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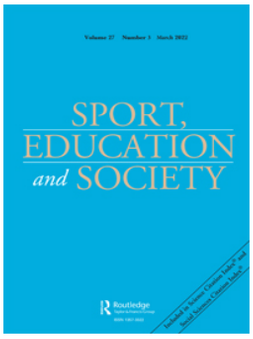

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Professional teaching standards and inclusion in teacher education: insights from a hearing-impaired Health and Physical Education pre-service teacher's professional experience

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ABSTRACT
Initial Teacher Education (ITE) is a critical arena for advancing inclusion in Health and Physical Education (HPE). This paper reports research that is engaging with the diversity of the HPE profession and practitioners. It centres on a unique case study that critically explored the school-based professional experience of an Australian secondary HPE Pre-service Teacher (PsT) who has a hearing impairment. Specifically, to enable PST success in HPE professional experiences as defined by the professional standards for teachers in Australia and to which, PSTs' must evidence to graduate and attain teacher registration. Drawing on documentary and interview data the paper focuses on tensions identified between the bureaucratic environment of ITE and the legislation of 'reasonable adjustments' for students with additional needs. Discussion highlights the expertise that PsTs with additional needs can bring to inform institutional and sector-wide work to advance equity and inclusion in ITE. Our research shows that graduate employability of peoples with additional needs in HPE teacher education relies on the inclusive interpretation and application of the professional standards for teachers. We advocate further research to increase knowledge(s) supporting (i) the representation of people with additional needs in HPE teaching and (ii) inclusive practice in HPE ITE courses.

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Introduction

Internationally, teachers are acknowledged as 'the most costly and, potentially, the most powerful resource in the education system' and as such, key to advancing inclusion and equity (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2017, p. 36). UNESCO's (2019) '*The Right to Education for People with Disabilities*' report reaffirmed that individual differences should be viewed as 'opportunities to enrich learning rather than problems to be fixed' and urged states to 'employ teachers with the required skills to provide inclusive education and to ensure adequate and effective training of teachers so that they are able to teach persons from different backgrounds' (UNESCO, 2019, p. 6). In a similar vein, UNESCO's (2015) guidelines for Quality Physical Education (QPE) highlighted that delivering on the visions for inclusive QPE required review of and developments in QPE teacher education (PETE), to address acknowledged shortcomings in understandings of and approaches to inclusion.

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The research reported in this paper reflects that diversity within the Health and Physical Education (HPE) profession and therefore, the capacity of Initial Teacher Education (ITE)[1] systems and institutions to support Pre-service Teachers (PsTs) with additional needs, are important foci in efforts to advance inclusion and equity in HPE (and Physical Education [PE])[2] teaching. An empirically unique case study is presented that further identifies professional experience during ITE courses as a critical arena for PETE research that is seeking to extend opportunities for undergraduate students with disability to successfully enter the HPE profession. Located at one ITE institution (ITEI), the research explored the second[3] professional experience of an Australian secondary HPE PsT, who has a hearing impairment, to extend examination and understanding of the ways in which the legislative and bureaucratic context impacted this PsT's professional experience. Although inclusion and inclusive practice in higher education (HE) are supported globally by policy and research, a review of literature found the context of the professional experience for PsTs with additional needs has not received focused research attention. To our knowledge no previous comparable research in PETE has been undertaken internationally.

Theoretically, the research sought to draw on and span perspectives on inclusion stemming from disability and linguistic minority literature. As we explain further below, many theorists, academics, and disability advocates do not identify deafness in the context of disability, but rather associate the experience of deafness with the linguistic minority model (Ferndale, 2015; Lane, 2006). At the same time, deafness/hard of hearing and more specifically, the constraints it presents, are frequently conceptualised in relation to medical (e.g. Ferndale, 2015), or social models (e.g. Oliver, 1990, 2009). While acknowledging the medical conceptualisation and insights research adopting that perspective offers, this research focused particularly on the notion of connectedness to community as a central facet of the social context and of inclusion in ITE (and PETE) settings. Following Wenger's (2008) perspective that 'learning is most personally transformative' when it involves 'membership' in communities of practice (p. 212), the study embraced the participant voice to better understand the needs of PsTs with a hearing impairment in relation to the professional experience. Inspired by Riddell et al. (2005), who applied mixed methods research to examine the impact of institutional change promoting inclusion for disabled students, the study similarly created a nexus between document and qualitative data analysis in exploring professional experience of a PsT with a hearing impairment. The study necessarily positions institutional and professional commitments to advance equity and inclusion in complex ITE policy contexts and regulatory requirements. Data and discussion draw particular attention to tensions between the bureaucratic framing of ITE and professional experience, and discourses of inclusion in PETE. Like Riddell et al. (2005), we purposefully share our research with an international audience to promote discussion and 'anticipatory adjustments' (p. 641) for PsTs with additional needs on professional experiences. We also seek to dispel the perception amongst some HE students with additional need that 'presence within higher education is conditional on them adapting to the demands of the institution, rather than institutions seeking to adapt to the needs of students within them' (Riddell et al., 2005, p. 641).

