creating a competitive school system (McKinsey & Co., 2007, p 13; SOU 2008:109, p 53).

The reformation of teacher education that, in 2011, resulted in new Swedish TE programmes shifted the discourses evident in previous teacher education reforms and was rationalised by referring to globally recognised, neoliberal discourses on education. It was also justified with reference to traditional Swedish teaching methods dating back to the 1950s. The new TE programmes are thus based upon both neoliberal and neoconservative rationalities (Sjöberg, 2010). The policy text, as well as the teaching practices that resulted from it, are both grounded in a more explicit focus on subject knowledge and subject didactics,[1] concentrating on the specific subject in which the future teachers will be teaching. The reformation of the TE programmes thus represented a break with teacher training ideals that emphasised integration and cooperation, leading to programmes with a high degree of specialisation or strong classification (Beach & Bagley 2012, 2013; Beach et al., 2014; Bernstein, 1996). One of the new programmes established by this reform was the Primary Teacher Education (PTE) programme, with its specialisations for preschool class teachers and teachers of grades 1-3 (K-3), grades 4-6, and teachers working in leisure-time centres.[2]

Previous research on pedagogical discourses in the new PTE programme has shown how the subject didactics focus dominates assessment of student teachers' knowledge and skills, that there are subcultures within the programmes due to its assessment practices (Player Koro & Sjöberg, 2018), and that the current curriculum has a substantial influence on teacher education students' knowledge base (Sjöberg, 2018a). Finally, research demonstrates that there are

[1] Didactics is central in the context of the Swedish TE programme. The term comes from the Greek word for teaching (*didaskein*) and touches on both micro and macro aspects of teaching.

[2] The specialisation for leisure-time centre teachers is not included in this study due to it being different from the other primary teacher specialisations, historically speaking.

significant differences between the various specialisations and subjects in terms of pedagogical discourses on assessment practice (Sjöberg, 2018b).

The present study is a continuation of a research project dealing with the new PTE programme and aims to examine the programme's pedagogical discourses in terms of the way that the programme is structured and the way its organisation affects the programme's content and the future teachers' knowledge base as well as their professional identity.

This study is structured according to the following research questions:

- How is the PTE programme organised, based upon principles of integration and insulation respectively (weak or strong classification), in terms of courses, and in assessments in the respective courses?
- What factors and rationalities affect and control the organisation of the programme and its praxis?

The study was carried out at a large Swedish university that educates primary teachers, and the empirical material consists of programme syllabi, course policy texts (course syllabi, study guides, and assessment tasks), and interviews with seven teacher educators.

Theoretical framework

This study is mainly grounded in Ball's and Bernstein's sociological theories of education policy and practice. It is also based on Ball's way of defining policy as both text and discourse (Ball, 2006). Furthermore, Braun et al. (2011) point out that institutional logics, contexts, and materialities are part of policy discourses (cf. Cochran Smith et al., 2018). This approach to policy implies that university lecturers, in this case teacher educators, and others involved in policy practices, participate in creating policy and can therefore be seen as both policy actors and policy subjects.

In addition to Ball's theoretical toolbox, Bernstein's theories and ideas are used to analyse the way educational policy is transformed into pedagogical practice (the pedagogic device) through pedagogic discourse (Bernstein, 1996). Bernstein defines pedagogic discourse as 'a principle for appropriating other discourses and bringing them into special relation with each other for the purposes of their selective transmission and acquisition' (Bernstein, 1990, p 181). Hence, pedagogic discourse not only relates to content but also to the way education and instruction are transformed, organised, and practised. Pedagogic discourse consists of both 'what' and 'how' aspects, through an instructional and a

regulative discourse. The instructional discourse relates to the 'what-aspect' of education – that is, what content is to be taught and learned. The instructional discourse is embedded in the regulative discourse, which affects the 'how' of education. The regulative discourse works both at a general level and through concrete phenomena and situations. According to the current study, the regulative discourse influences the PTE programme through both overarching global and historical discourses and traditions and the local organisation of the programme.

This study places particular focus on classification as a part of the pedagogic device and the pedagogic discourse. An important basis for the concept of classification is, according to Bernstein, that power is constituted in the relationships between various entities, such as principles and practices of insulation and integration. Strong classification involves more distance between various entities (insulation), while weak classification involves less distance or even the hybridisation of various entities (integration). Classifications form symbolic relationships between and within discursive categories of the educational system – in this case, in the PTE programme. These symbolic relationships create, legitimise, and reproduce symbolic boundaries and 'messages of power' (Bernstein, 1996, p. 6) between, for example, various groups of individuals and categories of teaching and subjects. Bernstein asserts that it is in this way that power relations are created, social order is maintained, and pedagogic identities are shaped. Hence, important questions are: 'In whose interests is the apartness of things?'; 'In whose interests is the putting together of things?' These questions immediately raise the issue of the relationship of power relations to boundaries: 'Whose power is maintained and relayed by whose boundaries?' (Bernstein, 1996, p. 127)

With reference to the theoretical concepts mentioned above, the empirical material will also be analysed using the concept of commodification (Agnafors, 2018) and institutional logics (Freidson, 2001). These concepts are used to understand and draw attention to the organisational aspects of the pedagogic discourse in the PTE programme. Commodification deals with the process that constructs education as a product with commercial value (Agnafors, 2018; Werler, 2015). Freidson's (2001) three institutional logics—the bureaucratic, the professional, and market logic—can also explain how the pedagogic discourses are articulated in the programme.

Previous research

In recent years, there has been considerable interest in studies concerning teacher education, and this interest has been focused on some particular areas. A large number of studies, both those done in the Nordic countries and internationally, deal with changing global discourses concerning education policy and how these discourses are disseminated. This research examines how these discourses depict the TE programme as a system in crisis, rendering it and other programmes around the world ever more standardised (Cochran Smith et al., 2013; Ensor, 2004; Maguire, 2014; Nordin, 2012; Sarakinioti & Tstatsaroni, 2015). These studies show how international political actors and 'think tanks' operate as powerful policymakers and what effects these discourses have on national policy and local educational practice. Furthermore, the studies show how market logics—and to a certain extent, bureaucratic ones—have conquered the domains of higher education, where professional logics receive ever less attention, resulting in an objectification and commodification of education, educators, and students, including teacher educators and student teachers (Agnafors, 2018; Freidson, 2001 Page, 2019; Werler, 2015). With reference to discourses on the great importance school teachers have for the results of the educational system, quite a few international studies have examined how teachers' professionalism, 'teacher quality', and 'teacher knowledge' are constructed in and outside of teacher education programmes (Ben-Peretz, 2011; Berkovich & Benoliel, 2018; Cochran-Smith et al., 2018; Hardy et al., 2018; Mockler, 2018; Nordin & Wahlström, 2019).

With regard to global discourses on education, the most recent reorganisation of Swedish teacher education (SOU 2008:109) has been studied from the perspective of historical change or as a policy trajectory (Alvunger & Wahlström, 2018; Beach & Bagley, 2012, 2013; Beach et al., 2014; Nilsson Lindström & Beach, 2015; Player Koro & Sjöberg, 2018; Sjöberg, 2010; 2018a; 2018b; Wermke & Höstfält, 2014). Among other things, these studies show that the TE programmes of 2011 are constructed upon neoliberal and neoconservative rationalities, breaking with a long tradition of continuity in educational logic. The studies also show that concerns expressed in the policy text regarding the subordination of didactic content in the TE programmes were unwarranted, since the didactic content is clearly dominant, at least in the assessment tasks. Studies also show how various sub-discourses have been created throughout different parts of the PTE programme, among the various teaching specialisations and in the different subjects (Player Koro & Sjöberg, 2018; Sjöberg, 2018b).

Other studies of the Swedish or Nordic context deal with specific content in teacher education and there has been particular interest in areas like placement (in Sweden this is called VFU) (Hegender, 2010; Jedemark, 2019; Karlsson Lohmander, 2015; Leeferink et al., 2018), degree project (Erixon Arreman & Erixon, 2015; Gustavsson & Eriksson, 2015), and the relationships between theory and practice (Saetra, 2018; Wågsås Afdal & Spernes, 2018). In several studies, Wågsås Afdal has also compared the Finnish TE programme, which has a clear research approach, to the more profession-oriented Norwegian programme to see what consequences these different approaches and organisational perspectives have for the content of teacher education and for the future teachers' knowledge base and professional identity (Wågsås Afdal, 2012, 2017; Wågsås Afdal & Nerland, 2014).

There are relatively few studies that focus on teacher educators' perspectives and/or the organisation of teacher education. Teacher educators' professionalism and professional identity have been studied by Beach and Angervall (2018), Dodillet and Lundin (2018), Jonker et al. (2018), and Vanassche and Keltermans (2014), among others. These studies show that a teacher educator's work and professional identity have changed in terms of new educational rationalities and the use of new technologies in higher education. One study by Zimmerman Nilsson (2017) also shows how teacher educators use rhetorical strategies to position themselves in relation to the programme's various goals and content—as practice-oriented, relations-oriented, or reflection/critical thinking-oriented teacher educators.

This study's contribution to existing research is its focus on the local organisation's significance for the programme's pedagogic discourses and, in the long run, for the knowledge base, the epistemological approach, and the professional identity that university students and, in this case, teacher education students, carry with them throughout the programme and into their future professions.

The Swedish PTE programme and description of the studied university

The Swedish PTE Programme is one of four TE programmes.[3] The two PTE specialisations that focus on the primary grades are four-year programmes (240 credits), with the final year at the advanced level. The programme's content is

[3] The other teacher education programmes are the Preschool Teacher programme, the Vocational Teacher Education programme, and the Secondary and Upper Secondary School Teacher programme.

regulated by a number of learning outcomes in the System of Qualification,[4] but also by the subjects that the programme comprises as well as the subject scope (Higher Education Ordinance, SFS 1993:100). The subjects that are included in the programme are the educational science core (UVK), placement (VFU), and the subjects Swedish, English, mathematics, the natural sciences, and the social sciences. Students specialising in grades 4-6 can also choose to study a practical/aesthetic subject instead of the natural or social sciences. All students must also complete one or two degree projects. Every university has responsibility for constructing and organising the programme according to the above framework.

The present study has been carried out at a university with a long tradition of educating teachers. The Education Faculty is responsible for the PTE programme. The operative responsibility for courses is, however, spread out across the entire university with the idea that teacher education is everyone's responsibility and concern.[5] The Education Faculty consists of several departments that are located in adjacent buildings. The other departments involved in teacher education belong to different faculties at the university.

Before the new TE programmes were introduced in 2011, the programmes were regulated by a teacher education board called LUN, which was in the form of a faculty board (without responsibility for employees). It was LUN that decided the economic, organisational, and content-related framework for the programme. Since 2011, re-organisation has taken place and today the PTE programme is regulated by a centrally situated board with overall responsibility for maintaining competency and organising coordination, strategic development, and quality assurance.

For each programme, there is also a programme board that has responsibility for the quality of course and programme syllabi as well as for the organisation of the programme. The programme board thus decides which department will be responsible for a course, which departments will be involved, and how educators' time will be distributed between the departments. A programme coordinator is responsible for programme content. Employees who work with the various TE programmes are, however, employed by their respective departments, under the administrative supervision of a head of department, with a director of studies doing the operational planning with regard to employees of the department.

[4] The current specialisations on the PTE programme have 27-28 learning outcomes.

[5] This reasoning was clearly articulated by the investigation done in conjunction with the previous Teacher Education programme (SOU 1999:63) and is also formulated in the internal documents of the university.

Data collection and analysis

The empirical material consists of both text and interview data. The texts are policy texts for courses (course syllabi, study guides, and assessment tasks) in the PTE programmes K-3 and 4-6, as well as the programme syllabus.[6] The text material is taken from 44 courses and 283 assessment tasks. The collection of the policy texts was done during the autumn of 2014 and spring of 2015, that is, during the academic year in which the students who had begun their studies in 2011 were doing their last year on the programme, making all course documents accessible.

	Courses	**Examination tasks**
Primary teacher education for grades K-3	22	136
Primary teacher education for grades 4-6	22	147
Total	**44**	**283**

Table 1: The number of courses and assessment tasks studied.

During the spring of 2018, interviews were also conducted with seven teacher educators from the same university. An invitation to participate in the interview study was sent to all of the teacher educators who were course coordinators for a course that was part of the programme during 2018. Seven of the educators offered to participate in the study. The educators came from different departments and faculties at the university. They are in charge of courses from both specialisations (K-3 and 4-6), and every subject included in the study. To protect the anonymity of the informants, the academic degree, gender, and subject specialisation of interviewees are not revealed. In the results section, they are represented by the letters A-G. Six of the interviews were conducted at the university where the study was carried out, and one interview was conducted via video link. The interviews were semi-structured and included topics such as choice of content and assessment format in relation to their subject and courses, as well as how the programme was constructed when it was implemented and what now influences and regulates content and praxis of the programme. Each interview lasted between 45-60 minutes.

