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Deconstructing health and physical education teacher education: a mapping and analysis of programme structure and content in Australia

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ABSTRACT

Background: In Australia, Initial Teacher Education Institutions (ITEIs) provide undergraduate Health and Physical (HPE) programmes that meet a number of regulatory requirements, including those of the Australian Institute for Teaching and School Leadership (AITSL) and the Tertiary Education Quality and Standards Agency (TEQSA). In addition, ITEIs must also ensure programme alignment with state/territory-based jurisdictional requirements. While historically varied philosophies and practices have shaped HPE teacher education nationally, ITEIs are thus operating in an increasingly regulated environment.

Purpose: The purpose of this paper is to report research that has critically examined the structure and content of ITEI undergraduate programmes in Australia that prepare teachers for HPE in secondary schools. Analysis at programme and unit levels was undertaken to explore programme variance, ITEI priorities and consideration of the implications that programme structure and content has for graduate secondary HPE teachers and their employers. The paper seeks to contribute to wider debates about the role of teacher education in shaping HPE curriculum futures and the challenges faced by ITEIs to navigate increasing government regulation.

Methods: An audit and document analysis of 15 Australian ITEIs identified programme structures and specific units of study for the preparation of secondary HPE teachers. These programme structures were compared to those of an ITEI in Western Australia (WA), similarly preparing secondary teachers of HPE, and undertaking internal programme renewal. The WA ITEI’s programme nomenclature and elements therefore provided the reference point for analysis of variation across programmes nationally.

Findings: Findings show that graduate secondary HPE teachers in Australia are variously prepared, with ITEI programme structures ranging in nomenclature, breadth of content, positioning of units and the amount and placement of school-based practicums. ITEIs variously meet state, territory and federal accountability and accreditation requirements in preparing secondary HPE teachers. Programme variations may mean that graduate secondary HPE teachers have differing perspectives on HPE curriculum and pedagogy. Schools employing graduate teachers cannot assume all graduate teachers have a common outlook on or backgrounds in HPE, while meeting the graduate standards.

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**Conclusions:** The significant variation between programme structure and content at the 15 ITEIs preparing teachers for HPE in secondary schools indicates that in a heavily regulated sector, ITEIs in Australia remain critical players in shaping HPE practices across Australian schools. Further research is needed to appropriately ascertain the impact of ITEI programme variation on HPE teachers’ values and professional practice.

**Introduction**

Increased attention and considerable research continues to be directed toward Initial Teacher Education (ITE) programmes in Health and Physical Education (HPE) and/or variations such as Physical Education Teacher Education (PETE) (Mooney, Moncrief, and Hickey 2018; Tinning 2004; Walton-Fisette and Sutherland 2020). Programme philosophies (Ormond 2012) and guiding principles range from but are not limited to principles of social justice (Devis-Devis et al. 2018), the acculturation of Pre-service Teachers (PST) (Hordvik, MacPhail, and Ronglan 2019), sport pedagogy (Mooney, Moncrief, and Hickey 2018) and the embodiment of health in PETE (Quennerstedt 2019). As an early commentator, Tinning (2004) ruminated the essential knowledge(s) and learning(s) in ITE programmes in Australia. He contemplated: ‘what sort of teacher education is necessary or desirable’ (242) to prepare HPE teachers? Taking inspiration from Tinning’s (2004) rumination, this paper explores the structure and content of 15 Initial Teacher Education Institution (ITEI) programmes preparing Pre-Service Teachers (PSTs) to teach HPE in Australian secondary schools. It provides a contemporary snapshot of the ‘essential knowledge(s) and learning(s)’ discussed by Tinning (2004) and speaks to the key role of teacher education in shaping curriculum futures in schools. More specifically, the paper investigates and problematises the breadth of content, proportioning and positioning of content, and the amount and placement of practicums within secondary HPE programmes at the 15 ITEIs.

While the focus of analysis is Australian institutions, the issues explored are pertinent to international debates and research in teacher education and PETE particularly. Teacher educators elsewhere will relate to our concern for programme renewal to be informed by research. The analysis presented in this paper is part of a broader project that is seeking to inform improvements to the HPE programme at an ITEI in Australia and effectively balance responsiveness to policy mandates with a research-informed perspective. The analysis aligns with Arafeh’s (2016) call for evidence-based programme renewal, which is formalised and systematic. It also aligns with Hattie’s view shared on the Australian Institute for Teaching and School Leadership (AITSL) website, that ‘expert teaching should be by design, not chance’ (AITSL 2017, par 5).