Exploration of scholarship related to professional experiences for people with hearing impairment revealed little empirical research (Australian Government, 2012; Keane et al., 2018; Szymanski, 2010; Urbis, 2015) and none relating specifically to the PETE context. The PETE context is recognised as prospectively compounding challenges for hearing-impaired individuals, due to, for example, the need to teach in expansive outdoor environments. In the absence of prior investigation into how ITEIs across Australia and/or internationally are supporting PsTs with hearing impairment to complete PETE courses, this study therefore offers modest but important insight for PETE research, policy and practice in Australia and internationally. The authors acknowledge that as is the case in many international settings, professional experiences are central to teacher education course completion in Australia, but their delivery varies cross ITEIs (Barwood et al., 2021). Following Maher et al. (2020) and Maher (2018), the researchers' as abled individuals, were committed to making sense of and empathising with the lives of those with additional needs to better support an inclusive culture enabling positive experiences of all HPE PsTs on professional experiences.

While situated in the Western Australian context, the study is pertinent for researchers, HE administrators and ITEIs elsewhere, who like us, are working amidst increased enrolments of students with additional needs (Adefila et al., 2020; International Consultants for Education and Fairs Monitor, 2020; National Centre for Student Equity in Higher Education, 2018).

Theoretical and policy positioning of hearing impairment in ITE in Australia

As indicated above, this research is framed within a deep understanding of disability and impairment constructs and at the intersection between models of disability and linguistically marginalised people. The latter perspective reflects that advocates of the linguistic minority model (Ferndale, 2015; Lane, 2006) suggest that within deaf communities there is no disability to overcome when a common language such as Auslan (the sign language of the Australian deaf community) is fluently understood. The former perspective contextualises deafness/hard of hearing within either the medical model with its focus on audiological experiences and communication challenges (Ferndale, 2015), or the social model (Oliver, 1990, 2009) that places deafness within a societal context and seeks out barriers that impact on these individual's capacity to connect with their communities. This study sought, cautiously, to acknowledge both the medical and social context of deafness/hard of hearing within a methodological approach that foregrounded participant voice. The research focus was thus on a hearing-impaired PsT's lived experience of professional experience in their PETE studies. Within the study, tensions between the nature and timeliness of support, are juxtaposed with teacher educators' understanding of how best to utilise these support mechanisms and from a human rights perspective how to achieve equity in provision of support when considering all students. Thus, our research, positions teacher educators as critical agents for change, with potential to impact upon PsTs' successful professional experiences in schools.

The HE experiences of PsTs with hearing impairment are understandably different from those of fellow students who are without hearing loss (Barwood et al., 2018; Hyde et al., 2009; Keane et al., 2018; Powell et al., 2014). Like many students with disabilities and/or additional needs in educational institutions, environmental, practical and attitudinal barriers toward learning can impede, disrupt and/or interrupt their experiences (Commonwealth of Australia, 2016). In the HE context, irrespective of country, such complexities hinder and obstruct course selection and may also result in course deferral and/or withdrawal (Albertini et al., 2012; Komesaroff, 2005; Spradbrow & Power, 2004, as cited in Power & Leigh, 2004). Adefila et al. (2020), from the United Kingdom (UK) point to intermittent, divisional and poorly conceptualised HE institutional support as contributing to course concerns for these students. Szymanski (2010) and the National Deaf Centre on Postsecondary Outcomes identify practical experiences central to professional preparation and graduate accreditation in the United States of America as presenting specific challenges for individuals with hearing impairment (2020). Not surprisingly, Spradbrow and Power (2004) from an Australian context, as cited in Power and Leigh (2004), report that such students have had higher attrition rates in HE than those of their hearing peers. Keane et al. (2018), looking more broadly but from the context of ITE in the republic of Ireland, found that teachers with a disability or additional need are under-represented in comparison to similar individuals in the general population.

Other international research studies affirm that students with hearing impairment in HE, experience several challenging issues. For example, despite increased access to course content via the assistance of Auslan interpreters, students with hearing impairment report feeling socially isolated (Foster et al., 1999; Hyde et al., 2009; Komesaroff, 2005; Powell et al., 2014). These students are also concerned that they are missing vital content due to the interpreter translation process (Barwood et al., 2018; Hyde et al., 2009; Spradbrow & Power, 2004, as cited in Power & Leigh, 2004; Szymanski, 2010; Traynor & Harrington, 2003, as cited in Gallaway & Young, 2003) whilst, the chronic shortage of interpreters globally and in Australia impacts learning consistency (Barwood et al., 2018; Marschark et al., 2005; Powell et al., 2014). For those students with hearing impairment who use their residual hearing at HE institutions and access support to facilitate

course content, issues such as interpreter lag, room acoustics, lighting and interference from background noise were reported as impacting student success (Hyde et al., 2009; Stinton & Foster, 2000, as cited in Spencer et al., 2000). How these noted antecedents impact the experience of students with additional needs in the HE HPE environment is largely undocumented.