The analyses of text and interview data were carried out with the help of the qualitative data analysis software NVivo. A deductive approach was used to

[6] For the specialisation in grades 4-6, the students can choose to take 30 credits of social sciences, natural sciences, or one or more practical/aesthetic subjects. Since it was impossible to access material from several of the practical/aesthetic courses, those are not part of the study.

analyse the textual data, primarily using Bernstein's (1996) theoretical concept of classification. Each course and each assessment task was examined to see whether they are formulated based on principles of insulation or integration, that is, whether they contain unconnected components or if the course and/or assessment task are based on a principle of integration. The course material was coded based upon two variables: strong or weak classification. A course that was coded as having strong classification is clearly split up into different thematic sections that are not explicitly connected through lectures/seminars or assessment tasks. A course that was coded as having weak classification contains integrated content. Likewise, all the assessment tasks were coded, but this time with three variables. A task coded as having strong classification deals with a limited aspect of a subject/course. A task with weak classification includes themes/content from various elements of the subject/course. An assessment task coded as having average-classification contains several aspects or a somewhat broader area, but lacks aspects that cut across subject boundaries. After the coding of all the courses and assessment tasks, a quantitative, descriptive analysis was carried out to reveal how the courses and assessment tasks are constituted in relation to classification (Bernstein, 1996).

The analyses of the interviews were also done using NVivo, but in this case the approach was based on inductive reasoning. The analyses were grounded in the topics used to structure the interviews. In the analysis phase, the inductive work involved finding common themes and patterns, as well as differences, based upon both the informants' perspectives and the theoretical framework of the study. Quite early on in the interview process, it became clear that organisational factors stood out as important for the construction of courses and content in the PTE programme, and through this, the construction of the pedagogic discourses in the programme.

Results

One of the goals of the new Swedish TE programmes was to more clearly focus on various forms of school education by concentrating teacher knowledge on the future pupils' ages and 'maturity' as well as on subjects, subject didactic knowledge, and skills (SOU 2008:109). The previously comprehensive TE programme has now become four distinct programmes, and the System of Qualifications in the Higher Education Ordinance (SFS 1993:100) constructs a difference between subjects by making explicit the scope of each subject. The overarching premise and principle of teacher education is then a strong classification.

Classification in courses

By analysing the 44 courses that are offered in the current PTE programme, it can be seen that one third of the courses is structured around the principle of strong classification. The study guides show that content in these courses is organised into separate modules and consists of content that does not together form a coherent and integrated whole (Table 3). The percentage of courses characterised by strong classification is somewhat larger in the specialisation for grades 4-6 than it is in the K-3 specialisation (36% as opposed to 27%).

	K-3 **Number**	**%**	***4-6*** **Number**	**%**	***Total*** **Number**	**%**
Strong classification	6	27	8	36	14	32
Weak classification	16	73	14	64	30	68
Total	**22**		**22**		**44**	

Table 2: Classification in courses, both specialisations.

The results also show that there is a difference between subjects in terms of how the courses are constructed; all the courses that are part of the mathematics, English, the natural sciences, and the social sciences subjects are based on a principle of strong classification. Courses in the educational science core, the degree project, and placement all have weak classification of content. Courses in Swedish are characterised by a combination of principles.

	Swedish		**Mathematics**		**English**		**Social sciences**		**Natural sciences**		**Educational science core**		**Degree project**		**Placement**		**Total**	
	No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**
Strong classification	3	60	4	100	3	100	2	100	2	100	0	0	0	0	0	0	14	32
Weak classification	2	4	0	0	0	0	0	0	0	0	16	100	4	100	8	100	30	68
Total	5		4		3		2		2		16		4		8		44	

Table 3: Classification in courses, all subjects.

Classification in assessment tasks

Analyses of assessment tasks show that those characterised by a weak classification dominate (54%), and this applies to both grade specialisations. In the specialisation for grades 4-6, there is a somewhat higher number of tasks with strong classification (8% as opposed to 5%), but in general, tasks that deal with only a very limited part of the subject are uncommon.

	K-3		4-6		Total	
	Number	**%**	**Number**	**%**	**Number**	**%**
Strong classification	7	5	12	8	19	7
Average classification	57	42	55	37	112	39
Weak classification	72	53	80	54	152	54
	136		147		283	

Table 4: Classification in assessment tasks, both specialisations.

A comparison between the different subjects and research fields shows that there are differences in culture between subjects when it comes to the way assessment tasks are constructed. The few tasks that are characterised by strong classification can be found in three of the subjects: the natural sciences (38% of the assessment tasks in this subject), English (17%), and mathematics (13%). With the exception of the degree project, the subjects in which classification is weakest and assessment tasks reflect an integrated approach are in placement (100%) and the social sciences (76%). Most subjects mix tasks characterised by a weak and an average classification.

	Swedish		Mathematics		English		Social sciences		Natural sciences		Educational science core		Degree project		Placement		Total	
	No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**
Strong classification	1	3	2	13	4	17	0	0	8	38	4	4	0	0	0	0	19	7
Average classification	17	42	4	27	12	50	10	24	6	29	63	70	0	0	0	0	112	39
Weak classification	22	55	9	60	8	33	32	76	7	33	23	26	13	100	38	100	152	54
Total	40		15		24		42		21		90		13		38		283	

Table 5: Classification in assessment tasks, all subjects.

Factors that affect organisation and content: the teacher educators' voices

What emerges in the analysis of policy documents reflects the descriptions that the seven teacher educators provide in the interviews. They reveal an organisation that is influenced by 1) *discourses within the subject and how that subject is constructed in schools and in curricula*, but mainly they say that the content of the programme is significantly influenced by factors such as 2) *organisation* and 3) *economic rationalities*. Together these factors create the possibility of a strong classification in the organisation and content of the programme (the pedagogic discourse).

The first factor that is raised and affects organisation and content of the PTE programme courses deals with *the subject's need to define the subject area's 'core', both inside the academic institution and out in the schools*. This is where the subject of natural sciences, for example, is described as having gone from being characterised by a weak classification in both specialisations (in grades K-3 and 4-6) to being more insulated and based on a stronger classification principle:

> D – The thought was that both K-3 and 4-6 should have it that way so that they would understand that all subjects are related to each other and that one can discuss certain things as cutting across subject boundaries between the various subjects, there we have deviated from the path a bit, so I don't really think we are there today.
> I – Why do you think there's been a deviation? And in what way has this happened?
> D – I think that it's because there is a, a desire to highlight the subjects each one by itself and also a need among the students to understand one thing at a time. So that it's like moving toward, we have more distinct physics, chemistry, and biology specialisations in the courses and surely also because of us who work with this and because of the way the school looks upon it.
> I – You mean the primary school?
> D – Yes, out in the schools and the curricula and syllabi that are there now, even though it is natural sciences for K-3 there is a more distinct specialisation of the subjects. (Informant D)

The other regulating factor is that of the programme's *organisation.* The programme's basic construction within the educational science core (UVK) and for placement (VFU) is made up of 7.5-credit modules, similar to the proposal that was made in the national policy text (SOU 2008:109). Since the policy text and the System of Qualifications (SFS 1993:100) describes a common educational science core, regardless of which teacher education programme, initially it was decided that these courses should be identical for the various programmes offered at the university. This initial decision has meant that it is difficult to make changes to or between courses:

> What regulates us is that they decided on these modules and this was decided centrally by the teacher education board. Modules worth 7.5 credits. The core courses [UVK] were supposed to be worth 7.5 credits and placement courses were to be 7.5 credits and there were to be four of them. All such framework and structures, but content-wise there was an opportunity to have some influence, that was the way I felt. /…/ For courses in subjects it's not so dicey, but the core of educational science is 7.5 credits and many of them are common for all teacher education programmes and then it's not so easy to move things around in them and it is I think one of the biggest regulating factors that we have. (Informant D)

The third, but most salient factor raised by interviewees relates to the assumption that the TE programmes are supposed to be the entire university's concern. The result of that approach is that *an economic system for buying and selling courses and lecturers* has been created, in which courses are said to be 'owned' by different departments. According to the informants, the portion of a course that a specific department contributes to and is responsible for is a *fait accompli*. According to the informants, this is not something that is decided on the basis of content or competence; instead, there is a given distribution between faculties and departments. Furthermore, there are co-opted lecturers who not only teach in the PTE programme but are also employed by a primary school. The system for buying and selling courses and lecturers generates more administrative tasks and, in some cases, a collision in content rationality regarding what a future teacher needs in terms of training:

> E – No, we collaborate with [name of department]. So they are involved in about 20% of the courses.
> I – What do they do?
> E – Yes, what do they do, that's a good question. I, we can say that their purpose is to see to it that the students' own [subject] knowledge is deepened. They are not specialists in didactics /…/ And then there is also a conflict between us and [name of department] how well this, well it's really closely tied to specific people, which lecturer will come. Some are interested in teaching and learning and in the students and then it works really well. But there are in fact lecturers from departments devoted to a specific subject who are only interested in their subject.
> I – But is it determined from the start that they should have 20%?
> E – Yes, or yes this has been negotiated, there are, so we used to have LUN [i.e., the teacher education board]. Do you know what that is? And then it was that board who negotiated and there are agreements between the heads of department and the departments as to how many should be involved in one another's courses and which faculties should collaborate and how much. Then it's not carved in stone, one can of course have negotiations about this. (Informant E)

The size of the programme, together with the way it is structured and organised, has led to a number of difficulties in collaboration, which partly have to do with geography, but also partly with access to things like cardkeys that are needed to meet with colleagues in person:

> I – Do you collaborate between Swedish and English, I mean grammar is part of both [subjects]?
> F – It is weak, we have wanted to arrange a collaboration and we feel that we are in this building, all the others are in [name of building] so we don't have any meetings other than when there are meetings for course coordinators. /…/ That would be, that is what we want, we come from schools so we are used to working together, now we collaborate within the course but we have, we feel, we would like to collaborate more.
> I – And so it's sort of the geography, the street that makes it like this?
> F – The street and different buildings, which make it so that we don't meet. We don't meet for coffee or we can't chat and discover how nice it would be. (Informant F)

> It's not any great distance, it's like a few hundred metres up […] but we don't even have cardkeys, we can't get into the building /…/ It is symbolic so I sort of flirted with a caretaker and I have a key now. I am there every term, should I like need to return the key then? (Informant A)

The teacher educators relate that the overall organisation affects the continuity of the programme and courses. First, it is seldom that the same people teach in the same course for any length of time; it is difficult to arrange staff meetings among teachers, and it is seldom that lecturers in different courses meet with one another to facilitate programme cohesion:

> B – So there are fifteen lecturers, something like that and that is for me the greatest challenge. I have been a course coordinator previously for several courses, but it's been me and maybe three more at the most and it's a whole different kit and caboodle to both have so many lecturers and from so many different places /…/ And so they choose the people they want to have from their department who they want so we have like a list of these people who come from this department on this course and add to that a director of studies. Then I think that in principle we can say no thanks, we don't want that person.
> I – But how many of these fifteen, how many are from this department and how many come from other departments and which ones?
> B – There might be five from here, two come from [name of dept] and the rest from [name of faculty] and two or three [name of department], but then there are from /…/ I will never learn the various acronyms in [name of faculty].
> I – What logistics.

> B – Yes, but it is really like this and it is mainly this that one has noticed a lot, admin-related. Then it can absolutely be the case that, one can feel that it is terribly time-consuming to sit and combine email [addresses] to all of these lecturers and reminders if you don't get any answer. /…/ And I think that if you have a small course in a small department where you can go and knock [on a door] instead of sending group email and so on so you are several colleagues and I wonder about this and so it's clear that it becomes two very different situations, but I find that it is hard to get away from the fact that it is you have to deal with it differently and I think that having direct meetings is very important. (Informant B)

The educators also describe a sense of hierarchy that affects the way the PTE programme is organised and, in the long run, its content. This feeling can be related to the fact that, for courses in the educational science core (UVK), there is a difficulty with retaining lecturers with subject or subject didactic expertise:

> A – But that's the way they plan our posts quite simply. The director of studies sits there and is supposed to put together Lisa's and Johan's posts and so they ask Lisa would you rather be in [subject A] or in this core course or the course coordinator for [subject B] didactics says, 'Damn right', Lisa should naturally /…/ be in [subject A] since she has a PhD in [subject A] didactics. So it becomes a little like the trash heap.
> I – But you feel that the educational science core becomes the trash heap?
> A – Yes, that's the way it is. In the placement course (VFU) too, I believe, so I would guess so. (Informant A)

The teacher educators also highlight that some lecturers from the departments for specific subjects, outside the education faculty, sometimes are not interested in teaching on the PTE programme, which affects the continuity of the programme:

> She was with us for many years. Now she is only on the K-3 [course] since she doesn't have time anymore and then afterwards there have been many different people. In our second course for 4-6 [teachers], the final 15 credits, it has unfortunately turned out so that every other term one person comes and every other term another person comes. But they are the same then but they switch terms and that means that the one works really well and the other not at all. So it's really difficult to, yes, it is a little bumpy. /…/ Sometimes someone comes who truly thinks it is interesting and then it's very good, but for many we have probably realised that it was that person's bad luck to get that [teaching assignment on the PTE programme] this year. (Informant E)

At the same time, many of the informants express the feeling that it would be best if there were a group of lecturers in the department, or faculty, who had sole responsibility for the course, including the teaching:

> I – But would that work if you, all twenty of you [lecturers in the subject at the department] had the courses [in the subject]?
> E – We feel that it would work, then I will say that there are certain individuals who are very good who contribute a great deal but sometimes it gets messier when they [the teacher education students] are standing here crying and we spend all our time on [name of subject content] because it is so difficult and we don't have time to read what you are teaching because that is what feels important. (Informant E)

Despite the strength of organisational and economic factors, the teacher educators both want to and try to improve the programme where there is free space to do so. This is done primarily in the various subjects or between the specialisations within the educational science core:

> I – If you yourself could decide, what would you like add or change?
> G – Yes, I think that it relates a bit to what we mentioned before, how we work together. I can't say what is lacking in various courses and so forth really but I think that we should work together more so that the progression is more obvious and that we make it more obvious what the students get when it comes to certain things so that it is built up, that the courses are not so isolated. For example, there's the issue of guardianship that is there in the corner, and so a little bit in the corner there, but how do we actually work with this throughout the entire programme? Then there should be a more obvious progression and collaboration between courses, that's what I think. (Informant G)

Discussion

The compiled results of this study show that most of the assessment tasks that are constructed in the PTE programme have a weak or average classification, which means that they are constructed based on the holistic integrated principle of content coherence. Individual subjects, however, demonstrate a stronger classification principle. This applies to mathematics, the natural sciences, and English, which has also been shown in a previous study to be constructed partially on the basis of another pedagogic discourse, with a more distinct emphasis on individually written assessment structures with a greater degree of an atomised knowledge structure, compared to other subjects and research fields in the PTE programme. In a review of the way courses are constructed, results show that one third of all the courses in the programme are based on a strong classification, that the course content is structured around distinctly different parts. It is also mainly in the teaching subjects of courses that the principles of insulation exist.