**ITE programmes in Australia: regulation and diversity**

In Australia, ITEIs continue to undergo substantial reform because of public concern and dissatisfaction with regard to ITE programmes, particularly a perceived lack of classroom readiness of teacher graduates (Teacher Education Ministerial Advisory Group [TESQA] 2014). Following consultation and review, and further strengthened by nationally introduced quality assurance processes, increased ITEI accountability measures have aimed to enhance the capabilities of graduating PSTs and ensure that they meet the Australian Professional Standards for Teachers at the graduate level (AITSL 2011). For example, in 2018 AITSL upgraded the Accreditation Standards and Procedures impacting upon ITEIs in Australia by introducing the Teaching Performance Assessment (TPA). This reflective assessment task is a requirement for PST graduation, supports the integration of theory with practice and confirms the classroom readiness of the PST via a three-point scale: developing, satisfactory and exceeding (AITSL 2019). The TPA is completed after the final teaching practicum, which occurs in the PST’s final year of study. An unsatisfactory TPA result is regarded as ‘developing’ with the PST required to complete another practicum placement to confirm...
satisfactory’ status of AITSL’s graduate level. AITSL has mandated that all Australian ITEIs implement the TPA by 2020.

Other similar and recently introduced accountability measures in Australia include but are not limited to: the raising of entry scores for ITE students, the mandating of the Literacy and Numeracy Test for Initial Teacher Education (LANTITE) by the Australian Government in 2016 (Australian Council for Educational Research 2019) and current thresholds identified in the Higher Education Standards (TEQSA 2015). As a result, ITE in Australia is characterised as both increasingly regulated and highly fluid and uncertain for those at the fore of programme development. For example, it is too early to ascertain the impact of the recent national Alice Springs (Mparntwe) Education Declaration1 (Education Council 2019a) and the Australian Curriculum and Assessment Authority’s (ACARA) ongoing review of the Australian Curriculum.2 Renewal of an Australian vision for curriculum across states and territories may well have significant implications for jurisdictional teacher education programmes. Consultation processes have, for example, identified a number of priority areas or key themes to be reflected in future curriculum, including imperatives for lifelong learning, diversity and holistic education, student voice, learning pathways, strengths-based education and flexible curricula (Education Council 2019b).

In responding to the AITSL standards (2011), ITE programmes address professional knowledge, professional practice and professional engagement relevant to what Australian teachers should know and be able to do. While the AITSL standards provide a common framework for programmes, there is variation in the nature of undergraduate programmes, with four-year degrees, double-degrees and honours degree programmes variously offered across Australian states and territories. Undergraduate programmes in teacher education in Australia typically span four years of study, however, some ITEIs condense the volume of work set out by AITSL (2018) into a shorter time frame. For example, a trimester structure (as opposed to a two semester per year structure) can compact programmes. Double degrees variously combine a teaching qualification with another degree to broaden student expertise in disciplines other than education such as a Bachelor of Economics. An honours degree is normally an extra year of study undertaken post of an undergraduate degree to enhance career pathways and employability. The Master of Teaching3 is a postgraduate pathway to teacher accreditation, typically comprising a two-year programme of study for students who have previously completed a bachelor’s degree or equivalent qualification.

ITE programmes also vary in programme length, breadth of content, number of units and nomenclature; and, school-based practicums vary in terms of the number of placements, length and content (Ledger and Vidovich 2018). With respect to programme content, a key consideration is compliance with the requirements outlined in national standards and procedures for accreditation of teacher education programmes (AITSL 2018). Initial compliance with AITSL is referred to as ‘stage one’ accreditation (5) and is particular to new programmes ‘entering the accreditation system for the first time and focusses on a provider’s plan for demonstrating impact’ (5). During ‘stage two’, ITEIs in Australia are required to evidence the impact of a programme according to measures of PST performance and the outcomes of high quality graduating teachers (5). AITSL stipulates that the time span between stage one and stage two accreditation and/or between stage two and stage two re-accreditation must not exceed five years.

For programmes that prepare secondary teachers, AITSL (2018) requirements focus on the inclusion of knowledge relating to school curriculum, discipline studies and professional studies. AITSL’s minimum requirements stipulate that an ITE programme must include at least one major discipline/teaching area, which constitutes three-quarters of the time allocation for a year of full-time study. AITSL’s preference is for the programme to include a second discipline/teaching area (minor), which could constitute half of the time allocation for a year of full-time study. Further to this, curriculum and pedagogical knowledge must relate specifically to the chosen major and minor disciplines of the PST and constitute one quarter (for each discipline) of a full-time year of study.
Irrespective of AITSL’s (2018) requirements, accreditation of ITE programmes is a jurisdictional responsibility with some Australian states nuancing the standards to better fit local imperatives. For example, in Western Australia (WA), ITEIs comply with the requirements of AITSL but are accredited by the Teachers Registration Board of WA (TRBWA) 2019. In Queensland and Victoria, the respective regulatory bodies place requirements upon ITEIs that are in addition to AITSL’s minimum requirements. For example, Physical Education (PE) teachers in Victoria must hold a current AustSwim Teacher of Swimming and Water Safety certificate (Victorian Institute of Teaching 2012, 2015) and in Queensland, PSTs completing Early Childhood programmes must complete a minimum of one lesson in upper primary schooling (Queensland College of Teachers 2019). Additional requirements such as these may understandably have implications for the structure and content of HPE teacher education programmes.