In Australia, students with hearing impairment enrolled in HE are supported by the *Disability Standards For Education*[4] (DSFE) (Commonwealth of Australia, 2005, 2006), whereby federal law mandates that all education institutions make reasonable adjustments to course curriculum and related activities to accommodate students with additional needs. However, and in some ways similar to earlier research from the UK (Vickerman, 2002), Australian research pinpoints ambiguities in the application of the standards, especially in relation to the participation of students with disability in professional experiences like a school-based practicum placement (Australian Government, 2012; Urbis, 2015). This research is located within the deployment of the DSFE (2005) and the parallel application of the *Australian Professional Standards for Teachers*[5] (APST) (Australian Institute for Teaching and School Leadership [AITSL], 2011) and requirements for the *Accreditation of ITE Programs in Australia*[6] (AITSL, 2019). As explained later in this paper, these two policy frameworks were the central focus of the documentary dimension of this study and are key points of reference for inclusive ITE practice in Australia.

The following section expands upon the complex policy context that this research was located within and echoes previous commentaries identifying ITE as typically operating within a complex milieu of legislation, regulation, and policy (Darling-Hammond, 2017; Yeigh & Lynch, 2017).

The standards debate – a complex milieu

The Disability Standards for Education

Following the review of the Australian DSFE (2005) in 2015, the Australian Government acknowledged, the 'raised level of awareness among educators of access and inclusion for people with disabilities' (Urbis, 2015, p. 15). However, it was noted that 'there is much more to be done' (p. 15). The 2015 review drew particular attention to concerns associated with third parties responsible for implementing the DSFE, including hospitals and schools, with the following contribution cited:

> [o]ften there can be students who can manage the academic requirements but when they hit the practicums that's when the issues arise and there are difficulties. I feel that the Standards just really don't address those issues in enough detail to provide direction. (Educator's roundtable, cited in Urbis, 2015, p. 31)

The DSFE (2005) clearly articulates that reasonable adjustment to the curriculum or participation in the courses at HE institutions, 'should ensure that the integrity of the course or program and assessment requirements and processes are maintained' (p. 15). Guidance notes further anticipate a need for expert input to this process, explaining that:

> A detailed assessment, which might include and independent expert of the nature, may be required in order to determine what adjustments are necessary for a student. The type and extent of the adjustments may vary depending on the individual requirements of the student and other relevant circumstances. Multiple adjustments may be required and may include multiple activities. (Commonwealth of Australia, 2006, p. 14)

At the time of writing, no research has been identified that provides insight into how ITEIs and/or PETE providers specifically, are approaching adjustments for students with hearing impairments. Thus, we view our research as a unique attempt to prompt renewed discussion in the ITE sector about diversity and inclusion and specifically, address the inequity in knowledge(s) supporting PsTs with additional needs on professional experiences. As explained above, such adjustments need to be considered in relation to the framework and specifications for teacher professional standards in Australia.

The Australian Professional Standards for Teachers (APST)

The APST framework comprises seven standards and focus areas that outline a pathway for teachers to achieve outstanding professional knowledge, professional practice and professional engagement (AITSL, 2011). Each standard explicitly prescribes what is required at the four career stages of teaching – graduate, proficient, highly accomplished and lead teacher – for each of the focus areas within the APST. The APST expectations for graduate teachers are used by ITEIs as one measure to qualify the success of PsTs in their final professional experience. In addition, the APST is a required point of reference in the accreditation of ITE programmes in Australia (AITSL, 2019).

The Accreditation of Initial Teacher Education Programs in Australia: Standards and Procedures

To achieve national consistency in ITE, *Standards and Procedures* explicate the process to accredit ITE programmes in Australia (AITSL, 2019). Amidst jurisdictional distinctions across Australia, six standards and eight procedures scope ITE programmes and assessment processes for graduating PsTs. For example, in complying with Standard 1: 'Program outcomes', ITEIs must evidence 'where each Graduate Teacher Standard is taught, practised and assessed' (p. 12) and whereby, PsTs 'have demonstrated successful performance against all of the Graduate Teacher Standards prior to graduation' (p. 12). In the context of this paper, ITEIs must provide evidence in response to Standard 3: 'Program Entry' and particularly, sub-standard 3.4, which requires that:

> The program is designed to address the learning needs of all pre-service teachers admitted, including through provision of additional support to any cohort or individual who may be at risk of not being able to participate fully in the program or achieve its expected outcomes. (p. 12)

Located within the boundaries and constraints of the DSFE (2005), institutional processes and resources, and the political background of state and territory jurisdictions, Australian ITEIs evidence how they meet the standards and procedures.

Problematising the fit of professional standards to all graduate teachers

International literature has highlighted that few PsTs with sensory issues graduate from education courses (Keane et al., 2018). The PsT in our study is the first to graduate from the ITE in Western Australia (WA) to teach HPE in secondary schools. As reported previously (Barwood et al., 2018), the experiences of this student have led us to question the extent to which the APST (graduate level) are 'fit for purpose' for PsTs with additional needs such as a hearing impairment. Our investigation of the PsTs' second professional experience was designed to further examine this issue, with recognition that some degree of disjunct between the APST and potential needs of PsTs with a hearing impairment, was apparent. For example, Standard 3: 'Plan for and implement effective teaching and learning' and its focus area, Standard 3.5: 'Use effective classroom communication' requires PsTs to 'Demonstrate a range of verbal and non-verbal communication strategies to support student engagement' (AITSL, 2011, pp. 5–6). Locating observations such as this in the assessment protocols within ITE begs the question; how do PsTs with a hearing impairment meet the expectations associated with this standard? Further, what adjustments or accommodations need to be made to facilitate these PsTs evidencing achievement and what is reasonable adjustment?