The large proportion of assessment tasks characterised by weak classification indicates that the epistemological approach embraced by most teacher educators is holistic. Educators try to construct tasks that are characterised by principles of coherence and comprehensive content coverage. The organisation of courses—in which many actors are involved—and their geographical spread result in diverse and more tightly defined course content and assessment tasks.

The informants describe a PTE programme with content defined by its organisation—an organisation that is based upon the suggestions and rationalities expressed in the national policy text (SOU 2008:109): that its basic structure should be strongly classified. Another problematic rationality concerns the notion that that teacher education should be the entire university's concern. The result of these basic rationalities is that the PTE programme and its content have become both atomised and commodified. Furthermore, courses and lecturers are treated like products with particular values that can be traded between departments and faculties.

The transformation from policy text to policy practice, the pedagogic device (Bernstein, 1996), has, according to the informants, facilitated the emergence of a bureaucratic system where cooperation and collaboration are difficult to manage. Due to the way the programme is organised, it falls upon a course coordinator to deal with (mail) system logistics so that all the involved educators know what they are supposed to do and when. In the subjects, and in conjunction with the courses being offered, the educators try to meet to plan content and progression. Nevertheless, the informants say that there are very few physical areas where the teacher educators can create coherence and progression within the subjects and for the whole programme. The physical distance and physical artefacts, such as cardkeys, also affect opportunities to work together across subject, department, and faculty boundaries and in the long run they also affect the coherence of the PTE programme. Other aspects that are of influence are the feeling that there is a lack of continuity in the courses and the status hierarchy in place that determines both programme content and the status of the entire PTE programme. Many of the informants say that teaching in the PTE programme does not have high priority and sometimes is seen as a necessary evil. The teacher educators do their best to find areas for collaboration both for their own sake and to improve the programme, but also for the sake of the students who are specialising in education for different age groups so that their educational experience and approach will have more breadth.

Overall, the study shows that the most recent reform of teacher education is grounded in a neoliberal rationality (Beach & Bagley, 2012, 2013; Sjöberg, 2010), in policy and practice. The organisation of the programme is characterised by a neoliberal rationality, in which the market and, to a certain extent, the logics of

institutional bureaucracy, substantially affect the form and content of the programme. Professional logics are no longer voiced as they once were (Freidson, 2001. According to Bernstein's (1990) theories of pedagogic discourses, the instructional discourse—the content—is affected by the overall regulative discourse. In this way, not only the content of the programme, but also the students' knowledge base and professional identity are influenced by both policy text discourses as well as material and organisational aspects of policy practice (Braun et al., 2011) in teacher education as well as in other university programmes. The results of this study show that the way that education and teaching are constructed in terms of the organisation of the PTE programme is, to a great extent, based on a strongly classified rationality, from policy to practice—a rationality that will in all likelihood be the one that shapes the future teachers' way of viewing the construction of education and teaching practices, and possibly also their own teaching practice and professional identity.

Finally, I cannot help being reminded of an expression that is somewhat scoffed at: 'the industrialisation of instruction', about the way education departments in Sweden have come to function like industries/factories that produce teachers. The expression is often interpreted as being grounded in the size of the national TE programme since, as stated, it is the largest professional programme in the country. But in light of these results, the factory or industry metaphor gains a new and problematic weight, emphasising a market rationality that treats content, courses, and educators like commodities that can be bought and sold. Considering a political discourse that defines a teacher as the single most important factor leading to individual and system-wide educational success, teacher education and its organisation need to be taken seriously. The entire university should be responsible for teacher quality, but the results of this study indicate that this responsibility is not currently allocated in an effective way. Responsibility does not end within the universities. This study, together with previous research on the new Swedish PTE programme (Alvunger & Wahlström, 2018; Beach & Bagley, 2012; 2013; Beach, Bagley, Eriksson et al., 2014; Nilsson Lindström & Beach, 2015; Player Koro & Sjöberg, 2018; Sjöberg, 2010, 2018a, 2018b; Wermke & Höstfält, 2014), clearly show that the conditions under which teacher education operates—strict regulation, constant evaluation, and a lack of financing—must change. If not, the job of educating 'high-quality' educators will become an impossible task.

Author biography

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The work of university research administrators: Praxis and professionalization

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Abstract

As part of a project on the social production of social science research, 19 research administrators (RAs) in five Canadian universities were interviewed about work, careers, and professionalization. While rarely featured in the higher education literature, RAs have become an important source of assistance to academics, who are increasingly expected to obtain and manage external research funding. RAs perform multiple roles, notably assisting with the complexities of grant-hunting as well as managing ethical clearance, knowledge mobilization, and related activities. Aspects normally associated with professionalization include organizations that control entry, higher degrees in the field, and clear career paths, all of which are somewhat compromised in the case of RAs. Nevertheless, most of the participants regard research administration as a profession, and we argue that it is more important to focus on the sensemaking and identity formation of these mostly female staff than to apply abstract criteria. Although their efforts do little to challenge a culture of performativity in the academy, and indeed may be regarded as supporting it, the RAs have defined for themselves a praxis dedicated to easing the burdens of the academics, helping one another, and contributing to the greater good of the university and the research enterprise.

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As government funding for universities declines, and universities increasingly mimic corporations, individual academics are encouraged, or even compelled, to obtain research funding from external sources. At the same time, grant-hunting has become ever-more complicated (Luukkonen & Thomas, 2016). It follows that at least some academics may need assistance to navigate these complexities.

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Consequently, we see the expansion of a cadre of research administrators dedicated to assisting faculty in this pursuit and, in some cases, performing other research support roles.[2] It is tempting to link research administration's increasing pro-minence with the surge of managerialism and regulation that has accompanied the neoliberal transformation of universities (McGinn, 2012; Shore & Wright, 2015) and with encroachments upon academics' traditional independence and autonomy (Ginsberg, 2011). However, our purpose is not to impose an external judgement or critical commentary upon the part research administrators may play in supporting a neoliberal agenda, but to focus on the interpretations research administrators themselves give to their roles, their careers, and their field's professional status.

Research administrators have received relatively little attention from higher education scholars, reflecting the general tendency of the literature to focus on academics rather than other university staff. Many of the studies that do exist combine administrative staff with very different roles, thus making it difficult to say much about a specific group such as research administrators. Other studies make generalizations about 'administrators', blurring the distinction between senior academics in managerial roles and professional staff.

This article reverses the typical focus of higher education scholarship by moving academics out of the limelight and foregrounding instead research administrators, whose contribution to the successes attributed to academic others may be substantial. Moreover, the article adds a Canadian perspective, generally missing from the international literature on university administrative staff. It also addresses questions around whether research administration can be considered a profession, what elements of praxis are involved in the practice of research administration, and how to respond when research administrators' perceptions seem at odds with prevailing ideas in some of the literature on professions or on neoliberal tendencies in universities.

As part of a project on the social production of social science research in Canada, we interviewed 19 research administrators in five universities. Given that so little specific research exists on the work of this occupational group, our overall research question is simply, 'How do research administrators in Canadian universities understand their work?' We probe more deeply with our sub-questions, which are:

1. Do research administrators see their field as a profession and if so, are there elements of praxis involved?

[2] In this article, we use the Canadian terminology of administrator, rather than manager or developer, and faculty, rather than or in addition to academic staff. The term 'faculty' may also describe a disciplinary-based unit, such as a faculty of arts.

2. What aspects of research administrators' work contribute to or contradict this image of research administration as a profession?

In the discussion section, we build from these results to consider what tensions may obtain between the sensemaking of these research administrators about their work and the prevailing critiques of universities as increasingly corporatized, managerial, and audit-based. Before turning to our findings, we review the major concepts that inform our analysis, present relevant literature on professions and research administration, and describe the details of our study.

Conceptual framework

Our primary concepts are sensemaking, praxis, and profession. Degn (2018) extends the sensemaking perspective, derived from Weick (1988) and popular in organizational theory, to 'academic sensemaking', that is, 'the way academics make sense of their changing circumstances, and how this affects their perceptions of their organization, their leaders and of themselves' (p. 306). Earlier usages of the sensemaking framework pertained to responses to specific events such as crises, but the purview has widened to consider situations of rapid organizational change (Maitlis & Sonenshein, 2010, p. 558), which would seem to describe contemporary academe. The notion of sensemaking can be extended from academics to research administrators.

We also invoke the concept of praxis. Praxis involves inserting a theory or idea into one's practice, making it purposeful and, in most cases, oriented towards change that 'contribute[s] to the good for each person and the good for humankind' (Kemmis, 2012, p. 903). When discussed in the higher education literature, praxis is most often associated with academics' classroom pedagogy, action research, or service to the community (e.g., Kozaitis, 2013), although there is no reason not to include other university staff. Kemmis (2012) distinguishes between 'spectator' research, which may be appropriate when identifying factors that shape the responses and choices of those studied, and research conducted from the participant perspective, where people examine and improve their own lived realities through praxis. We are not research administrators, so there is inevitably an element of spectatorship in our research; however, as 'co-habitants' (Kemmis, 2012) in the university research enterprise, we are implicated in the practices we study. It is our intention to respect the interpretations of the participants.

We believe that understanding the ways in which people in this occupation see themselves as engaged in a praxis and a profession is an important

contribution to the higher education literature. Investigating the perceptions (sensemaking) of our participants about research administration as a profession gives us insights into their individual constructions of professional identity and into the field's professionalization efforts. Our third main concept—profession—is discussed in more detail in the following section, which also introduces literature about research administration.

Research administration and the sociology of professions

The sociology of professions is a vast and contested field. Much effort has been expended on determining which occupations qualify for the designation. Over time, the prevailing interest has changed (for overviews, see Adams, 2015; Evetts, 2011; Martimianakis et al., 2009). Generally speaking, scholars have moved away from identifying a set of traits critical to determination of a profession to a series of additional questions, such as 'What mechanisms do occupations use to restrict entry?'; 'What roles do professions play in social stratification and power struggles?'; and 'How do occupations lay claim to professional status?' Recent interest has shifted to the negotiations and compromises required of professionals in corporatized public sector settings, where professional claims to expertise clash or combine with managerial forms of control (Noordegraaf, 2007; Paton et al., 2013; Reed, 2018).

Research administration has been defined as 'the leadership, management or support of research activities' (Kerridge & Scott, 2018, p. 2). It is one of many diverse occupations seeking professional recognition and thus status and respect. It is generally considered to be located within academic institutions, although other sites, such as hospitals, non-profit organizations, and government agencies, are possible.

University research administrators, our focus in this study, work at various points of what is typically called the research life-cycle. A conventional distinction in this cycle, one that we heard often in our interviews, is between 'pre-award' and 'post-award' responsibilities. The former involves 'the identification of funding opportunities, proposal development, costing, internal approval, and submission to the prospective funder' while the latter is concerned with 'financial management and reporting, partner agreements, and reports to the funder' (Zornes, 2019, February, slide 6). Some responsibilities cross this divide, such as strategic projects or research ethics management, as well as leadership roles supervising others and contributing to institutional policy. In a large institution, the work may be subdivided into relatively small parts and there may be both centralized and decentralized administrators, the latter working in a

faculty, research centre, or department, while in a small university, centrally located research administrators may cover activities across the board.

Various authors note that university administrators are frequently women (Allen-Collinson, 2007, 2009; Eveline, 2004; Krug, 2015; Losinger, 2015; Pearson, 2008; Ricketts & Pringle, 2014; Simpson & Fitzgerald, 2014; Szekeres, 2004). Eveline (2004) contends that much of the 'glue work' involving repairs to interpersonal relations is done by women in administration, a point echoed by Losinger (2015) and Allen-Collinson (2006). The fact that this form of labour is largely female is likely related to its 'unacknowledged value' (Angervall et al., 2015).