Further, AITSL (2018) stipulates undergraduate PSTs must complete a minimum of 80 practicum days within the programme studied. AITSL’s only stipulate in relation to the 80 days is that the final practicum placement must occur in the final year of study.

Teacher education programme development in HPE: contemporary directions and influences

Teacher education programmes internationally are challenged to both respond to major curriculum reform initiatives and play a role in shaping their enactment. In Australia, a shift towards content and approaches that support thoughtful, inclusive, critically reflective and holistic HPE teacher/practitioner(s), who engage and are engaged with learners via student-centred rather than teacher-driven approaches has in part been a response to the orientation emerging in evolution of the Australian Curriculum (Tinning 2004). Curriculum policy developments have since reaffirmed a focus on equity in a future(s) focused twenty-first century education (ACARA, 2020) and the integration of learnings in HPE (ACARA 2015). Varea’s (2018) analysis of two Australian teacher education programmes preparing HPE teachers against the then, newly released Australian Curriculum for Health and Physical Education (AC: HPE) (ACARA 2015) raised questions in relation to programme alignment with new curriculum directions. Focusing particularly on the construction of knowledge(s) pertaining to health and the body, Varea (2018) found dissonance between the expectations of the curriculum and what the PSTs had been prepared to teach.

Lambert and O’Connor (2018) have similarly identified a need for curriculum renewal in Australian PETE following their analysis of the AC: HPE and have reaffirmed the challenging policy context that characterises teacher education in Australia currently. Amidst what Lambert and O’Connor (2018) term a ‘policy storm’, those designing undergraduate ITE programmes in Australia are challenged with meeting administrative, inter-departmental and economic priorities of the ITEI as well as institutional governance requirements. Enright et al.’s (2018) work has further illustrated the discursive tensions consequently playing out in HPE teacher education. Focusing on one ITE programme, Enright et al. (2018) conducted a comprehensive analysis to contrast social justice priorities against neoliberal discourses impacting the programme. They specifically, analysed focus group interview data from teacher educators and PSTs, teacher educator written reflections, programme documentation for national accreditation bodies, electronic programme profiles and ITE policy documents. Enright et al. concluded that catering for diversity and developing inclusive practice(s) and shared values is challenging. In another study, Shelley and McCuaig (2018) critically explored the uptake of sociocultural and socio-critical perspectives by PSTs at an ITEI preparing teachers of health education. They found that critical pedagogical work with these PSTs was challenging but worthwhile to support them to be more critical of practices concerning the body.

Programme development also reflects and responds to philosophical influences (Ormond 2012). Programmes variously draw upon theorists such as Vygotsky (1978) and contextual stimuli such as the Alice Springs (Mparntwe) Education Declaration (Education Council 2019a) and Indigenous culture in Australia (Department of Education, Western Australia 2015). Programmes may feature
educational frameworks such as ‘Universal Design for Learning’ (Centre for Applied Special Technology 2019), key competencies that aim to support competent classroom managers (Weinstein 2013) and a raft of pedagogies to broaden practice including explicit teaching, collaborative learning and sport pedagogy (Churchill et al. 2011; Mooney, Moncrief, and Hickey 2018). Principles of social justice and educational reform (Australian Government 2011; Australian Government 2018) and emerging PST schemes that model a scholar in residence programme (McMullen, van der Mars, and Jahn 2014) and/or the apprentice mode of learning through versions of internship are now inclusions.

Churchill et al. (2011) also note that interest in the complexities of practice, diversity of learners and social significance of educational reforms has continued to shape ITE programme development in Australia, with greater emphasis on learning designs that address individual and contextual needs. This aligns with AITSL’s (2011) stipulation that effective teachers should know the learner and understand that learners, learn in a range of ways.

Internationally, Backman and Larsson’s (2016) analysis of the learning outcomes from 18 Swedish PETE programmes, explored the relationship between epistemology and programme content. They found that particular programme ‘values’ take priority over others whereby a strong focus on the natural sciences can lead to a scientifically driven programme, which may be at the expense of more sociologically driven perspectives. Hill et al. (2018) in their study of PETE in North America, Europe and Australasia found country-based differences in the ways in which social issues such as gender and race were problematised within programme constructions.

Therefore, this study sought to more closely interrogate contemporary teacher education programmes in Australia, examining the various ways in which philosophical approaches, imperatives from regulatory bodies, curriculum directions and directives, and jurisdictional and institutional agendas come to be expressed in the structure and content of undergraduate teacher education programmes for secondary HPE. The study specifically aimed to develop new understandings with regard to breadth of content, positioning of content and the amount and placement of practicums at 15 ITEIs in Australia. Each of these variables was acknowledged as having a potentially important bearing upon PST’s preparedness to teach HPE. A further prime aim of this study was to directly inform programme development at the authors’ own institution. As we explain below, this agenda influenced a number of methodological details, particularly with regard to the nomenclature and framework used in analysis.