In examining the first professional experience of the PsT with a hearing impairment who is an author in this paper, and the assessment processes used to evaluate the PsT's performance, Barwood et al. (2018) recommended nuanced application of the APST, with the emphasis that one size will not fit all and individual case reviews are needed. In a similar manner to Davies and Heyward (2019), 'contextualised dilemmas' were also identified as impacting upon the PsT's professional experience, with numerous examples provided of the 'disconnect' between the APST

and the verbal and non-verbal communication capacity of the PsT (Barwood et al., 2018). Accordingly, this study sought to foreground the PsT's perspective as a 'nuanced view of reality' (Flyvbjerg, 2006, p. 223), overflowing with 'context-dependent knowledge' (p. 221) and, deserving of a rich research design to capture the complexity of the case (Riddell et al., 2005).

Introducing Jordan and our research approach

The PsT with a hearing impairment, Jordan, was enrolled in a Bachelor of Education Degree at the ITEI in WA. This four-year undergraduate course, which includes three professional experiences, will prepare Jordan to teach HPE in Australian secondary schools, with students from year 7 to year 12 (12–17 years old). Should Jordan choose to become a teacher of the deaf and/or hearing-impaired, further study is required specialising in special needs teaching. This additional study would occur following attainment of the Bachelor of Education Degree.

As Creswell (2014) has discussed, qualitative researchers variously apply theoretical lenses to research to shape, transform and support a 'call for action or change' (p. 64). Employing Wenger's (2008) social theoretical perspective of learning, we adopted the view that as 'social beings' (p. 210) knowledge is derived from competence, participation, and experience. As social participants, we characterised 'knowing' and 'meaning' within the professional experience as pertaining to 'individuals', 'communities' and 'organizations' (Wenger, 2008, p. 213). And, in some way, albeit limited by our ability to hear, we sought to move beyond our hearing community and experience a new practice and a new community, that of Jordan's and the hearing-impaired (Maher et al., 2020; Wenger, 2008). We therefore aligned with Jordan's sense of modelling for future PsTs, hoping that: 'If some day in the future a deaf person goes along the same line and wants to become a teacher … and if they end up reading something like this … it will help them prepare'.

Jordan – as research participant

Jordan is hearing impaired and wears hearing aids. At the WA ITEI he accesses the assistance of two Auslan interpreters and a note-taker. Jordan is classified as post-lingually deaf, resulting from gradual hearing loss following a car accident in his late teens. Prior to enrolling in teacher education, Jordan lived in Japan and worked as an English interpreter. While in Japan Jordan was told that he was a 'good teacher', and at this time also became aware that his hearing was gradually deteriorating. Jordan returned to Australia to pursue a career as a teacher.

Like most individuals who are post-lingually deaf, Jordan can speak but at the ITEI, he chooses not to speak. Jordan has found that in the ITEI environment his peers and others forget that he is deaf or assume that he has heard. McDonald (2014) reports similar frustrations, whilst other researchers comment that Jordan's choice not to speak is not uncommon in HE institutions as the open environment contributes to a variety of misconceptions and/or barriers to a student's success (Albertini et al., 2012; Komesaroff, 2005; Lokomski, 2007).

Following discussions with the HPE academic teaching and equity staff at the ITEI, Jordan decided that he would use his voice to communicate with his students whilst on his professional experiences. To support him, Jordan was provided with an Auslan interpreter who accompanied him on a fulltime basis, shadowing Jordan for the length of the school day. This support is unlike the intermittent support that Jordan receives whilst on campus at the ITEI, whereby interpreters and a note-taker are only present when Jordan attends classes. However, it is noted that the interpreter did not shadow Jordan past school closure, limiting his opportunity to participate in extra-curricular activity.

Jordan's first professional experience occurred in the second year of his course, lasted for 15 days and was completed at a specialised centre for the deaf and hard of hearing positioned within a large secondary school. This placement aimed to provide Jordan with experiences of both the hearing and non-hearing schooling contexts. Barwood et al. (2018) reported that at this school, 'an inclusive environment already existed for students who are deaf and therefore vicariously for Jordan' (p. 6).

During this first professional experience Jordan successfully taught HPE to hearing students within a hearing class via the use of Auslan interpreters.

An intrinsic case study

Jordan's second professional experience occurred in the third year of his teacher education course and lasted for 25 days. As described by Jordan, the school for this professional experience is a 'fully hearing school' and, as a 'non-hearing person in a hearing school', Jordan taught HPE to hearing students with the aid of an Auslan interpreter.

Using an intrinsic case study design (Yin, 2018), qualitative data was collected via a semi-structured interview, which was held at the earliest opportunity following the second professional experience; 11 days later. Policy documents specific to the boundaries of the case study were then examined to pursue points of discursive connection and tension inherent in the two datasets. Yin (2018) identifies case study research as appropriate to investigate a phenomenon and gain an in-depth understanding of a real-life context.