Research administration follows this general trend of feminization. Shambrook et al. (2015, October) indicate that, in the United States, research administration has changed over time from a male-dominated to a female-dominated field. Internationally, about 77% of research administrators identify as female (Kerridge & Scott, 2018, p. 26) and in Canada, the figure is even higher at 81% (Zornes, February, 2019). There is also international evidence that, as in many fields, men are over-represented in leadership roles (Kerridge & Scott, 2018, pp. 26–27).

Variations in terminology across (and within) countries can make it difficult to apply findings from one jurisdiction to another. In Australia, dissatisfaction with the labels of 'general staff' and 'non-academic staff' has led to a substitution of 'professional staff' as the preferred designation (Sebalj et al., 2012). Different national usages of 'management' and 'administration' have also caused confusion (Szekeres, 2004). What in Canada is likely to be termed a 'research administrator' may be called 'strategic research support' in Sweden (Ryttberg & Geschwind, 2017), a 'research development officer' in Australia (Berman & Pitman, 2010, p. 165), or an 'income capture officer' in the UK (Cox & Verbaan, 2016, p. 321).

Role variations go beyond nomenclature. The size, historical status, and level of research intensiveness varies across institutions. Moreover, there are also major differences from one country to another in how research is funded (Acker & Ylijoki, 2018, July). If, for example, external research assessment exercises are linked to funding, administrative staff will have to assume responsibilities for data collection and reporting not fully duplicated elsewhere.

It is logical to expect that research administration work has changed in parallel with changes in knowledge production, university orientations, and technological innovations. The world of research now includes conformity to published ethical standards, open access commitments, web-based grant applications and ethics review processes, bibliographic and project management software, and other technical and accountability innovations and requirements. A principal investigator with a funded project will not only work with co-

investigators and research assistants, but also interact regularly with university personnel such as librarians, information technology staff, departmental business officers, and research administrators (Cox & Verbaan, 2016). Research administrators themselves must keep up with rapidly changing flows of information (Karlsson & Ryttberg, 2016).

There are debates in the literature as to whether the administrative component of universities has grown at the expense of the (permanent) academic labour force (Gornitzka & Larsen, 2004; Karlsson & Ryttberg, 2016). Macfarlane (2011) argues that 'all-round' academics are being displaced by 'para-academics', including specialists such as 'student skills advisers, educational developers, learning technologists and research management staff' (p. 59). Whitchurch (2008) refers to 'blended professionals' who work in the 'third space', an emergent territory between academics and administrators. Shelley (2010) describes a range of academic-type duties carried out by research managers in the UK.

In general, these authors contend that, despite new administrative roles often being located in the 'back office' (Ryttberg & Geschwind, 2017, p. 343), the functions they provide and consequently the people who provide them are crucial to the operations of contemporary universities. For example, Berman and Pitman (2010) state that 'a layer of professional roles central to the operations of universities has arisen in areas such as student services, international operations, alumni services, marketing and public relations, human resource management, information sciences, research commercialization and research management' (p. 157). Karlsson and Ryttberg (2016) call these service providers 'administrative professionals'. Larson (2018) offers 'techno-bureaucratic professions'. But is university administration a single profession or many? In particular, how do research administrators understand the parameters of their work?

Methods

As part of a larger study on the construction of social science research, 19 qualitative, in-depth interviews were conducted in 2018–19 with staff members holding research administration responsibilities in universities in Ontario, Canada. Although their titles varied, as did the extent to which they had line management roles, nearly all described themselves as research administrators (hereafter, RAs).[3]

[3] We are not including staff who are employed as managers of individual projects or whose main responsibility is related to higher degree student research, although some of our participants occasionally contribute to those areas. Nor are we including academic administrators (managers) such as associate deans or vice-presidents with responsibilities for research.

The RAs were affiliated with five Ontario universities at various levels of research-intensiveness. They were identified through website searches, personal contacts, and referrals from other participants. Although we gave preference to individuals with responsibilities related to the social sciences (including education and social work), we included a broader range of participants to cover a variety of specialties within the research administration category (e.g., research information analysis, research ethics management, and knowledge mobilization). Participants worked in pre-award and/or post-award sectors, in specialized areas, and in central administrative offices or decentralized units such as faculties or research centres. Our selection of participants followed national trends in that the majority, about three-quarters, were women (Zornes, 2019, February); most of the men and about a third of the women were in the most senior position of director. These promotions were related to age and experience, however, so we cannot readily say that gender alone is implicated in giving men an advantage. Nevertheless, the distribution is suggestive and parallels other literature on gendered work among academics (Acker & Dillabough, 2007; Angervall & Beach, 2017) and administrators (Kerridge & Scott, 2018; Simpson & Fitzgerald, 2014).

The questions that were addressed covered academic background and current responsibilities, as well as opinions on a range of issues and policies. The semi-structured nature of the interview guide meant that participants could elaborate on those areas that were most meaningful to them.

The members of the research team secured clearance for the study from their universities' research ethics boards and those of other institutions that required it, and all interviewees provided voluntary consent prior to participation. Three academics on the team conducted the interviews. Although we did not discern any untoward consequences of the fact that we were academics interviewing administrators, it is possible that participants tempered any potentially unflattering statements about academics in order to ensure the interview proceeded comfortably. Interviews lasted from 75 to 90 minutes and were transcribed in full. The names used below are pseudonyms.

We conducted iterative-inductive thematic analysis, building from open and provisional codes toward key themes and analytic insights (Cascio et al., 2019; Charmaz, 2010). The engagement of multiple team members strengthened the confidence in the analysis (Cascio et al., 2019). This article focuses specifically on the professionalization theme that arose across interviews.

The results of our study are discussed in the two sections that follow. In order to answer the first research sub-question, we consider the responses of the RAs to questions about research administration as a profession. When discussing such issues, the participants reveal the extent to which they see their practice as

praxis. Next, in line with the second research sub-question, we isolate some of the aspects of professions commonly cited and note how our participants' experiences compare.

RAs' views of the profession

This section concerns the sensemaking of participant RAs with regard to their understanding of the professional status of their occupation and the extent to which praxis is involved in their work. In the process of responding, participants generally defended the professionalization of research administration, indicated various forms of praxis (although not by name), stressed the ways their field had changed and was changing, and emphasized the centrality of helping academics do their work. When asked directly whether they saw research administration as a profession, responses included 'yeah, it's clear' (Amanda Gilbert); 'absolutely, it is' (Andrea Young); 'absolutely, absolutely' (Robert Walker); and 'yes, for sure, definitely' (Megan Lewis). Dissenting views included Kelly Andrews's comment 'I've only seen it as a livelihood' and Deborah Cooper's objection to the implied elitism that she saw in the term 'profession'.

A changing profession

In answering our questions about research administration as a profession, participants often explained how their views or the field had changed over time. Andrea Young noted, 'I can see that now in a way that I couldn't a couple of years ago', a development she related to the increasing pressure on academics to acquire external grants and the growing complexity of the process. Bruce Fitzgerald had also changed his assessment:

> I may not have [seen research administration as a profession] at first /…/ but I do now, because research and innovation is on everybody's mind right now as a future area of economic growth, let alone the merit of it from a research and academic exploration perspective.

Discussions of professionalization tended to overlap with commentary on change. Andrea and Bruce's remarks are examples of sensemaking in situations of rapid institutional change. Participants were aware that 'the research landscape is rapidly changing and evolving' (Candace Vernon) and that RA work had moved from 'checking boxes, what attachments, what components need to be included /…/ to much more imaginative work' (Amanda Gilbert). Pauline Emerson concluded that because there is less of the 'boring, laborious work' to do,

'technology has changed [things] for the better'. Others were less sure. Constantly upgraded technology in one institution had led to difficulties for academics and administrators alike (cf. Szekeres, 2011, p. 683), as Candace Vernon indicated:

> What has changed? Definitely I feel like [it's] this digital piece, trying to adopt these digital systems to help bring about efficiencies in research administration, and to me the jury's really out on whether that is the case and whether it creates any efficiency or displaces inefficiency.

One change mentioned by several participants was the rise in the importance of demonstrating research impact or what was locally called 'knowledge mobilization'. Stephen Osborne noted that his unit 'focusses on, not just the inputs to research but the outputs of research, so the publications, the performances, the patent applications'. He continued:

> So community engagement, public engagement would form the type of work that we do. And then research happens in the knowledge mobilization space often co-created with partners /…/ and that's all part of the innovation space, and then also there's the dissemination. How do we get it out? How do we mobilize that? How do we help researchers facilitate the uptake of evidence by policymakers, community partners, industry, government?

Robert Walker pulled together several aspects of research administration's professionalization project and its intertwining with change:

> [People in this field] /…/ we came to it through happenstance, an opportunity that emerged that aligned with our skill sets, but [with the] increasing needs federally for accountability and transparency around such things, and with increasing competition across the country or internationally for such things, we've kind of upped the ante collectively on what constitutes a strong proposal, what constitutes good governance, what constitutes robust administration and management and compliance with research. So it's a growing space. It's forced itself to sort of become professionalized.

Robert's statement indicates a contribution to strengthening the research profile of the university as a whole. Also embedded is the determination that research administrators have 'upped the ante' or increased the quality of the work being done by researchers and universities. Claims like Robert's can be regarded as signalling a form of praxis.

A helping profession

Note that in the quotation above, Stephen said, 'we help researchers'. 'Helping' was a dominant motif across the interviews. It was especially apparent for RAs with pre-award or across-the-board responsibilities who tended to emphasize contributions to faculty success and well-being. For example, they contacted new faculty early in their appointments in order to help them plan their research careers: 'We'll meet with the new faculty and kind of develop a plan for them, and tell them what the expectations are /…/ and what grants to go for and what not to go for. So you get rid of a lot of anxiety' (Pauline Emerson).

The RAs also worked with more senior faculty when requested, as changing technological and substantive requirements of the funding bodies challenged everyone (McGinn et al., 2019). Pauline's reference to reducing anxiety suggests that a form of help may be emotional rather than or in addition to technical. Some RAs referred to their work as counselling or coaching, especially when grant applications were unsuccessful and faculty were upset: 'Sometimes you have to talk people off the ledge. People can be very angry in June when they get their comments [from the research council]' (Eric Lowe). Karen Douglas, who described these rejections as producing 'crushing emotion', added that her job also had the practical side of finding other sources of funding for such individuals. She stressed that she enabled rather than instructed:

> I would never want to be in a position of directing where we think, institutionally, researchers should put their efforts /…/ The interest of the faculty members would be realized in terms of how we shape what happens institutionally /…/ So I always feel like what I'm around for is leading my team, thinking about one-on-one supports for researchers, if they want to plan their careers. I have lots of specific grant knowledge that we try and share. I see my role as attempting to connect people to other researchers or sort of as an information-gathering role that can help enable research to happen.

The RA identity builds on helping others and in doing so, RAs feel personal satisfaction, as these two quotations illustrate:

> [In the pre-award sector] we can focus really on helping the researchers on building an environment and a culture that will be supportive for faculty. I love that part. I think I've got one of the best jobs in research administration /…/ I'm dealing with helping the researchers achieve their goals. (Eric Lowe)

> I think things are becoming more complicated and I think that those who stay in the field and want to improve how we do things really are dedicated

> to the idea that the better we are at the work we do, the more time the faculty member ultimately has to spend on their research and that matters to a lot of us, although I recognize that we're also seen as a bureaucracy by many. (Bruce Fitzgerald)

Despite the potential for negative reactions from those they seek to assist ('seen as a bureaucracy'), there is evidence here that these RAs engage in praxis. In striving to make things better for their academic counterparts, the RAs' sensemaking keeps them motivated by believing that they are making a difference to the careers of others and the future of the university.

Aspects of a profession

Across the varied and contested assertions about what constitutes a 'profession', some key aspects include associations, a specialized body of knowledge, higher qualifications, and clear pathways into and through a career in the field (Szekeres, 2011). Participants' comments on each of these areas raise many points of difference between what might be expected of a profession and the characteristics and career pathways found in research administration. Serendipity in becoming a research administrator, learning 'on the job', and uncertain career prospects were all mentioned. Praxis is suggested too, as the gaps in formal training are addressed by informal efforts at creating self-help groups or 'communities of praxis' (Anderson & Freebody, 2012).

Associations

Our findings parallel Shelley's (2010, p. 53) observation that research administrators do not generally affiliate with higher education societies but prefer specialty RA associations. Many participants mentioned the conferences of the Canadian Association of Research Administrators (CARA) as the 'go-to place for developing a career in research administration' (Robert Walker). CARA has over 1000 members and describes itself on its website as 'a national voice for research administrators in Canada'.[4]

While CARA and other similar associations are engaged in professional development, hold conferences, and publish newsletters and in some cases journals, they do not control entry to the field, one of the characteristics often associated with professionalization. In fact, as we show below, entry to the field of research administration occurs along many pathways and is frequently serendipitous.

[4] https://cara-acaar.ca/about (2019-10-18).