Method

Archambault and Masunaga (2015) define curriculum mapping as ‘the systematic analysis of the content of the programmes in a curriculum’ (504–505). Eisenberg (1984) defines curriculum as ‘what is taught, in what order, with what methods and materials’ (cited by Archambault and Masunaga 2015, 505). Steven et al. (2017) caution that a curriculum map is merely a snapshot of how a particular programme is constructed at a particular time. Whilst Arafeh (2016), acknowledges that higher education programmes may vary and yet, align to overarching frameworks such as that presented in the AITSL standards for teacher education. Arafeh also reports that research exploring higher education programme renewal is ‘regretfully’ limited (586) and that no single methodology works best to examine discipline documents or body of curricular. Furthermore, and pertinent to this project, formalised and systematic review process are ‘not always in play in higher education’ (585) programme renewal.

We, similarly, acknowledge that analysis centring on curriculum maps for ITE programmes in Australia inevitably tells only a partial story about the programmes themselves and the learning opportunities that PSTs experience. Nevertheless, we contend that the snapshot prospectively produced by comparative and systematic analysis of key features of programmes, derived from formal programme documentation, has inherent value in relation to the research aims explained above. The project was thus conceived as documentary research employing formalised and systematic
comparison of an identified set of programme features (Arafeh 2016). Returning to Eisenberg’s comment, this research did not extend to methods or materials utilised in programme delivery and like Arafeh (2016), we recognise that these aspects are worthwhile foci for further research.

Sample

In Australia, 17 institutions offering undergraduate teacher education programmes for secondary HPE were approached to be involved in this study. Data were collected from the 15 institutions agreeing to participate.

Data collection procedure

Programme documentation gathered for each ITEI included programme information freely available on the Internet and information provided by the institution upon request. Some ITEIs had easily accessible information on the ITEI webpage whilst others did not appear to provide programme information directly to the public and in this instance, the ITEI was contacted by the researchers. More specifically, the documentary data included programme plan (also termed outlines or maps) and the specific unit outlines that comprised a particular programme. Essentially, this collective information provided details of the programme structure, content included and positioning of content.

Nomenclature for the study

As a prime aim of the research was to inform programme renewal of the HPE secondary programme at the Host ITEI in WA, nomenclature from that particular programme structure provided the framework for the subsequent documentary analysis of programmes at the 14 other ITEIs. This framework was also similar in the nomenclature used by the other ITEIs as it corresponded to the nomenclature articulated in AITSL (2018) documentation. The authors acknowledge that in adopting the framework from the one ITEI, some aspects of the uniqueness and variation in the other 14 programmes may not have been fully represented.

The review of literature and subsequent documentary analysis of the 15 ITE programme structures for secondary HPE in Australia revealed a range of nomenclature and conflicting descriptions that could be used in the analysis. For the purposes of the paper, the word ‘programme’ refers to the collection of units that prepare a secondary HPE teacher at an ITEI. Other nomenclature identified in the study’s documentary analysis and assimilating to programme include ‘course’. The nomenclature ‘programme’ was selected over ‘course’ as this nomenclature is consistent with AITSL accreditation in Australia.

The nomenclature of ‘unit’ refers to the particular content that comprises the programme. For example, and using the framework from the Host ITEI, a full-time student would be expected to participate in four units of study for two semesters in the year, with one semester spanning an approximate six-month period. In this framework, eight units of study would be completed in one year. As the Bachelor of Education (B. Ed) for secondary HPE at the Host ITEI is a four-year programme, PSTs complete eight semesters of study but not all semesters comprise four units of study.

A programme plan is essentially an overview/map of the units to be studied, with the units reported and mapped on a yearly, semester or trimester basis. As previously mentioned, the data from the 15 ITEI programmes were meticulously analysed and transcribed using the framework identified from the Host ITEI in WA. More particularly, each unit identified from either the programme plan, the ITEI programme handbook, website and/or other information, were closely consulted to identify and determine the unit’s learning outcomes. Each unit was then categorised by the researchers according to the unit framework originating from the Host ITEI (see Table 1). The categories used to organise these units included: Core, HPE, Curriculum, Specialisation and Practicum.
These categories were selected by the researchers as the ‘best fit’ to organise and accommodate the range of unit learning outcomes analysed from the review of programme documentation but more importantly, as they complied with nomenclature used in AITSL (2018) documentation (see Table 1). Note, the nomenclature of ‘Specialisation’ was used over the term ‘Minor’ as the addition of a second teaching area is AITSL’s preferred option and not a requirement for accreditation. Furthermore, some of the 15 ITEIs permitted PSTs to electively select units as opposed to identifying units particular to a second teaching area. For example, at the Host ITEI, PSTs could select a second teaching area from 15 learning areas, with six prescribed units for each of these 15 learning areas. At other ITEIs, PSTs could select units of study from prescribed and/or elective units.