The policy documents

The policy documents; the APST (AITSL, 2011), *Accreditation of initial teacher education programs in Australia* (AITSL, 2019) and the DSFE (Commonwealth of Australia, 2005) were each reviewed by four or the five authors of the paper. These policy frameworks and their inherent specifications were recognised as individually and collectively, proving a distinct and complex policy context for ITE and more specifically, for Jordan's professional experience.

The APST (AITSL, 2011) is interactively web-hosted and available via a 32 page portable document format (PDF). Thirty-seven focus area descriptors describe the seven standards at each of the four career stages with illustrations of graduate practice, teacher video logs and supplementary PDFs demonstrating the 'agreed characteristics of the complex process of teaching' (AITSL, 2011, p. 6). The accreditation of ITE programmes in Australia (AITSL, 2019) is also interactively webhosted, with a 36 page PDF outlining the principles, elements and system for ITE accreditation across two stages focusing on impact, specifically programme development, delivery, outcomes and improvement. Stage One applies to new programmes and Stage Two relates to ongoing programmes. The DSFE (Commonwealth of Australia, 2005) is similarly web-hosted and available through a comprehensive 39 page PDF that outlines the standards for enrolment; participation; curriculum development, accreditation and delivery; support services; and harassment and victimisation; whilst also providing guidance notes around making reasonable adjustments to individual programmes.

Each author's review of the three documents examined the ways in which the principles of equity are framed in contemporary ITE in Australia and how compliance seeks to protect the rights of those with additional needs in HE. The authors' review, engagement, and understanding of these documents was negotiated and collated in the construct of this paper, and specifically the discussion section, with author agreement as to policy interpretation.

The preceding commentary has presented key insights from this policy analysis to contextualise the case and in turn, provide specific points of reference for engaging with the interview data.

Qualitative data collection

Following the second professional experience, a semi-structured interview was conducted with Jordan by two of the authors and with the assistance of an Auslan interpreter. As with his professional teaching experience, Jordan chose to use his voice during the interview. Thus, the Auslan interpreter did not participate in the interview but was available to support Jordan. The interview was conducted at the ITEI, lasted approximately one hour, generated 25 pages of transcribed data and close to 14,000 words. The interview contained a combination of researcher developed

questions and open-ended prompts. These prompts were developed in situ when a researcher sought further clarification to understand Jordan's response. The questions built on the research team's previous explorations; teaching skills, managing the learning environment, student interactions like feedback, school supports and wellbeing. The format was designed to allow Jordan to explore, unpack and contextualise his experiences (Flyvbjerg, 2006; Punch, 2009) and enable the researchers, to probe for more detail. The interview was audio-recorded and transcribed. The transcript was checked and validated by Jordan as an accurate account of the interview.

Ethical considerations

As mentioned, Jordan is the first PsT with a hearing impairment enrolled in secondary HPE at the ITEI. Purposeful sampling was thus used to strategically invite Jordan to participate in the research (Creswell, 2014; Punch, 2009; Yin, 2018). Ethical approval for the research was obtained from Edith Cowan University Human Ethics Research Committee. Informed consent and additional approval to publish was obtained from Jordan, with recognition of his contribution in the research reflected in his authorship of this and other papers. The school, the school staff and the Auslan interpreters were aware of the research, but the scope of ethical approval precluded their direct involvement. It is recommended that future research pursue the involvement of such stakeholders to provide further insight.

Data analysis and results

To explore and critically examine the factors both challenging and facilitating Jordan's success whilst on his second professional experience, two phases of data analysis were employed. First, the qualitative data was deductively analysed according to the APST for graduating teachers in Australia (AITSL, 2011). This deductive process identified data aligning with the scope of the APST focus areas (prescribed data) and data, positioned outside of the scope (non-prescribed data). In the second phase, inductive analysis was applied to the non-prescribed data to thematically locate critical information not previously captured in the prescription of the APST (Xu & Zammit, 2020). Inspired by Wenger's (2008) call to 'rethink' learning opportunities, this iterative process located patterned meanings shared across the non-prescribed dataset according to 'what it takes to support learning' for: individuals, communities, and organisations (p. 213). Phase Two data is the focus in this paper, with Phase One data to be reported in a future paper.

By locating Jordan's lived experience in the context of teacher accreditation, the intention was to explore the interplay between policy and practice in the ITEI's assessment policy for the evaluation of professional experiences and application of the APST at graduate level (AITSL, 2011). Specifically, data analysis involved an exhaustive and iterative process to locate 'snippets' (Punch, 2009), according to the graduate professional standards (AITSL, 2011). The deductive process involved three initial steps:

(1) an initial and independent review of the interview transcript by the research team to familiarise themselves with the text;
(2) segmentation of the data into snippets of text; and then
(3) a review of the snippets to determine if they represented initial indicators of themes.

Upon completion of the initial stage of the analysis, three further steps ensued:

(4) application of the APST (AITSL, 2011) to organise and locate the snippets in accordance with graduating teacher accreditation;
(5) review of the snippets to affirm the attached standard and then, categorisation of the snippet into prescribed and non-prescribed AITSL data; and finally,

(6) the data snippets were quantified as prescribed or non-prescribed AITSL data to capture the positioning of Jordan's voice in relation to graduate standards.

