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# The Design of Early Childhood Teacher Education Programs: Australian Employer Perspectives with International Program Comparisons

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*Abstract: Provision of quality early childhood education and care (ECEC) supports children's learning with strong agreement that early childhood teachers (ECTs) are central to quality provision. In many countries, it is mandatory that ECEC services employ ECTs. However, Australian ECT employers report that early childhood graduates are not always well-prepared to work in ECEC settings. This may be because what constitutes optimal early childhood initial teacher education programs (EC ITE) is unclear. To investigate the design of EC ITE programs this research reports on (i) design of EC ITE programs across international contexts; and (ii) 19 Australian ECT employers' perspectives on EC ITE program design. Findings indicate little consensus on the design of EC ITE programs, with inconsistencies across and within countries. Australian employers identified shortcomings in graduates knowledge. This research highlights recommendations to understand how programs prepare ECTs, by conducting research tracking preservice teachers from EC ITE programs into ECEC teaching.*

## Introduction

It is well established that children's early years are a time of significant development, with the quality of a child's early experiences affecting their learning and development over the lifespan. For many children, participation in formal early childhood education and care (ECEC) services during these years is significant, with participation in high-quality ECEC services providing a strong foundation for lifelong learning (O'Connell, et al., 2016; Taggart et al., 2015). Correspondingly, participation in low-quality early childhood education can lead to poor outcomes for young children (Organisation for Economic Co-operation and Development [OECD], 2021).

There is broad consensus among researchers, practitioners, and policymakers that the quality of ECEC services depends on experienced and skilled teachers (Education Services Australia, 2021; Sylva et al., 2010; Urban et al., 2012). In particular, the quality of ECEC is directly related to degree qualified early childhood teachers' (ECTs') practice and the effectiveness of their teaching (Manning et al., 2019; Torii, et al., 2017). ECTs have been linked with better outcomes for children than staff with lower qualifications, as a result of

higher quality pedagogical approaches (Manning et al., 2017; Sylva et al., 2010), interactions that support children's language development (Degotardi, et al., 2016), and learning environments related to the relationships between the child and the educator (Degotardi, 2010). Fundamental to teacher quality is the preparation of ECTs (Darling-Hammond 2010). The OECD (2019a) maintains that:

> *Pre-service education and training is central to the construction of a skilled and knowledgeable ECEC workforce. Although qualifications by themselves do not guarantee high quality teaching, studies from across the OECD demonstrate that better educated staff are generally better able to deliver high-quality early childhood education and care (p.14).*

The OECD's assertion that "qualifications by themselves do not guarantee high quality teaching" (2019a, p.14) suggests that the preparation ECTs receive may not always provide high quality ECEC. There is little in the literature that points to what constitutes optimal content of an ECT qualification (Couse & Recchia, 2016). What constitutes a 'quality' early childhood initial teacher education (EC ITE) program is contentious and contextual, with research needed to consider not only the content of these programs, but also the capacity of institutions to offer programs that are reflective of current research and the needs of the sector (Whitebook & Ryan, 2011).