**Data analysis**

To reduce the variation from the deductive ‘winnowing’ of the data (Creswell 2014), the authors applied an exhaustive and iterative process to analyse, interpret, translate and categorise programme information according to the research framework. Informed by previous approaches in the higher education field (Arafeh 2016), the study used a methodical process of data collation and analysis that was developed by the researchers to suit the specific intentions. The analysis and subsequent categorisation aimed to triangulate the multiple sources of evidence and corroborate findings across the data set relating to the proportion and position of content and similarly, practicums. The process followed comprised the following sequential steps:

- Step one included an initial, independent review of programme information to familiarise the researchers with the research data.
- Step two, three of the researchers independently conducted a comparative documentary analysis to categorise programme data according to the programme nomenclature from the Host ITEI.
- Step three involved the same three researchers meeting to compare their analysis as part of a collaborative review.
- Step four involved the three researchers reaching agreement upon the categorisations and ‘best fit’ for data. More particularly, each unit in an ITEI’s programme was closely interrogated and categorised according to the research framework. The categorisation of units also included consideration of unit assessments, with this particularly helping to ensure cohesive interpretation of the purpose of the particular unit.

Data generated from the unit analysis were entered into the software package IBM SPSS Version 25.0, to produce comparative descriptive statistics for the 15 programmes. Data categories (Core, Physical Education and Sport Pedagogy, 7

<table>
<thead>
<tr>
<th>Unit category</th>
<th>Category description</th>
<th>AITSL (2018)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>General education-based studies in the theory and practice of teaching such as those identified by the AITSL standards (2011) and relating to Professional Knowledge</td>
<td>Equivalent to two years full-time study (FTS)</td>
</tr>
<tr>
<td>HPE (Major)</td>
<td>Discipline-specific studies in the major teaching area</td>
<td>Equivalent to ¾ of a year of FTS, usually over three years. At least six units, with no more than two at first-year level and no fewer than two units at third-year level</td>
</tr>
<tr>
<td>Curriculum</td>
<td>Discipline specific curriculum and pedagogical studies for each teaching area, and that is, both major and minor(s)</td>
<td>Equivalent to ¼ of a year of FTS for each teaching area</td>
</tr>
<tr>
<td>Specialisation (preferred)</td>
<td>Discipline specific studies in the second teaching area(s)</td>
<td>Equivalent to ½ of a year of successful FTS, usually over two years. At least four units, with no more than two at first-year level.</td>
</tr>
<tr>
<td>Practicum</td>
<td>Professional school-placed experience</td>
<td>Total minimum of 80 days with the final practicum placement occurring in the final year.</td>
</tr>
</tbody>
</table>
HPE Curriculum, Specialisation or Practicum units) were summarised accordingly, using simple frequency distributions such as percentages and proportions shown in tables and graphs. Mean and standard deviation for the number of units are shown through tables and figures within the sections that follow.

Results and discussion

At the Host ITEI in WA, the B. Ed programme is underpinned by a thematic and developmental philosophy, focused on the specific timing of programme content to logically support PST competencies across the four years of study (Ormond 2012). The first year of the programme focuses on creating an awareness and understanding of themselves as beginning PSTs. The second year focuses on developing pedagogical and content knowledge(s) and skills, with classroom relationships and practice prioritised in the third year. The fourth year concludes the programme by focusing on professional practice and the community of education through professional networks. The Host ITEI includes three practicum placements in the B. Ed HPE secondary programme. The first practicum occurs in the second year of study and comprises 15 days, the second practicum occurs in the third year of study and comprises 25 days whilst the final practicum occurs in the fourth year of study and comprises 50 days.

Programme types and structures

Examination of the 15 ITEI programmes for secondary HPE revealed two types of programmes as accredited by jurisdictional authorities and in compliance with AITSL (2018). These programme types include: B. Ed (n = 11, numbered ITEI 1-11) and the Bachelor of HPE (B. HPE) (n = 4, numbered ITEI 12–15). In the case of the Host ITEI in WA (H1), the programme is a B. Ed.

In addition to the two programme types, document analysis revealed that three of the 15 ITEIs structured their programmes using a variation to the Host ITEI’s semester structure and/or an alternative structure. All three ITEIs were accredited for a B. Ed programme. For example, two ITEIs varied the semester-based programme slightly by including an additional study period or summer school at the end of a particular year level. ITEI 4 included an additional study period at the end of the first year of study to include two additional units. ITEI 9 included an additional period of study at the end of the second year of study to include one additional unit. However, ITEI 7 differed from all other ITEIs to use a trimester-based structure or three periods of study over the one year. This ITEI included 10 units in the first year of study, nine units in the second year, and 10 units in the third year, and then completed the programme with only three units in the first trimester of the fourth year.