Specialized knowledge

A specialized body of knowledge was evident when participants described their work responsibilities, although it varied from one role to another, and its acquisition often seemed haphazard. A certificate program had recently been developed by CARA, starting in 2017, in conjunction with a community college (Mohawk College), but was not mandatory, and our RA participants had not attended it. We were told that there were several degree programs in the United States, but not in Canada: 'Canada is a baby in terms of research administration, [whereas] the US is like a PhD student' (Eric Lowe).

In all of the universities represented in the study, there was an absence of sustained professional development activity that would help new RAs learn their craft: 'absolutely none at all, absolutely none at all' (Erin Bell). Learning might take place through other means, for example, 'I learned a lot from going to conferences, participating in conversations with more seasoned researchers or faculty members or employees' (Angela Gordon); 'I went to the CARA conference this year in May and it was a great experience for me and I learned about many resources' (Cynthia Quinn). Most of the participants spoke of learning 'on the job': 'It was almost 100% on the job' (Eric Lowe); 'a learn-as-you-go thing' (Jason Thorne). Candace Vernon commented that 'until quite recently, there was no structured training at all. It's sort of baptism by fire'.

Responding to the lack of university-based professional development, participants described informal and proactive efforts at workplace learning made by RAs in their institutions, which we could reframe as examples of praxis, in the sense that they are efforts to improve their own and their colleagues' work lives. For such initiatives to flourish, they need time, space, and trust (Mahon et al., 2019), which may be more readily available in some sites than others. According to Anderson and Freebody (2012), while communities of *practice* are forums for collective learning, there are also communities of *praxis,* with a greater emphasis on reflection and applying theory to practical situations. One such group, mentioned by Kathryn Richards, was made up of institutional researchers within a large university; another was a network of research administrators that Karen Douglas described:

> [At first] it was a place to complain a bit, but mostly to share best practice. And as the years have gone on /…/ we've given up on the complaining part and we look only to that part about what is best practice, how do we learn, who are we learning from, what did you do in this case.

Kelly Andrews belonged to a research administrator group in a different university that also shared information: 'it becomes this backdoor way of getting information that you actually need to do your job effectively'.

Not everyone could benefit from communities of practice or praxis within their institutions. A few individuals like Rebecca Smith had very specialized job descriptions: 'I don't really think there's a community of practice that I fall into at this point'. Those RAs who worked in smaller universities had few colleagues to consult. Erin Bell was in that category:

> There were only two people in the office so I did /…/ everything from pre-award administration of grants, development of grants, to the post-award administration of grants, which is letters of transfer funds, helping to set up research agreements, filing reports, doing knowledge mobilization activities including research week or conferences linked to the funded research, promoting the research through social media, doing large teaching grant applications. Basically anything I was asked to do that was related to research and then I also did research ethics.

Erin's description indicates the potential for becoming a 'Jill-of-all-trades' when providing research services in a small, predominantly undergraduate university. Being required to absorb 'specialist knowledge' in so many subfields may actually make the job more difficult than it is for RAs in larger, research-intensive universities where responsibilities are more segmented.

Qualifications

Interviews with the RAs began with questions about their academic backgrounds and careers. A frequent comment was a variation on 'none of us in this field ever said, as a child, I want to grow up to be a research administrator' (Robert Walker). Like participants in Karlsson and Ryttberg's (2016) Swedish study, our RAs were highly educated. Three held bachelor's degrees as their highest qualification, while the other 16 were equally split between those with master's degrees and those with doctorates. Interestingly, of the eight with doctorates, all but two had additional postdoctoral research experience, reporting up to three postdoctoral postings. As the three without higher degrees were all in the 50-plus age group, it appears that a master's degree has become the baseline expectation, consistent with Shambrook et al.'s (2015, October) findings from the United States.

The RAs' degrees were in many different fields. Given that there are no Canadian degrees in research administration, we can surmise that various skills learned in higher degrees, regardless of subject field, may provide a base for RA work. The prevalence of postdoctoral research was especially interesting as this finding has not been reported elsewhere. It may indicate that these individuals are comfortable with research and with universities as workplaces. When an opportunity for an administrative career appears, individuals with that profile may be likely to seize it. In addition to the six individuals who had conducted research

as part of their postdoctoral appointments, another four spoke of prior employment as researchers. Most of these positions were in universities but a few were in other venues (e.g., non-profits).

We can speculate that one reason that qualifications for these positions have been rising may be the lack of opportunities in the full-time academic labour market (Acker & Haque, 2017). The 'alt-ac' sector of relatively well-paid and secure administrative positions that most of our participants occupied provides an opportunity to stay in the university environment and be involved in some measure in research while avoiding the growing pressures placed upon academics (except vicariously) and bypassing or abandoning the difficult search for a permanent academic position (Campisi & Vander Kloet, 2019, June).

It could also be said that these RAs enjoyed learning for its own sake and for ideas they could incorporate into their work. As well as online higher degrees such as MBAs, participants gave examples of additional courses and certificates they had embarked upon, including project management, mentoring, coaching, knowledge translation, and career development.

Pathways in and through careers

Given that research administration associations do not control entry into the field, and there are no specific degree qualifications available, how do people arrive there and what career paths are available to them? Pathways varied. Several participants had worked in a university or universities for a long time, transitioning from one research or administrative position to another, often posts with significant degrees of precarity (Campisi & Vander Kloet, 2019, June), before landing in their current position. Others had performed a related role in another field, such as a business, and a fortuitous event or a job advertisement (often on a website) had resulted in a move into a university position. Rarely had they intended to become research administrators. What seems shared in most descriptions is the element of serendipity.

Although we did not ask directly about gender influences on career patterns or decisions, some of the women spontaneously mentioned issues related to work and family in the context of deciding to go into administration as opposed to academe. For example, Amanda Gilbert had to make some difficult decisions during her postdoc: 'Did I want to start a family? Did I want to start being able to plan for our future? Or did I want to accept another five years or ten years, for instance, of that kind of precarious living?' Stephanie Grant had a similar story:

> So when I was in [place], I realized that I didn't see myself working from postdoc to postdoc. I needed something that was more secure [so] that I could go home at the end of the day and tend to my family, and so that's why I decided not to continue on with research.

Rebecca Smith said that she had applied a few times for academic jobs but 'I don't know, something hit me at one point and I just didn't really want to do it anymore'. She added, 'I kind of like having an end to my day. There are demands of academic lifestyle that aren't for me'.

We asked participants about their future career plans. Two were nearing retirement. Responses of the others suggested that it was hard to plan within this occupational role. Those who were already senior (managers or directors) found it difficult to see where they could go next. Several had directed their excess energy ('brain power that was going to waste', as Eric Lowe put it) into involvement in mentoring, university governance, or association activities in their field. Even at the more junior levels, participants were uncertain about next steps: 'I don't know what the future holds and I'm trying not to think that far ahead' (Andrea Young); 'To be honest I feel a little bit like there is nowhere to go here… I don't know if this is a generational thing or what, but I do feel a bit like, oh what's next' (Candace Vernon). These comments draw attention not only to career patterns but to career prospects in research administration. Those who advocate that the field be regarded as a profession need to take account of the potentially contradictory conclusion that 'there is nowhere to go'.

Discussion

This article spotlights a group of key players in the university who have received little attention from higher education scholars. Our overall research question was 'How do research administrators in Canadian universities understand their work?' In general terms, we conclude that the RAs in the study understood their work as supporting the research functions of the university and the academics within it. The sub-questions allow more nuanced responses. Our first sub-question asked, 'Do research administrators see their field as a profession and if so, are there elements of praxis involved?' As shown, most of the participants described their field as a profession or an emerging profession. In a few cases, answers pertained to a sub-field such as research ethics administration, knowledge mobilization, or institutional research. For two participants, the professional designation seemed misplaced.

In speaking about research administration as a profession and practice, our participants revealed much about their 'praxis'. Praxis was rarely named as such. However, we considered as praxis reported acts and intentions such as helping academics to flourish (a main preoccupation), improving the quality of research work done in the university, contributing to broader societal improvements through supporting innovation and knowledge mobilization, and creating support

mechanisms for other research administrators to substitute for the absence of professional development within their institutions ('communities of praxis').

Their intent is not simply to carry out instructions or provide information, it is to *make a positive difference*. Notably, a prominent element in the RAs' descriptions of work with faculty was helping or caring, perhaps to be expected in a largely female profession, although not confined to our women participants. Men in feminized professions may have a career advantage, but there is also evidence that they can reflect the more generalized values of the field rather than undiluted masculinity (Acker, 1999). The emphasis was most apparent in interviews with RAs who worked in the pre-award sector or whose duties included pre-award work, which often involved talking faculty through emotional responses to rejected proposals or helping junior faculty manage anxieties about establishing a research career. Managers and directors without such direct responsibilities also spoke about caring for their staff, and even a post-award administrator like Stephen Osborne emphasized *helping*. In describing her data collection and analysis responsibilities, Kathryn Richards used the words *help* or *helping* six times. Although mentioned occasionally, little emphasis was placed on managerial values such as efficiency and compliance that have come to be associated with the contemporary university. RAs saw themselves as allies of the faculty rather than bureaucrats or rule-enforcers (Campisi & Vander Kloet, 2019, June).

Our second sub-question interrogated further the notion that RA work is a profession by comparing statements made by participants to four areas that are frequently understood as elements of professions, namely that there are associations that control entry, that a specific body of knowledge is there to be deployed, that qualifications would be consistent and understood, and that pathways into the occupation would be predictable and standardized. In practice, there was some departure in each of these elements from what might be expected in a prototypical profession. Associations are expanding their remits but do not exert control over entry; there is no consensus on a body of knowledge (which in any case was changing rapidly); expected qualifications are rising but are not specific; and pathways into the occupation are idiosyncratic.

So here we have an interesting contradiction between practitioner sensemaking, which generally supports the existence of a profession, and the many exceptions to the usual rules. We may not be able to resolve this particular contradiction, given that both the definition of 'profession' and the characteristics of research administration are in flux. What qualifies as a profession has clearly been modified from the early trait-theory days (Martimianakis et al., 2009) and, as stated earlier, many varied occupations are seeking such recognition.

Scholars are working to reframe the historical understanding of university administration as a kind of caste subordinate to the higher-status academic one (Krug, 2015), introducing concepts such as third-space professionals (Whitchurch, 2008), para-academics (Macfarlane, 2011), or hybrid professional managers (Shelley, 2010, p. 49) in order to convey a sense of blurred boundaries between academics and administrators. Although it was clear that RAs held a range of responsibilities that were relatively new and had been upskilled compared with the past, for the most part it was difficult to see them as operating in a new space or taking on formerly academic roles. Our findings are more like those of Gornitzka and Larsen (2004) in Norway and Karlsson and Ryttberg (2016) in Sweden. Gornitzka and Larsen note that most of their administrative staff participants 'portray their role as "low key" in the interface with academics and especially in relation to elected academic leaders' (p. 464). They see their role as *serving,* similar to our emphasis on *helping.* Karlsson and Ryttberg note that some administrators worked very closely with a particular member of management (also true in our case) and joint strategies might emerge from those partnerships, but on the whole, interviewees were 'clear in not wanting to exercise undue influence' (p. 6). There are parallels with our study, such as Karen Douglas's assertion that she would never want to direct researchers as to where they should put their efforts. It has been suggested that research administration may be a special case where relationships with academics are more harmonious than in other pairings (Allen-Collinson, 2009; Szekeres, 2011). These various findings suggest that more work is needed to compare different administrative specialties as well as different countries.

Those points lead us to examine another apparent contradiction and to ask: 'What tensions are there between the sensemaking of these research administrators about their work and the prevailing critiques of universities as increasingly corporatized, managerial, and audit-based?' There is now an extensive body of literature on neoliberal trends in academe, among them changes in granting structures (Polster, 2007), the spread of new managerialism (Enders et al., 2009), and intensified accountability regimes (Lucas, 2006). These policies are frequently said to have deleterious consequences, including narrowing the nature of research produced (Olssen, 2016) and putting undue pressures on academics to bring money into the university (Petersen, 2016). Contemporary university practices may both enable and constrain efforts at praxis (Mahon et al., 2019).

Given this context, some readers may be inclined to conclude that research administrators are necessarily complicit in furthering a dysfunctional system. Yet it is evident from our interviews that by and large, research administrators see themselves as offering an important and valuable service. There were a few, but

not many, references to the neoliberal turn within universities, such as comments about the pressure academics are under to secure grants and publish prolifically. It is not that the RAs are uncritical: there are many critical remarks in the interviews about the research councils, university hierarchies and procedures, and other aspects of their work surroundings. But it is illogical to expect critiques that undermine their own contributions.

This point leads to another question about the net impact of these changes over time on research administrators. We could see them as having been re-skilled and their positions upgraded and improved. That interpretation leads us to consider the neoliberalization of the university in a more positive way than is usually understood: for some, it provides opportunities. Although academics are frequently understood as 'playing the game' in order to succeed in the research world (Leathwood & Read, 2013; Lucas, 2006), that does not mean that administrators should also be characterized similarly. Rather than imposing potential interpretations about the complicity of RAs in furthering a system harmful to academics, we believe that RAs' sensemaking around professionalization and praxis and their self-images as contributors to faculty well-being through helping and caring should not be brushed aside by critical scholars.