By step 3, 82 snippets of data were identified by the researchers. By step 6, 45 snippets were identified as aligning and prescribing to the APST (graduating teachers) and 37 snippets were identified as unrelated and not accounted for by the graduate standards (AITSL, 2011). A second layer and/or embedded thematic analysis was then used to explore a specific aspect of the case (Yin, 2018) and locate the non-prescribed data according to Wenger (2008). Once again, a series of steps were followed in analysis:

(1) The remaining 37 snippets were qualitatively re-examined to further understand the complexity and uniqueness of the case.
(2) Informed by Wenger's social theory of learning (2008), thematic analysis was then employed to identify patterned, repeated, or recurring themes symbolically weaving across the data (Creswell, 2014; Xu & Zammit, 2020). This process was driven by the researchers' complex interpretation of Jordan's social reality combined with their experiences in HE and the professional experience for undergraduate teachers.
(3) Each snippet was further thematically coded according to the emergence of patterned data relating to individual's, communities, and organisations (Wenger, 2008), and finally,
(4) The 37 snippets were affirmed as relating to individual's, communities, and organisations via researcher agreement (Wenger, 2008).

In total the 37 snippets were analysed 111 times and the following three themes were found to weave across and in and out of the data:

- Supporting learning for individuals: Being a hearing-impaired PsT on a professional experience is logistically complex and challenging;
- Supporting learning for the hearing-impaired community: Being a hearing-impaired PsT on a professional experience is exhausting; and
- Supporting learning for the organisation of education: Being a hearing-impaired PsT on a professional experience can have positive impacts on the school community.

Findings and discussion

In the absence of other empirical research, we accept that our study is not for generalisation beyond the context of the case. That said, it is a nuanced view of reality (Flyvbjerg, 2006), purposefully located (Riddell et al., 2005) in the unique professional experience of one hearing-impaired HPE PsT and ITE in Australia. In organising the data relative to teacher accreditation in Australia, we view our analysis as uncovering important themes pertaining to the experience of a PsTs with hearing impairment (Creswell, 2014; Riddell et al., 2005; Wenger, 2008; Yin, 2018).

Supporting learning for individuals: being a hearing-impaired PsT on a professional experience is logistically complex and challenging

Jordan returned to an ongoing concern regarding the 'logistical nightmare' of the professional experience (Barwood et al., 2018), reporting that the biggest issue for him on this second experience 'was not to do with the teaching side of things' but, 'to do with the logistics of being deaf in a hearing school'. It became apparent that Jordan faced several additional administrative challenges that other PsTs are not subject to, which primarily related to the coordination of the Auslan interpreters who shadowed him. He provided numerous examples, of which a few are discussed here.

Jordan echoed the frustration of other researchers (Barwood et al., 2018; Marschark et al., 2005; Powell et al., 2014; Traynor & Harrington, 2003, as cited in Gallaway & Young, 2003) when discussing the shortage of interpreters in WA. He explained that 'bookings of interpreters have to happen months in advance' and that there was no consistency in the interpreter allocated:

> The main interpreter I had was … [Interpreter 1 – name removed], who was male, and he was Monday, Wednesday, Thursday, Friday. And then on Tuesdays, I had … [Interpreter 2 – name removed], who was a female. And then for the fifth week, I had … [Interpreter 3 – name removed and female], so someone completely different. For the last week, I was unsure if it was going to be … [Interpreter 3] every day, or a different interpreter every day. Not until a few days prior, did … [Interpreter 3] message me and said, 'It will be me for the five days'.

When prompted further, Jordan explained the impact of new interpreters on his ability to teach and build relationships at the school (Foster et al., Hyde et al., 2009; Komesaroff, 2005; Powell et al., 2014). He said:

> The biggest hassle with that is having them [the interpreters] accustom to what had already been previously established with another interpreter'. Such as 'bringing in someone else who doesn't have an understanding of the staff dynamics or the classroom dynamics or the student dynamics … this makes more work for me.

In Australia, Standard 3.4 of the DSFE (2005) positions a 'reasonable adjustment' as promoting independent learners (p. 12). It advises education providers to consult with the student when deciding on adjustments as to what is reasonable. Further, Standard 3.5 prompts the provider to 'assess whether there is any other reasonable adjustment that would be less disruptive and intrusive and no less beneficial for the student' (p. 13). Although Jordan's ITEI attempted to provide appropriate support, the regular and daily change of the interpreters was a disruption that impacted Jordan's ability to 'participate' in the experience (p. 12). Although he achieved the experience's 'learning outcomes' (p. 12), he evidenced the weight of the impact, saying: 'it stresses me out … because I have to build that relationship with staff and students again'.