Of the 11 ITEIs accredited for a B. Ed programme, ITEI 6 combined the programme of a B. Ed with another programme, enabling the PSTs at this ITEI to graduate with an additional degree or what was previously referred to as a ‘Double Degree’. Of the ITEIs accredited for a B. HPE, ITEI 12 provided the PSTs with opportunity to complete the degree at Honours level. PSTs at this ITEI could withdraw from the programme after the third year of study and graduate with a Bachelor of Health, and Physical Education Studies, however, this programme is not approved for teacher registration in Australia. ITEI 13 also offered an Honours level to their programme but this was not acknowledged in the official programme title unlike the previous ITEI.

Total number and length of units

Document analysis revealed no significant difference in the number of units constituting the two programme types. The number of units in the B. Ed programme ranged from 30–42 units (M = 33.09, SD = 3.47) while the number of units in the B. HPE ranged from 31–41 units (M = 33.50, SD = 5.06). Figure 1 displays the mean number of units in each categorisation based on whether it is a B. Ed or B. HPE programme or overall.
There was however inconsistency and variation across the ITEIs with regard to each programme type such that some ITEIs overloaded units in some semesters whereby a PST studied five or six units in one semester and four or less units in another. To add further complexity, the analysis found variation in the length and/or timeframe of the units. For example, 13 weeks of study could comprise a unit at one ITEI whilst 12 and/or 14 weeks comprised a unit in another. Shorter units were also found across all 15 of the ITEIs.

**Breadth of content**

Overall, there does not appear to be a difference in the breadth of content based on the type of programme (B. Ed or B. HPE). However, there was a difference between the programmes based on the proportion of units based on the categorisation of the unit (Core, HPE, Curriculum, Specialisation and Practicum). Specifically, the B. HPE programme had a larger number of HPE units than the B. Ed courses, whereas the B. Ed programme had a larger number of Core units. In addition, the B. Ed programmes had a larger range for the number of units in all other unit categories (HPE, Curriculum, Specialisation and Practicum).

Figure 2 suggests that four ITEIs did not include units categorised as Specialisation (second teaching area). As these ITEIs are accredited by AITSL (2018), the authors accept that the ITEIs have either not included a second teaching area in the programme structure or that the Host ITEI’s category framework may not appropriately reflect the provision of Specialisation units at these ITEIs. More specifically, AITSL’s preference for a Specialisation may have been met at these ITEIs within units categorised as either Core or Curriculum units. For each unit category, Figure 2 displays the percentage of units for each category within each ITEI programme.

**Number and positioning of Core units**

There was no significant difference between the mean number of Core units for the B. HPE programme ($M = 6.25, SD = 4.50$) and the B. Ed programme ($M = 9.72, SD = 2.10$). AITSL (2018) does not stipulate a minimum number of Core units for ITEIs in Australia. The number varied from a low of four units to a high of 13 Core units in the various programmes.

Document analysis revealed that Core units were variously positioned across the 15 ITEIs (Table 2). As previously mentioned ITEI 4 and ITEI 9 introduced an additional study period or summer school at the end of a particular year level whereas ITEI 7 used a trimester-based format. All three of these ITEIs used at least one of the additional study periods to study Core content.
Most (7) of the ITEIs in the B. Ed programmes positioned Core units evenly across the four years of study. However, three ITEIs loaded Core units more heavily into the first two years of the programme than the other ITEIs, with two of the three loading the majority of the Core units in the first year of study. Analysis of the learning outcomes for these Core units suggests that these ITEIs prioritised Core knowledge(s) over other knowledge(s) at this time. Furthermore, by focusing on general education units based in the theory and practice of teaching, these particular ITEIs could have sought to prepare PSTs for practicum placements in the first year of study. Alternatively, two ITEIs loaded Core units more heavily in the second half of the programme than the other ITEIs, possibly to support the PSTs praxis in the final practicum placement. The number of Core units per semester/study period ranged from 0–4 units.

Figure 2. Percentages of all units for categories of units in 15 ITEI programmes.

<table>
<thead>
<tr>
<th>Table 2. Positioning of Core units.</th>
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</thead>
<tbody>
<tr>
<td>Initial Teacher Education Institutions</td>
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<tr>
<td>Year</td>
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<tr>
<td>Total units</td>
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</tbody>
</table>
Number and positioning of HPE units

Document analysis revealed that HPE units (major content units) were variously positioned across the 15 ITEIs (Table 3) and that there is a greater range in the total number of HPE units in the B. Ed programmes (6–17) when compared to the range in the B. HPE programmes (16–18). The B. HPE programmes consistently include a greater number of HPE units than the B. Ed programmes to show a significant difference between the mean score for HPE units in the B. Ed programmes ($M = 11.36, SD = 3.95$) and the B. HPE programmes ($M = 17.25, SD = 0.95$) $t(12.40) = –4.57, p = .001$.