From the perspectives of our participants, research administrators engage in praxis and are a helping profession in several senses. They help each other to learn 'on the job'. They help to enhance the greater good of the university and the quality of the research enterprise. In that process, they help academics to conform to expectations, including those that may be unjust and stressful. Yet (ironically?) through their praxis, they also make working life more bearable and rewarding both for themselves and their academic colleagues.

Conclusion

A number of limitations and potential extensions of our work can be outlined. Interview-based data like ours always produce a snapshot of what people choose to tell at a particular moment in time. And as a small, qualitative study in one province in Canada, generalizations are necessarily limited. Nevertheless, given the neglect by scholars of the various staff other than academics who make up a large proportion of universities, and the near-absence of Canadian research on research administrators, a small study is heuristic and worthwhile. We have not had space to comment on institutional variations, although some do appear. The range of roles and responsibilities within the RA group has also added both to the strength of the study and the weakness, as a generalization applicable to a pre-

award RA in a faculty of social sciences might not apply to an RA in a central unit specializing in research data management or knowledge mobilization.

Differences among administrative subgroups including and going beyond research administration need further investigation. Many published studies combine rather disparate specialties. We also suggest that more work be done to illuminate differences among countries. To what extent, for example, does the UK's Research Excellence Framework shape prevailing scholarship, often from the UK, about new divisions of university labour? How might such divisions differ in cases where the audit culture is less prominent or varies in other ways? Research in Canada can be an important corrective or an extension of ideas around how to understand changing academic (and by extension, administrative) work (Acker & Webber, 2016). Canada is unusual in not having a federal department of education (Shanahan & Jones, 2007), instead delegating educational responsibility to provinces, as well as retaining strong academic tenure systems and functioning unions for many university workers (Jones, 2013). Thus, Canada has no centrally directed research assessment exercises, although some provinces are beginning to impose versions of performance funding. Nonetheless, expectations for publishing and securing grants have increased and even spread to institutions without strong research profiles. Elsewhere we have described Canadian academics as uneasy rather than in despair (Acker & Webber, 2016).

The example of the RAs also suggests that analysis of the gendered academy needs to go beyond academics alone. Administrators in universities perform many tasks that appear to parallel those in occupations that Bourdieu (1992) called the 'left hand of the State' or 'social work' (see also Acker & Dillabough, 2007) and that we have characterized here as 'helping'. Gender scholarship needs to expand to consider the full gendered and raced profile of the university and what mechanisms sustain or challenge the divisions of labour, opportunity, and reward among administrative and other staff groups as well as academics.

Finally, the age-old debate about structure versus agency has arisen in our analysis, if not by name. Although there are many points at which structure limits what people can do, as evident in the description of aspects of what might, or might not, be a profession, we have made efforts to take agency seriously and not to undermine the sensemaking of the research administrators or their efforts at praxis by superimposing an interpretation upon their work lives that is at odds with their own.

Author biographies

Sandra Acker has held academic positions in the United States, the United Kingdom, and Canada. She is a sociologist of education whose research has highlighted gender and other equity issues in the careers and workplace cultures of teachers, doctoral students, academics, and academic administrators. She is the principal investigator for the Academic Researchers in Challenging Times project from which this article is drawn.

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Teacher educators' perceptions of their profession in relation to the digitalization of society

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Abstract

This study takes an exploratory approach to investigating Swedish teacher educators' perceptions regarding their profession in relation to the digitalization of society and education, including higher education. Eighteen semi-structured interviews were analyzed using thematic analysis. Findings show that the teacher educators perceive digitalization on a scale that ranges from simply using tools to being part of a technology-initiated revolution of educational institutions and society. From this range of digital developments emanate individual, group, and organizational requirements/demands, needs, and consequences for being, *that is, personal experiences of how digitalization affects the work, and* acting, *that is, doing something in response to the demands of using and teaching with digital technology. The teacher educator is situated primarily in* being *with the requirements for working professionally and* acting *as a teacher, which creates tensions and challenges for the individual and the professional self. Teacher educators require support to strengthen their professional identity, to facilitate activities for professional development, and to stimulate reflective practice. A further difficulty is the lack of relevant policies and strategies. This study highlights the complex challenge of teaching and learning simultaneously in a profession that implicates autonomy and responsibility of its practitioners. This creates limitations for the teacher educators to move from being to acting.*

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Introduction and aim

The purpose of education is to help students, who are citizens, or citizens of the future, to develop an understanding of our world. The rapid expansion of digital technology is changing the ways we communicate, make meaning, and learn, which in turn affects education. Thus, education is in a process of change that requires a relevant development reflecting contemporary society. In the case of school education, such a change takes time and requires equipping future school teachers with the skills that meet the demands of a digitalized society. Consequently, changes also need to be made to higher education and its contexts and programs, teacher education being one of these programs. This, in turn, entails changes in teacher educators' professional identity and work (Jonker et al., 2018; Selwyn, 2017). There are differences between teacher education programs around the world; they have varying goals, structure, and organization since their purpose is to educate those who will teach a particular nation's citizens. This study is in a Swedish context, where the national Teacher Education Program is offered within higher education.

In Sweden, a national strategy for the digitalization of education was launched in 2017 with an overall aim to give students the opportunity to develop the ability to use and create with digital technology and understand how digitalization affects the individual and society (Swedish Ministry of Education, 2017). The digitalization of schools in Sweden has been an ongoing process since the late 1970s, mainly supported by state funding for shifting reasons and during specific periods of time. Nowadays Swedish schools report the highest figures in Europe for computer density (OECD, 2017). Similar initiatives have not been implemented to the same extent in relation to teacher education in Sweden, which, like many other pre-service teacher programs around the world, faces challenges preparing future teachers for digitalized education in schools (Gudmundsdottir & Hatlevik, 2017; Istenic Starčič et al., 2016; Mouza et al., 2014). The aim of this study is to explore teacher educators' (TEs') perceptions of their profession in relation to the digitalization of society and skills needed in the future. The goal is to provide an in-depth understanding of how changes in schools and higher education that coincide with digitalization affect the TE's profession and the conditions for developing the pre-service teachers' readiness to teach and work in a digitalized school.

Digitalization in the educational sector and higher education

Digitalization is described by Brennen and Kreiss (2016) as 'the way many domains of social life are restructured around digital communication and media infrastructures' (p. 1) and by Fors (2010) as embedded in 'most aspects of our

lives, the world increasingly becomes impregnated by, with and through the digital' (p. 29). Thus, technology-related changes affect the entire society and its inhabitants. The pace of change in the implementation of digital technology has differed between the public context and the educational sector (from pre-school education to higher education). Selwyn (2017) suggests that the digitalization of the educational sector can perhaps best be understood as 'further development of non-digital processes and practices /…/ creat[ing] new opportunities while bringing new limitations and unwanted consequences' (p. 15); for example, consequences such as the uncritical adoption of digital tools and unhelpful reproduction of existing practices. Furthermore, Selwyn (2017) discusses the normative and positively-loaded rhetoric behind digitalization in terms of three different levels of impact: as technology that *improves* teaching, as something which *transforms* processes and practices, or something that *leads to an educational revolution*. Selwyn (2017) implies that these conceptions concern the whole educational system and extensively influence teacher education, and thus teacher educators.

Castañeda and Selwyn (2018) put forward a need for critical reflection and discussion on the complexity of digitalization as a response to a rhetoric of a hyped nature, and raise some overarching issues concerning digitalization of higher education. First, there is the need to talk about learning and pedagogy, to dig deeper into understanding what technology-based learning actually is, and how the use of technology shapes, conditions, and modifies instruction and pedagogy (see also Bartolomé et al., 2018; Decuypere & Simons, 2016). Second, we need to acknowledge that digital technology in higher education 'profoundly shapes the emotions, moods and feelings of students and staff' (Castañeda & Selwyn, 2018, p. 4) and examine how this affects higher education and the individuals involved in it. And third, we need to understand how digital technology has created individualized educational paths, an increased responsibility placed on the individual to learn and be self-motivated, and with that a decreased possibility of socialization and education becoming democratic and inclusive (Castañeda & Selwyn, 2018). In this paper the concept of digitalization is viewed as a process of change, including the three levels of impact described above by Selwyn (2017).

TE in a digital era

The TE differs from other university lecturers with the assignment of teaching to teach, that is, second-order teaching, representing what will be the students' future profession (Berry, 2009; Korthagen et al., 2005; McGee & Lawrence, 2009). TEs are a heterogeneous group with different backgrounds, working in diverse settings, with a variety of tasks that relate to several different roles or functions

(Koster et al., 2008; Lunenberg, 2010). Lunenberg et al. (2014) found six professional roles that TEs have to play: teacher of teachers, researcher, coach, curriculum developer, gatekeeper (for the students), and broker (to stimulate the cooperation between schools and institutions). Digitalization has an influence in various ways on all these professional roles. The TE is thus, on a daily basis, faced with a challenge to balance these roles, which can complicate decisions about where to invest energy and what to emphasize.

The TE's identity construction is described as ongoing and fluid, involving negotiation between past experiences, new ideals, necessary skills, agency, and constraints (Trent, 2013). For example, TEs' past experiences can collide with new challenges in terms of, for example, their acquired knowledge and acting in new learning environments. The ongoing changes in society, schools, and higher education with regard to digitalization require the TE to be innovative and willing to change. Drent and Meelissen (2008) argue that TEs who use digital technology innovatively have a certain type of identity, with a particular combination of knowledge, skills, and attitudes. The authors call them 'personal entrepreneurs'. They have the following characteristics: a positive attitude towards digitalization of education and society; regard for digital competence as part of a student-active pedagogical approach; willingness to take responsibility for their own information and communications technology (ICT) professional development. Avidov-Ungar and Forkosh-Baruch (2018) have recently examined TEs' perceptions regarding their pedagogical innovation in the digital era, using three modes of existence as a theoretical framework. There is the being-mode, the conceptual aspect of their identity; the doing-mode, the practical aspect; and finally, the having-mode, which is the environmental support aspect, that is, what the TE needs from, for example, colleagues. The authors found that educational practice in the digital era makes TEs re-examine their professional identity, that is, the being-mode, to a greater extent than the other two.

Knight et al. (2014) identify a general research gap, namely that the TE as an important field to understand second-order teaching has been an area of lesser interest. When it comes to research on digitalization within teacher education, focus has been primarily on studies about teaching with technology and the development of students' digital competence (Farjon et al., 2019; Harvey & Caro, 2017; Instefjord & Munthe, 2016). Studies on TEs' work and what role digital technology plays in being a lecturer working in higher education are few (e.g., Gerbic, 2011; Kim et al., 2013; Uerz et al., 2018). Digital technology creates new prerequisites for the teaching profession and the practice that the individual lecturer has to relate to and cope with. The TEs' construction of who they are as educators in relation to digitalization in turn affects the pre-service teachers'

ability to develop a professional identity. Therefore, research on this topic is needed.

Theoretical lens – the TE's professional development

The TE's professional identity as an educator can be seen as a response to participation in a practice and to their experience, learning, and knowledge of the profession (Kolb, 2014; Wenger & Wenger Trayner, 2015). According to Reich and Hager (2014), practice in a professional context can be explained as 'a collective and situated process linking knowing, working, organizing, learning and innovating' (p. 421). To create collective learning and a practice with a sense of belonging to a professional community, Wenger and Wenger Trayner (2015) argue for creating a community of practice where domain, community, and practice are in play and in transition. 'Domain' represents here the group's identity, 'community' is the engagement between community members in purposeful activities and interprofessional learning, and 'practice' is the shared repertoire of resources. Patton and Parker (2017) conclude that when TEs are part of a community of practice, the collegial collaboration and the development of teaching and research abilities are increased. Based on the Wenger and Wenger Trayner's (2015) conception of a community of practice, Hadar and Brody (2010) propose a three-layered model for building a professional development community (PDC) among TEs, where the layers build upon one another (see Fig.1).

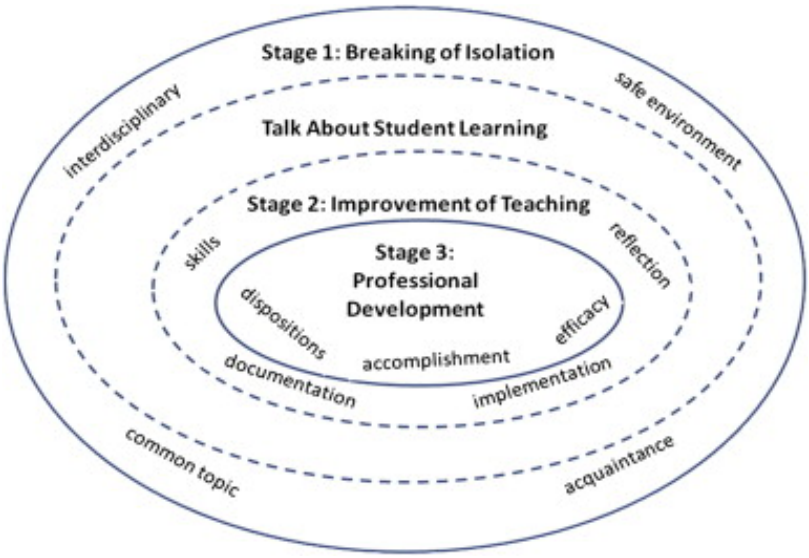

Figure 1. Layered model of professional development based on the PDC paradigm (Hadar & Brody, 2010).