As access to an Auslan interpreter is a critical element supporting a hearing-impaired individual's opportunity for educative success (Barwood et al., 2018; Marschark et al., 2005; Powell et al., 2014; Traynor & Harrington, 2003, as cited in Gallaway & Young, 2003), the researchers' question whether it is 'reasonable' to expect PsTs like Jordan to function amidst such interpreter constraints. Standard 3.4 requires educational providers to apply reasonable adjustments that balance the 'interests of all parties affected' (Commonwealth of Australia, 2005, p. 12), raising further questions about what constitutes such balance, from various parties' perspective. Seemingly, balance for Jordan required early recognition, acknowledgment and acceptance by the ITEI of the reality in WA and that is, the interpreter shortage. For the researchers, mitigating the potential for disruption imposed by the changing interpreters and maintaining balance such as greater awareness of different formats that maintain the integrity of the APST whilst promoting course learning outcomes became key.

Jordan also commented that the addition of another person (Auslan interpreter) presented logistical challenges for which the researchers had not previously encountered. Jordan explained:

> The first day was mostly spent sorting out a lot of the logistics, which you would do in any prac [professional experience] but having to think … something that you might … the school prac coordinator was not aware of, is that everything needs to be doubled. All the considerations need to be doubled. All the considerations need to be doubled because I have an interpreter with me all the time.

Jordan explained that such things as a desk and chair in the office for the interpreter had not been considered at this school and that the entering of the school via the staff carpark had posed an initial challenge. Jordan relayed how he had taken a bold approach toward a conversation with the Coordinator for Professional Experiences at the school, saying: 'My interpreter will need a carpark, he'll need a swipe key, he'll need this, and he'll need that'. However, like Powell et al. (2014), Jordan also shared his willingness to accommodate and be solutions focused, advising that with issues like this, 'you just work it out'. This collaborative and somewhat adaptive approach reflect advice

shared by the NDCPO (2020), recommending accommodations for students on placements to be 'informed', 'proactive' and 'flexible' (p. 1). Also, and aligned with the intent of Standard 3.5, which pertains to consultations with students (Commonwealth of Australia, 2005, p. 13), NDCPO report that 'there are no hard and fast rules' (p. 1) as accommodations should evolve with each student. Since universities must consider 'the learning and professional experience needs of pre-service teachers across all offered modes of delivery' (AITSL, 2019, p. 13), we were reminded that fairness and equity were not only principles leading to social justice but requirements leading to accreditation.

Supporting learning for the hearing-impaired community: being a hearing-impaired student on a professional experience is exhausting

Jordan described the first week of the professional experience by stating: 'I was stressed out, I was miserable, I was exhausted, and I didn't know if I wanted to do this'. Although this description is not unlike the experiences of some of his peers who similarly come to question their choice of profession, Jordan expressed the enormity and weight of the responsibility he felt toward the deaf community (Szymanski, 2020). He said: 'I don't want to leave them thinking that the next deaf person they meet is going to be crap'. When prompted, he explained further:

> It's like, juggling a giant ball, like, the deaf, the deaf side of things, it's included in everything else and it makes it a lore more … harder. It makes it more exhausting, and I think that was the biggest thing I noticed on this prac [professional experience], I was physically exhausted because, you know a full day and all that … I was exhausted at being deaf … I was exhausted because I had to be so alert and aware.

As the researchers had not envisioned deafness as physically exhausting, they contemplated what is expected of a PsT with a hearing impairment that is not expected of their hearing peers? When they probed further, Jordan explained that his exhaustion stemmed from being continuously 'switched on' and that this feeling extended to his downtime at the school. For example, when Jordan wasn't teaching and perhaps sitting in the office preparing for his next class, he felt the need to be, 'on all the time' to respond appropriately to others whom were also in the room. This account is somewhat similar to McDonald's (2014) experiences, whereby others forgot she had a hearing impairment and she was required to adjust accordingly. To explain further, Jordan said:

> I feel that part of the exhaustion was not just the whole workload and teaching, I felt part of it was definitely the whole … the deaf side of things … being more aware of my surroundings and having to control … such as my voice regulation … constantly.

Jordan explained that physical exhaustion and a sense of responsibility also extended to the Auslan interpreters who had accompanied him at the school because they too 'had to be alert and on the whole time'. Jordan relayed how one interpreter had said to him, 'I have never been so exhausted interpreting for anyone in my life'. When asked for clarification, Jordan explained that even though the interpreter might not actually be interpreting, 'they had to be aware of what was happening in case I did miss something'. This constant focus is unlike the focus that the interpreters experience when interpreting for Jordan at the ITEI, and whereby a shared role requires one interpreter to interpret for 20 minutes whilst the other interpreter rests for 20 minutes. This considered, collaborative and less fatiguing approach supports the interpreters remaining on task.

Jordan also unpacked how his sense of responsibility to the deaf community and deaf culture was intensified by the inclusion of an additional person into his professional experience and to which, he felt ethically responsible. He explained, that

> the role of an interpreter is, I guess, basically to be invisible, like, they're facilitating language and that's about it. But when you work with me in a school environment, there needs to be, and I guess, a rapport established.

When asked to explain what he meant by this comment, Jordan said: 'because if the staff don't like the interpreter, unfortunately, they're not going to like me'. Szymanski (2020) relayed similar

sentiments, reporting it was 'stressful' for him 'when the interpreter looks bad' as 'the deaf person looks bad' (p. 16). Jordan then immediately switched tack, differentiating between himself and the interpreter and stating that the role of the interpreter is to 'facilitate language for me' and that 'they're not there as a staff member'. He commented, 'interpreters are not teachers, they can only interpret based on what knowledge they have of the subject'.