The total number of HPE units per study period for the B. Ed programmes ($M = 1.36$) varied to the B. HPE programmes ($M = 2.15$), however, this variation would be accounted for by the increased amount of HPE units overall in these particular programmes. Table 3 shows there is no difference in the positioning of HPE units across the first and second-half of the programme in the B. Ed, however, the B. HPE programmes position most of the HPE units in the first-half or first two years of study to support the accumulation of discipline knowledge(s) for those students who exit programmes at the end of the third-year of study.

All of the ITEIs complied with the AITSL (2018) accreditation requirement for HPE content units to constitute three quarters of a year of study (6 units) and for HPE units to be positioned across three consecutive years of study. Further to this, AITSL suggested that no more than two HPE units be studied at the first-year level and no fewer than two units are studied at the third-year level. All of the ITEIs complied with AITSL’s suggestion for the third year of a programme, however, only three ITEIs complied with the guideline regarding the first year of the programme and in some instances, some ITEIs were including four times the suggested allocation for HPE units.

Number and positioning of curriculum units

Curriculum units were variously positioned across the B. Ed programmes ($M = 2.81, SD = 1.72$) and B. HPE programmes ($M = 2.25, SD = 0.50$) for the 15 ITEIs (Table 4) with no significant difference between the two programme types. There is also consistency in the number of Curriculum units per period of study with the number of ranging from 0–2 units per period of study. Table 4 suggests that three ITEIs did not comply with AITSL’s (2018) requirement for ‘discipline-specific curriculum and pedagogical studies’ (15) equating to ‘at least one quarter of a year’ of study (2 units) (15). However, the provision for Curriculum units at these ITEIs does not reflect the category framework of the Host ITEI. Therefore, to confirm that these ITEIs met AITSL’s requirement the authors analysed the learning outcomes for units at these ITEIs. These outcomes indicated that Curriculum content as per AITSL’s directive was embedded within units that were categorised as a Practicum unit.
Number and positioning of Specialisation units

Specialisation units were variously positioned across the programmes of 11 ITEIs (Table 5) with the provision of these units not evident in four ITEI programme structures. Across the 11 ITEIs, the number of Specialisation units per period of study was consistent. The number of Specialisation units ranged from 0–3 units per period of study across the two programmes with most \((n = 13)\) ITEIs providing not more than two Specialisation units per period of study. There was no significant difference in the mean number of Specialisation units for the B. Ed programme \((M = 2.81, SD = 1.72)\) and the B. HPE programme \((M = 2.25, SD = 0.50)\).

Five ITEIs included units in the programme that were not identified or mandated by the programme plan and these units were classified as elective selections with the nomenclature ‘elective’ used within the programme. Consequently, and in accordance with the Host ITEI’s category framework, these units were included as Specialisation units. The provision of electives enabled PSTs at these ITEIs to select the units that constitute a second teaching area as opposed to the prescribed units as per the Host ITEI.

As previously mentioned, the provision of Specialisation units was not identified in the programme structures of four ITEIs. However, the identification of a second teaching area could have resulted from the Host ITEIs category framework not capturing the provision of Specialisation units at these ITEIs. Alternatively, it may have been the preference of these ITEIs not to include a second teaching area (AITSL 2018).

Table 4. Positioning of Curriculum units.

<table>
<thead>
<tr>
<th>Year</th>
<th>Study Period</th>
<th>Bachelor of Education</th>
<th>Bachelor of HPE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Total</td>
<td></td>
<td></td>
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<tr>
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<td>Semester 1</td>
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</tr>
<tr>
<td></td>
<td>Semester 2</td>
<td>0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 3</td>
<td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Semester 1</td>
<td>1 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester 2</td>
<td>1 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 3</td>
<td></td>
</tr>
<tr>
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<td>Period 3</td>
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</tr>
<tr>
<td></td>
<td>Semester 2</td>
<td>1 0 1 0 1 0 1 0 0 0 0 1 0 1 0 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 3</td>
<td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Semester 1</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Semester 2</td>
<td>1 1 0 0 2 0 0 0 1 1 1 0 2 1 0 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 3</td>
<td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>Total units</td>
<td>6 8 0 0 10 4 8 6 0 6 3 2 7 6 0 66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Number and positioning of Practicum units

There was no significant difference in the mean number of Practicum units for the B. Ed programme ($M = 4.54$, $SD = 2.06$) and the B. HPE programme ($M = 4.00$, $SD = 1.41$).

The range in number of Practicum units differed between the B. Ed programmes (3–10 units) and the B. HPE programmes (3–6 units), with Practicum units variously positioned across the programmes of the 15 ITEIs (Table 6). However, one ITEI (8) differed greatly from all other ITEIs by including a total of 10 Practicum units in the four-year programme. If this outlier ITEI is removed from the calculation of Practicum ranges across the 15 ITEIs, re-calculation shows that there is no difference in the range of Practicum units between the two programme types. Therefore, neither of the programme types prioritised Practicum units over the other.