The first layer, called 'breaking the isolation', relates to the solitary nature of the work TEs do, with its limited opportunities for collegial interchange, including factors such as a safe environment, having a common topic, interdisciplinarity, and acquaintance. The isolation can be used by the TE to restrict and protect the professional practice, which could be a factor that delays the professional development process (Snow-Gerono, 2005). In the second layer, 'improvement of teaching', the TE is gaining new knowledge and skills and reflects collegially. Skills, reflection, implementation, and documentation are important factors. Finally, in the third layer, 'professional development', factors such as efficacy and disposition are stressed. The TE has a feeling of efficacy and a sense of accomplishment. In the present study, Hadar and Brody´s (2010) model will be used as a theoretical lens.

Method

The study was designed in accordance with a qualitative research approach and inductive analysis. In order to explore the TEs' perceptions, semi-structured interviews were carried out. This section describes the context and participants in the study, data collection, and analytical instruments.

The context and participants

Twenty-seven Swedish universities offer a four-year teacher education program in primary school education. The Primary School Teacher Education Program is divided into three different majors: (a) after-school center education; (b) preschool class education and primary school education, grades 1–3 (K-3); and (c) primary school education, grades 4–6. In order to receive a teaching degree for grades 4–6, one must fulfil twenty-six intended learning outcomes according to the Swedish Higher Education Ordinance, one of which is related to digitalization: 'Demonstrate the ability to safely and critically use digital tools in educational activities and take into account the importance of different media and the digital environment's role in this' (SFS, 1993:100).

The participants were 18 TEs working on a campus with teacher education programs for primary school education, grades 4–6. Twelve of them were female and six were male, in the age group 30–60 years. In the Swedish Higher Education Ordinance (SFS, 1993:100) there are only regulations for teaching in an institution of higher education, none specifically for teacher education. The statute defines a lecturer as 'a person who has demonstrated teaching expertise and been awarded a PhD or has the corresponding research competence or some

other professional expertise that is of value in view of the subject matter to be taught and the duties that it will involve' (SFS, 1993:100). All these different levels of professional background are represented among the participants. The participating TEs had on average 10.6 years of teaching experience as a TE. Fifteen of the 18 TEs had a degree in education and an average of 19.4 years of teaching experience at the elementary or high school level. Ten had PhD degrees, while eight had both a degree in education and a PhD. One participant had neither a degree in education nor a PhD. The participants represent different disciplines and departments.

Data collection and analysis

Data were collected from four universities in Sweden in June 2017. The four ethical principles based on (a) respect, (b) competence, (c) responsibility, and (d) integrity have been practiced throughout the study (Swedish Research Council, 2019). The four universities differ in several aspects: geographical location, the number of students attending the teacher education program, the plan and structure of the program, and the profile of the university. Details about the universities have been left out since they could otherwise be easily identified. Criterion sampling was applied for gaining information-rich cases and maximum variation (Quinn-Patton, 2002). The criteria for participation was being a TE working with pre-service teachers on a teacher education program for grades 4–6. Four position holders at different universities were contacted and asked to provide names and contact information for all their TEs working on teacher education programs for grades 4–6. The four position holders had leading positions, which may have affected the selection process. The participants may have felt obliged to accept being interviewed, but they were informed that they could terminate their participation at any time without anyone knowing. The TEs were approached and invited via e-mail to participate in the study. Altogether there were 49 TEs contacted, and 24 of them were willing to participate in the study. Eighteen of them were interviewed. The drop in number was due to reasons such as illness and time constraints. The interviews took place at the participants' universities except for two: one was conducted over the phone and one was conducted at another university. All interviews were carried out behind closed doors in offices or the equivalent to ensure a safe environment for the participant and to avoid disturbances. Before the interview, the participants signed a written informed consent.

The structure of the interviews was designed to investigate the following topics: the assignment and everyday work as a TE, contact with the students, and teacher education as part of society. The interviews ended with an invitation to freely reflect upon four vignettes (four quotes) representing statements related in

one way or another to the digitalization of society, higher education, and teacher education. Vignettes can be a way of exploring the interpretative practices of participants (Jenkins et al., 2010), which was important for this study. Three of the vignettes were identical for all participants: one was from the Swedish Higher Education Ordinance (SFS 1993:100), concerning IT being an essential part of teacher education in phase with the digital developments in society and in the school system; one was from a research article concerning the lack of digital competence in teacher education; and one was from a survey-report investigating how pre-service teachers perceive their education from the perspective of digitalization, conducted by a market research company. The fourth vignette represented a quote from the participants' universities' goals and vision for the future, a future of globalization, new learning environments, and rethinking of education. During the last part of the interview, the participants were given the possibility to add to or comment on the topics discussed. The duration of the interviews was between 50 and 75 minutes (in total 18 h, 20 min) and they were recorded with a Dictaphone and transcribed verbatim, comprising 281 pages of transcription.

The transcriptions were coded using the qualitative data analysis software NVivo. A thematic inductive analysis was used, which, according to Braun and Clarke (2006), is a stepwise analysis process in six phases, each with clear guidelines aimed at creating themes. To begin with, each transcript was read repeatedly; this was done to become *familiar with the data* and to begin searching for patterns and themes relating to the aim of the study (first phase). A sample of three interviews was randomly selected and *initially coded* to explore the terrain and find a focus for the research. The initial coding resulted in clusters of codes labelled 'possibilities', 'fears', 'challenges', 'needs', 'requirements', and 'expectations'. These code-clusters were used as a starting point for the open coding of the entire empirical material (second phase). The analysis continued with *searching for potential themes* by comparing and collating codes, clusters of codes and *reviewing themes* (third phase).

In the comparative analyses, some of the clusters of codes became subthemes and new themes were constructed depending on whether the participants talked about a professional self or the professional practice (fourth phase). In the continuing comparative analyses the themes were related to each other, exploring similarities, differences, and contrasts, and the final themes and subthemes were constructed, defined, and labelled (fifth phase). In the sixth and last phase the manuscript was completed, and the final themes and subthemes have been used to describe the findings. Table 1 shows the number of references (codes) included in each theme and subtheme, demonstrating that the theme *being in practice* is highly emphasized in the utterances by the participants compared to

the theme *acting in practice*. Excerpts are used to illustrate the content and meaning of each theme and subtheme. It should be noted that the analysis covers the variety of perceptions across the group of participants based on representative quotes.

Theme – subtheme	No. of interviews	No. of codes
Being in practice	**18**	**180**
External requirements and inner demands	15	51
Needs in relation to the requirements and demands	16	103
Consequences in being	11	26
Acting in practice	**18**	**79**
Teaching with digital technology	15	40
Handling technology	8	16
Consequences of acting as an educator	11	23

Table 1. The final themes and subthemes – number of interviews and number of codes included in the themes.

Results

Based on the aim of this study to explore the TE's perceptions regarding their profession in relation to the digitalization of society and the conditions of higher education to develop pre-service teachers' readiness to teach and work in a digitalized school, two themes (a) *being in practice* and (b) *acting in practice* were identified in the interview data, described further below.

Being in practice

The identified theme *being in practice* concerns the TE's conceptual understanding of being a TE in a digitalized society and teaching pre-service teachers to become professional practitioners in schools in the future, the professional self. Thus, 'being' refers to the personal experiences of how digitalization of society affects the work as a TE, the individual's inclination to grow, learn, and cope. This theme was represented in the data by the following three subthemes: (a) external requirements and inner demands, (b) needs in relation to the requirements and demands, and (c) consequences in being.

(a) External requirements and inner demands

A large group of the TEs talk about the external requirements and the inner demands they perceive exist when it comes to living in a digital society and using digital technology as a teacher. There are external requirements placed upon the

TE by society, university administration, and students that demand one has the skills needed to use the digital technology. They say that places demand on the teacher education program and the TEs to adapt to the trends that permeate society. These trends are both made apparent and are regulated by policy. When university administrations implement, for example, digital systems, it is mainly up to the individual TE to learn to handle the digital technology in the workplace: 'one is just thrown into a learning platform and expected to have the knowledge' (1)[2]. Technology must be mastered to be able to do one's job and it is repeatedly being updated and changed. There is a perceived demand for a personal commitment to drive a process of change and at the same time be part of the students' learning process. A TE expresses that in the following way: 'a strong incentive is required for wanting to change the way one works' (11). This is perceived as time-consuming, difficult, and tiring, and, as one TE puts it: 'I'm not prepared to put so much of my energy into it to become excellent' (18). There is a perceived demand from the students to be part of a digitalized program, but also to learn to conduct digitalized teaching. Some of the TEs also experience an expectation from the students that the teacher education program they are attending is up to date: 'I think there is an expectation in some way, that teacher education should be a modern education that keeps up with the times' (11). The TEs have the feeling they cannot achieve this and they say that it is always going to be a problem due to a lack of time and competence. The TEs say they need time to explore and learn how to use the digital tools.

The TEs also talk about the inner demands digitalization has placed upon them to be able to relate to the present. Digitalization is described as 'the reality we live in now' (3). It is not something that has happened or will happen; instead, we are in the midst of it. Some TEs describe digitalization as profound, something that has created a change in the individual's identity, relationships, and ways of thinking. There is an uncertainty about how this affects oneself and others. It is perceived as an inner demand, a must, to be able to relate to contemporary society and that teacher education 'must become a more natural part of how we relate to our times' (3).

(b) Needs in relation to the requirements and demands

The TEs talk about their needs in relation to the requirements and demands they perceive exist. There is a consistency between the requirements/demands and their needs in terms of knowledge development, but the TEs stress the need to critically reflect upon the use of digital technology and to understand the group they are part of. When society changes, it creates a need to be prepared and a need for more knowledge and competence to 'be updated factually, didactically, and

[2] The excerpts are labeled with the number of the interview corresponding to the interviewed participant.

technically' (12). To have knowledge of digital technology is considered by the TEs to be a significant development area. They note the importance of being able to handle 'a new game plan with a new set of rules' (16) and to be able to 'formulate goals that feel relevant when it may be something we have not tried ourselves' (12). It is also stressed that '[i]t has a tendency to become too much that we adapt to trends that are not always so well-founded, there is somebody else who has an interest there' (18). The perceived consequences are that the TEs are not taking the time to reflect upon why digital technology ought to be used. There is a belief that digital technology is being put on a 'pedestal' (5) and to be the 'solution to all problems' (5), which could be a sign of a technical optimism. One TE goes even further and raises a question about the uniqueness of teacher education: '/…/ we can instead think about what is unique that we can come up with as a complement to people's lifelong learning' (7), and whether digital technology has a role to play in this. A reflection on what purposes there are for the use of digital tools is sought after and not only to 'reproduce what always has been done' (3).

It is also highlighted by some TEs that there is a need to understand the culture of the group of TEs, who are heterogeneous in terms of interest and digital knowledge. There are the enthusiasts 'who are very good at this and then I think for example then the students get it at least from them, which is a really bad excuse for not doing this yourself' (8). Often, these enthusiasts become responsible for the use of digital tools in more courses than their own. Then there are educators who do not have an interest in learning anything new; it is speculated that this is due to the fact that digitalization is seen as 'nothing new under the sun' (6). There is also 'a resistance to change, it takes so much time and effort, so you do not want to do it, one protests wildly' (7). This results in time and effort needed for learning not being prioritized.

However, several of the TEs express the desire for an increased shared responsibility and commitment to digitalization and 'less sharp dividing lines between the various institutions at the university' (11). The fact that the culture of the university 'is an individualistic culture where no one should tell me how to handle my job' (1) is mentioned by one of the TEs as an explanation for why it is difficult to get the group united. Some TEs point out the importance of the collective having digital strategies for the entire teacher education program. They say 'if there is to be a radical change, then it does not just have to land in the lap of the individual teacher, then the teacher education curriculum in general has to state that this is what we should do' (11).

(c) Consequences in being

The requirement of using digital technology for both professional and student needs can contribute to the TE's feelings of inadequacy, both at work and as a private person. This is an inadequacy which includes both a lack of knowledge and skills. There is an endless development of new technology and new systems to handle, which becomes a necessity to manage in university teaching situations and not all TEs feel that they can manage that: '/…/ I do not think that everyone is able to adapt their teaching so that it becomes good, I have a hard time and that is because there is technology that I have not mastered' (18). It becomes a challenge to adapt the teaching to the new circumstances. TEs describe this as a feeling of insecurity, a fear of making mistakes and in the long run not being able to handle the task as an educator. This can lead to stress and contribute to an ever-present bad conscience in their relations with students: 'I should be better, but I do not really know how yet, I have a bad conscience, I have a really bad conscience' (8).

Some of the TEs speak about the fact that there are possibilities for using digital technology since they are given the opportunity to work with other resources and that teaching can be done in other forums. Working on the learning platform has changed the TE's own learning; they learn from students and through social media. Only one participant points out that the technology can mean the possibility for the individual to have a more flexible work situation, a chance to live his/her life in a different way.