Again, it was apparent that what was expected of Jordan was not expected of his hearing peers. Although the researchers acknowledged that Jordan's involvement could be attributed to his acute awareness of the parameters of his situation, they were increasingly concerned by ongoing complexities. Jordan subsumed greater responsibility for his personal preparation (in this case, toward the professional experience) but as his inherent needs were brought to light in situ, we questioned the fairness of applying professional standards (AITSL, 2011), when clearly there was nothing standardised in Jordan's experience.

Supporting learning for the organisation of education: positive impact on the school community

On a more positive note, Jordan relayed numerous examples as to how his professional experience had impacted the school community. In sharing the positivity, he provided an example that evidenced the students' eagerness to learn and use sign language. Jordan said: 'Kids started signing, just everywhere, just not even to me, just to their friends, to the other teachers … they started just to incorporate sign language and deaf culture into their daily life'. He relayed that students would ask him to attribute time during a lesson to teach sign language and how he had taught the students' signing related to lesson content. For example, during a lesson based on the topic of self-confidence he taught the sign for the words: 'confidence', 'brave', 'talk' and 'speak'. In addition, and to support the management of learning taking place in his health education classes, Jordan shared with the researchers that he would technically add captions to videos that he used. Although this process was time consuming it allowed Jordan to effectively stop a video at a pertinent point of discussion. Jordan said: 'having the captions there, I could easily press pause … because that's what we were going to discuss'.

Conclusion

By exploring and trying to socially empathise with Jordan (Maher et al., 2020; Wenger, 2008), we learnt of the challenges, barriers, opportunities and successes interrupting, impeding and/or supporting equity and inclusion of a PsT with a hearing impairment whilst on a professional experience. The insights reported here are unique (Davies & Heyward, 2019; Flyvbjerg, 2006) and unreported in any other literature; nationally and internationally. They signify that exploration of the successful progression of students with additional needs in HE and more specifically, ITE and PETE, is long overdue, and warrants further investigation. This is especially the case regarding the professional experience, which in Australia, is a critical component of ITEIs assessment processes for graduating teachers and as such, a very significant consideration for ITEIs looking to attract and support students with disability to become teachers.

From this research, we learnt that discrete personalised 'anticipatory adjustments' (Riddell et al., 2005, p. 641) are required to facilitate success on professional experiences for students like Jordan, and in the light of findings, we advise that the interpretation and mobilisation by ITEIs of the APST for graduating PsTs (AITSL, 2011) should be a focus for sector-wide review. From our research it is apparent that the early question as to whether they are 'fit-for-purpose' for PsTs with additional needs, is currently too dependent on many uncertain variables, such as an ITEI possessing the knowledge as to what to adjust let alone how to adjust. We suggest that there is an urgent need for the development of accompanying guidelines to inform adjustments and facilitate greater success for PsTs with additional needs at ITEIs.

In contrast to the lack of clarity about application of adjustments in the context of ITEIs applying APST (AITSL, 2011), there is certainty about inclusion emanating from policies such as the DSFE (2005) and the Standards and Procedures for ITEIs in Australia (AITSL, 2019). Thus, we identify a problematic cloud of uncertainty overlaying the dichotomy between policy and practice for graduating teachers in Australia. We advocate for informed and considered council, specifically greater expertise, to progress equity and inclusion for these students in the ITE context. From an international perspective, we expect that similar expertise is required that can navigate the divide between policy and practice in other countries and that this need, just as it is in Australia, is timely.

Finally, and although we recognise the limitations of our study, we see the insight shared by this single individual as having the potential to address programme withdrawal and promote better representation of teachers with additional needs in the educational community (Keane et al., 2018). The experiences shared by Jordan, reaffirm to us that his involvement, support, and commitment to the processes of professional experiences are critical. We view Jordan's contribution as a snapshot of his world and have gained a deeper understanding of the unique difficulties he has faced during the practical components of his course (Wenger, 2008). Therefore, we strongly advocate for others'; nationally and internationally, to deliver nuanced assessment policies that capture the valuable contributions of students like Jordan, as this is one significant way to increase expertise in HE and utilise the autonomy, agency and capabilities of people with additional need.

Notes

1. ITE is the nomenclature used in Australia for courses providing initial teacher accreditation. It is acknowledged that terminology varies internationally and includes Initial Teacher Training.
2. Subsequently in the paper HPE is used to include reference to the subject of PE and/or other variants in name of the learning area.
3. For information regarding the first professional experience of the PsT please refer to Barwood et al. (2018).
4. The DSFE in Australia is available at: https://www.legislation.gov.au/Details/F2005L00767.
5. The APST is available at: https://www.aitsl.edu.au/teach/standards.
6. To view the *Standards and Procedures* for the Accreditation of ITE programs in Australia visit https://www.aitsl.edu.au/docs/default-source/national-policy-framework/accreditation-of-initial-teacher-education-programs-in-australia.pdf.

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