With regard to the period of study, the number of Practicum units ranged from 0–2 units across the two programme types, with most ITEIs ($n = 13$) providing no more than one Practicum unit per period of study. There was no difference between the number of ITEIs that included a Practicum unit ($n = 8$) in the first year of study as opposed to those that did not ($n = 7$). However, one ITEI (8) included two Practicum placements in the first year of study and two ITEIs (4 & 12) did not include a placement in the second year. All ITEIs included a Practicum unit in the third year and only one (2) did not include a placement in the final year of study.

According to documentary analysis, all of the 15 ITEIs complied with AITSL’s (2018) requirement for a minimum of 80 practicum days to be completed by PSTs. However, documentary analysis of programme plans, and unit learning outcomes suggested that two ITEIs were not compliant. When the authors attempted to confirm the research finding, one ITEI did not respond to a request for further clarification and the other ITEI provided the same documentary information as per the suggestion that the ITEI was not compliant with AITSL. This ITEI, when communicated with a final and additional request for clarification provided the same non-compliant information. This information was shared with the authors despite the third contact being made to a different individual at the ITEI.

Further to the above, there was variance and inconsistency in the number of days that constituted a Practicum placement at a school with the number of practicum days for any one practicum placement ranging from 1–50 days at a particular school. The total number of Practicum days ranged from 45 days (2) to 135 days (13).

Conclusion and implications

Programme structures and content from 15 ITEIs in Australia revealed that amidst ITEIs being challenged to meet institutional, jurisdictional and national accreditation requirements, HPE secondary
teacher education is variably structured. Furthermore, it is evident that ITEIs programmes differ in their representation of the essential knowledge(s) and learnings that shape HPE teachers’ work in Australian schools (Tinning 2004). Although the data presented here is only a sample of the accredited undergraduate programmes for secondary HPE teacher education, the notable disparities in ITEI programme structure and content suggests that ITEIs are a key player in the contemporary politics of HPE curriculum and pedagogy.

The findings from this research shine some light upon the ongoing debates about how HPE is represented in teacher education programmes and by qualification titles, and as Tinning contemplated, ‘what is necessary or desirable’ (2004, 242). In this research, the greatest disparity identified in relation to HPE unit content, was between the two types of programmes delivering secondary HPE teacher education in Australia; the B. HPE and B. Ed. programmes. This disparity correlates to the differing foci for each of these programmes, namely ‘education’ as opposed to ‘HPE’. For example, B. HPE programmes consistently included a greater number of specialised HPE units when compared to the B. Ed programmes, suggesting that PSTs from a B. HPE programme may graduate with more discipline-based knowledge(s) than PSTs completing a B. Ed. Comparably, B. Ed programmes provided a greater range of Core units, suggesting that PSTs completing a B. Ed. may have more expansive educational and/or pedagogical-based knowledge(s) than their B. HPE counterparts.

Yet, while HPE graduates across Australia may gain differing perspectives on HPE curriculum and pedagogy from the specific programme that they have followed, it is important to acknowledge that all programmes investigated are supporting PSTs to meet AITSL’s standards at the graduate level (2011). Furthermore, there were no significant differences identified between the two programme types with regard to Practicum units and Practicum placements. This includes the ITE programmes that did not appear to graduate PSTs with a second teaching area and those within a specific jurisdiction that stipulated graduation with additional requirements.

Thus, schools employing graduate teachers may have a degree of confidence in the standards but cannot assume all graduate secondary HPE teachers in Australia have a common outlook, philosophy or background in HPE curriculum and pedagogy. For this reason, we position further research as necessary to explore the outcomes of what is ‘enacted, experienced and assessed’ in a programme (Arafeh 2016, 587). More critically and once again responding to Tinning (2004), such research should seek to illuminate the impact of such differences in a graduate secondary HPE teacher’s teacher education experience on their professional values and practice.

Finally, we note the value of the analysis undertaken in the context of informing curriculum renewal of HPE teacher education programmes. Particularly in contexts of increased government regulation of teacher education, there is a need for more research that can help to reveal the different ways in which various institutions are creatively exploring the flexibility (albeit limited) to develop contextually appropriate and distinctive teacher education programmes.

Declaration of interest Statement

No potential conflict of interest was reported by the authors.

Notes

1. The Alice Springs (Mparntwe) Education Declaration supersedes the Melbourne Declaration on Educational Goals for Young Australians (MCEETYA 2008), which was the foundation to the Australian Curriculum.
3. The Master of Teaching pathway is equivalent to the Post-Graduate Certificate of Education (PGCE) model in England.
4. Students enrolled at the Host ITEI who are in their final year of study and post of their final practical placement, can elect to complete a scholar is residence/internship to take the place of on-campus study. That is, the final semester is completed as an intern at a secondary school.
Disclosure statement

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