Acting in practice

'Acting in practice' is what the TEs as individuals say they do in their everyday work in a response to the demands within higher education with respect to using and teaching with digital technology. The TEs act; they take a stand to do or not do. In the utterances, there is an awareness that digital technology is part of the contemporary society and higher education teaching, and the individual makes choices related to this. This theme is comprised of three subthemes: (a) teaching with technology, (b) handling the technology, and (c) the consequences of acting as an educator.

(a) Teaching with digital technology

The TEs encounter the students in various roles and situations but the primary task is to educate. TEs as a group see digital technology primarily as an asset in teaching when there is an added value in using it and when the educator has learned to use the technology. The TEs primarily emphasize that technology has enabled communication and collaborative work: 'I find it much easier to keep in touch with people /.../ creating groups' (1). Several TEs express the feeling that digital technology creates ways to interact with the students; for example, the technology makes it possible for the TE and the student to alternate ways of

meeting and working, such as via Skype. The technology increases student participation and facilitates collaboration and communication between the TE and the student as well as between the students. Digital technology also provides possibilities for variation in the teaching and thereby enables different ways of motivating students and gaining their enthusiasm. This is described by some TEs as utilizing the technology to its advantage. One TE also describes the use of digital technology as 'another form of representation' (3) that can improve learning and the abilities the student is supposed to develop; it becomes an asset. Thus, the use of digital technology provides possibilities for finding ways for the student to learn; for example, more opportunities are provided for visualizing abstract thoughts in new forms of representation.

(b) Handling the technology

Unlike the previous subtheme, this theme is primarily about managing and understanding how to use technology, rather than teaching with the technology. Digital technology plays an important role in the work of educators, since they must be able to handle the technology, use the equipment properly, and manage the consequences of using it. Some TEs say that they use the students as a resource in teaching situations, like starting up the technical equipment in the lecture hall. It is not just about believing the student to be more skilled; it is also, as one participant says, 'a way of not taking the time to learn the digital technology' (8). The use of technology allows the students to be both the helper and the technician: 'Very often when I am going to use a digital device in a lecture hall, I ask a student to come and help me and then they get it started' (18).

One TE stresses that with the use of, for example, learning platforms and open forums for comments, the TEs are faced with ethical dilemmas to solve. These ethical questions may concern violations of various kinds, such as spreading rumors, affecting both students and TEs. The digital medium's availability in time and space makes it difficult for TEs to be prepared for this type of event.

Teachers from primary and secondary schools, who are beginning to teach in higher education, are affected by the difference in the use of technology. There are differences in the type of hardware and software available in the teacher education program compared to the schools. As a result, these newly appointed TEs with previous experience of working as school teachers, perceive they must change the way they teach with digital technology, described as going backwards in usage: 'I went backwards nine years when I came here because the students, not all the students have a computer with them' (12).

(c) Consequences of acting as an educator

When it comes to preparing the pre-service teachers to pursue a teaching profession that will require the use of digital technology, some TEs feel that they do not enable this because they do not have the knowledge and skills. The TEs perceive that in some cases, students learn the technology on the teacher education program by creating, for example, films and searching for literature, but there is little reflection upon the pedagogical use and how digital technology should be used in teaching. The TEs reflect that they should help students make the transition from student to professional user (as a teacher). A participant describes it this way: 'I do not put too much effort into teaching them, and not so much perhaps into reflecting, if they are to reflect on how they can use it themselves in their teaching, perhaps they need to do that more, we help them see such a thing, make the connection, and also see what can work and what does not work' (9). There is an awareness among the TEs that students need time for reflection on what role digital technology should play in education, perceiving their role as TEs to guide the students in these reflections. However, there are also TEs expressing that the students learn the necessary digital skills themselves, often in their practicum (internship).

Being a teacher in general means, among other things, being able to manage a classroom, being able to see what is happening in the classroom and communicating with the students (through eye contact, body language). These are skills that one learns in a professional setting and through experience. The TEs stress the fact that this may be lost if too much is done, for example, via a computer, since the ability to teach the student about the profession is then reduced. For example, the TEs express that direct proximity is difficult to transfer and the subtler signals in a classroom can be difficult to see and teach on a screen. Concerns are also raised that subjects such as arts and crafts will disappear in a more technology-based education. The TEs refer to the way they teach as 'the intelligence of the hand /…/ which is reduced in our adaptation to virtual learning' (18), because of the difficulty in physically showing and using the material.

An additional aspect referred to concerns the opportunities and obstacles of using digital technology in an individualized learning situation. The TEs express that the technology makes it possible for students to access information whenever and wherever they want, which they perceive contributes to a loss of the socialization process that is present in a classroom and in learning situations with fellow students. One TE sums it up this way: 'it is difficult to be a teacher, a good teacher, with these new media. If it was only about transferring information, then it is working but it is not that simple being a teacher' (18).

Discussion

The analysis of the empirical material demonstrates that the TEs being and acting in practice are affected by digitalization on an individual, group, and organizational level (see Fig. 2). The TEs perceive that there are requirements, explicit and implicit, and needs that permeate these three levels. The explicit requirements of the TE, as an individual, concern, in particular, being the carrier of the knowledge base and also inner demands regarding being digitally competent and in constant learning mode. In fulfilling these requirements and demands, the TE feels alone and inadequate, expressing a need for knowledge acquisition and professional development. In turn, the TE perceives an obligation to master technology in everyday life and in preparing the student for the profession as it is now practiced in a digital society. On the group level, the TE is part of a 'semi-digital' culture—a culture of participants who differ in knowledge and motivation to learn about and ponder digital technology and use their professional autonomy in various ways. In this respect, the TEs express a desire to become members of a community that facilitates opportunities to learn, explore, and critically reflect upon digital technology in the teaching profession. On the organizational level, the TEs find teacher education trend-sensitive. They perceive that existing guidelines, strategies, and the administration of a teacher education program in the digital age, are vague and few.

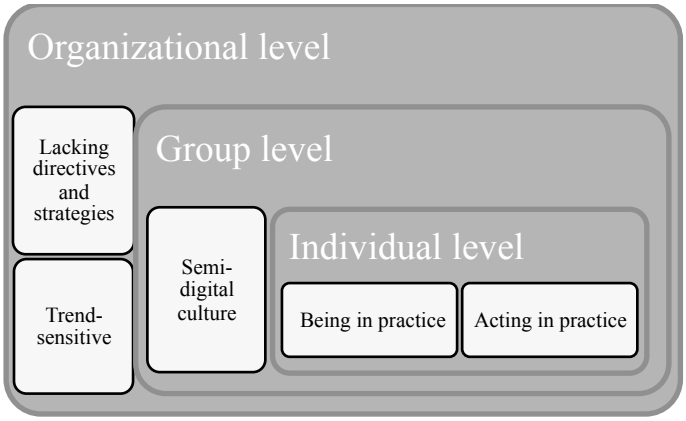

Figure 2. Digitalization in relation to TE.

Furthermore, the identified theme *being in practice* is more strongly emphasized in the empirical material in comparison to the theme *acting in practice*. That is, similar to the Avidov-Ungar and Forkosh-Baruch (2018) study, the TEs emphasize and talk more about being a professional practitioner and how digitalization affects the professional self (knowledge, skills, and sense of self) than the professional practice, acting as a TE. In accordance with these findings,

the TE is thus located primarily in being in practice with the requirements for working professionally, which creates tensions and challenges for the individual and the professional self on several levels. The empirical material identifies three such tensions.

The first tension concerns requirements affecting the professional self with the consequences of learning with a responsibility to teach and a feeling of loneliness. Being a professional in constant learning mode is nothing new; however, as a TE, who has teaching as his/her teaching subject, not having the required knowledge in relation to digitalization in education creates an inner demand and a complex situation.

The complexity derives from the need to be teaching and learning simultaneously when being responsible for second-order teaching. This is a state of affairs that requires reflection on the teaching content and its impact on the pre-service teacher's future career, a reflection emphasized by Castañeda and Selwyn (2018). Thus, the requirements and demands of having knowledge and skills affect both the TE's personal and professional self. The study's findings show that the TEs perceive themselves in general as not being capable and competent, where their perceived lack of digital competence creates an inner demand to be digitally skilled. As Castañeda and Selwyn (2018) argue, digital technology shapes the needs and emotions of staff and students.

Furthermore, the TEs express the feeling of solitude in this process of learning, which clearly relates to the isolation in this profession, identified in previous research of the TE's scheduled life of planning and carrying out lessons on their own that limits possibilities to collaborate and conduct collegial interchange (Hadar & Brody, 2010). The isolation can be connected to the TE's feeling of being solely responsible for gaining new knowledge and the inner demand of being in constant learning mode. Snow-Gerono (2005) concludes that the perceived isolation has been viewed as having restrictive and protective sides, visible also in the empirical material of this study. The restrictive side is the TEs expressing the feeling that digitalization and the use of digital technology is a trend and questioning the added value, and hence there appears to be some hesitation and a more selective approach. The protective side concerns the autonomy of TEs and their identity as a teacher. The isolation or solitude of the TE enables autonomy, in this case the possibility of choosing how to implement and use digital technology in instruction and teaching, and a possible way of hindering the individual's professional development.

In the data, there is an expressed desire for becoming familiar with the technology and to learn together with colleagues collectively, indicating the ambition to become part of a learning community. The TEs believe they are part of a semi-digital culture, a culture whose character traits include having

substantial professional autonomy, an obligation to be both a teacher and a researcher and having a variety of approaches towards digitalization. Becoming a member of such a professional community would mean an opportunity for collaborative learning and exploring (Hadar & Brody, 2010) and a professional opportunity for exploring attitudes towards the digital trend and adopting more of a pedagogical approach that is student-oriented (Drent & Meelissen, 2008). Discussing together in a learning community what digitalization is and how digitalization should be used can be a way forward in developing a collective, strategic voice (Wenger & Wenger Trayner, 2015), shared repertoire of resources, and a working consensus. A working consensus for teaching situations, courses or even educational programs, would reduce the sense of isolation for the TEs.

The second tension the study demonstrates concerns a lack of sufficient professional support for the TEs to make the jump from being in practice to acting in practice. Research shows that there should be both a bottom-up and a top-down perspective to create a long-lasting development and supportive conditions that stimulate a reflective behaviour and possibilities to experiment and explore (Drent & Meelissen, 2008). Thus, the study reveals a top-down perspective on digitalization in teacher education, implementing digital tools and organizing courses and workshops mainly for administrative and informative purposes. Opportunities for the employed TEs to reflect and experiment, to create spaces for professional development, are lacking. As Berry (2009) asserts, the TE as a representative of a learning profession needs to develop professionally but professional development support is rarely provided. The findings thus verify the Avidov-Ungar and Forkosh-Baruch (2018) conclusion that functioning as a TE in the digital era requires support to strengthen the professional identity and to facilitate activities for professional development. In this perceived lack of professional support and development there is an underlying belief that higher education and the teacher education curriculum is adapting to digital trends without reflecting upon its affordances and challenges. The TEs in this study clearly call for collegial critical reflection on the added or the subtracted value of digitalization, its place in teacher education, and what digital competencies and digital approaches the TE and the pre-service teacher need to develop.

The third identified tension concerns the TE's views on digitalization and impact on education represented on several and varied levels in the empirical material: from digital tools improving their teaching, to transforming processes and practices, to being part of a technology-initiated revolution of education and society (Selwyn, 2017). The TEs who view digitalization of education in terms of the digital tools that improve their teaching also have ideas and a shorter path to use digital technology in their teaching. TEs who view digitalization on a more abstract level, as practices and processes, or even as a transformation of society,

seem to have a longer path to working with it in practice. Their utterances show more overwhelming views regarding the digitalization of everyday life and the speed of change, and they become vague and unsure about what to do and how to carry out their work as TEs. They seek more of a discussion and more reflection upon whether and how digitalization improves teaching and learning for the pre-service student, as Castañeda and Selwyn (2018) consider necessary. They have more of a focus on values and ethical issues and how these can be processed in the teaching.

Conclusion

In conclusion, this study offers insights into TEs' perceptions of their profession in relation to the digitalization of society and the perceived needs and consequences for the TE. It addresses the research gap in studies on TEs' work and what role the digitalization of society plays in the duties of a lecturer in higher education who is preparing future teachers for their profession, rather than being a study in how to use and implement digital technology in higher education. The study demonstrates the complex challenge of the TE, to teach and learn simultaneously in a profession of autonomy and responsibility, to move from being to acting in practice.

This in-depth analysis clearly shows that the TEs' perceived requirements and demands give rise to needs and consequences for the TE located in the intersection between a desire to learn in order to meet the demands of current developments in society and being professionally autonomous in a higher education institution that lacks targeted policy, strategy, and support to provide the necessary conditions. The study identifies in the TEs' statements a discrepancy between directives about their work and the actual professional practice. The study implies that breaking the TEs' perceived isolation is crucial for the TEs to develop professionally and move forward from merely being in practice to acting in practice. It is essential to find support in the policies and strategies of their organizations as well as among their colleagues, for each TE to find an approach to the digitalization of teacher education. Further research needs not only to address the conditions of TEs in relation to the students and teaching as Castañeda and Selwyn (2018) points out, but also, as this study implies, from the perspective of working conditions of university lecturers.

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