There is great variation across and within EC ITE programs (Kagan & Roth, 2017; LiBetti, 2018). The OECD (2019b) investigated the content of EC ITE programs in nine OECD countries: Chile, Denmark, Germany, Iceland, Israel, Japan, Korea, Norway and Turkey. The report found 16 common content areas, illustrating varying degrees of agreement on what is considered important to include in an EC ITE program (see Figure 1). Child development was identified as the most frequently included content, yet, this was still not covered in all EC ITE programs. For pedagogical content areas (such as science, literacy, mathematics), working with children with additional needs or with families, or facilitating transition to school – which were the least frequently included – there was even less agreement across programs. Troublingly, despite McArdle's assertion that practical training is a key foundation of *all* teacher education programs (2010), just 70% of the EC ITE programs in the OECD report included practical training, known also as professional experience or work integrated learning. The data from the OECD study suggests there is little consensus on the content of EC ITE programs.
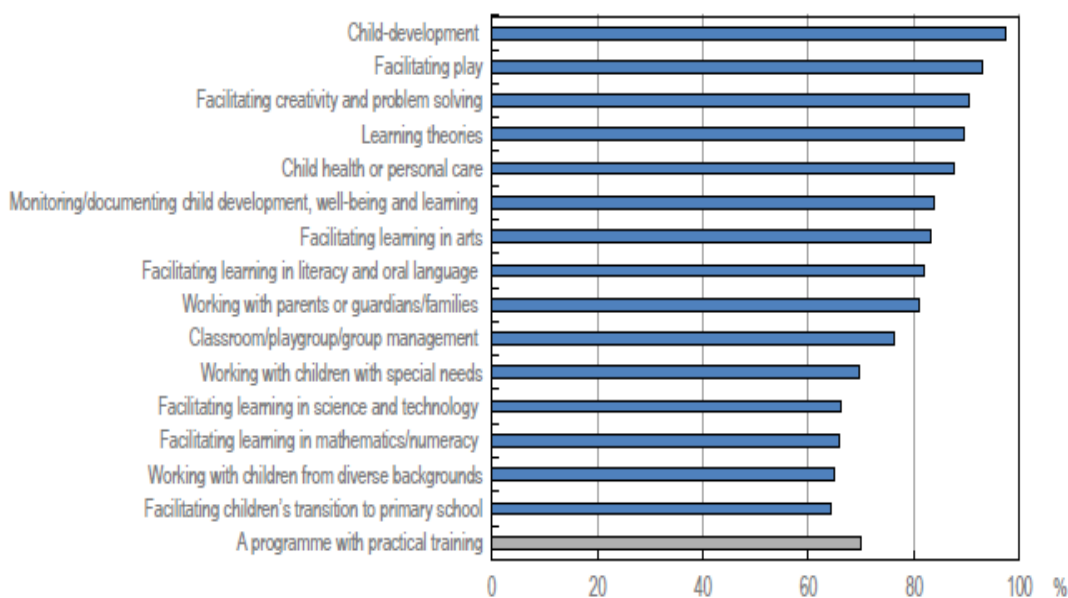


**Figure 1: Content of EC ITE Programs (OECD, 2019b, p. 107)**

The research question guiding this paper is: What is viewed as essential in a university early childhood teacher degree, and why? This paper aims to further inform understandings about the design of EC ITE programs and what should be included to prepare high-quality ECT graduates by:

(i) contributing to understandings about the design of EC ITE programs for ECTs across four international contexts, and

(ii) presenting findings from an exploration of employers' perspectives on EC ITE programs in Australia.

Two methods of data collection were used. Method One included an exploration and comparison of content in four EC ITE programs, followed by Australian employers' perspectives of the content of EC ITE programs. From this combined exploration and analysis, recommendations are made for the design of EC ITE programs that optimise the preparation of early childhood graduates to provide quality learning experiences for children's learning and development.

The theoretical framework applied in this study was the ecological systems theory (Bronfenbrenner & Morris, 2006). The study's theoretical perspective was that the quality of EC ITE programs was influenced by the content and design of EC ITE programs which was determined by policy within that country. These broader influences are external to EC ITE programs yet have a trickledown effect to influence them and subsequently young children's learning and development are influenced by the exo-system (Bronfenbrenner & Morris, 2006). The construction of the EC ITE programs had been identified as optimal for graduates to teach in early childhood settings.  However, remembering that "qualifications by themselves do not guarantee high quality teaching" (OECD, 2019a, p.14), and that quality is contentious and contextual, the study was undertaken to investigate employers' perspectives of the preparation ECTs receive, to see if there was alignment with content of the ECT's study and the quality of the graduates. There were two approaches to data collection in this study: an exploration of the design of EC ITE programs across international contexts, and 19 Australian ECT employers' perspectives on EC ITE program design. These methods and findings are now described.

**Method One: The Design of Early Childhood Teacher Programs in Four International Contexts**

One way to identify what is considered integral to an EC ITE program is to identify and compare content across EC ITE programs – as was done in the OECD report (2019b). This paper contributes to these understandings by examining EC ITE programs in four countries purposefully selected. These four countries - Australia, England, Finland and New Zealand - were selected for analysis of design because:

• Each country is required to have a degree qualified early childhood teacher in the early childhood settings (Boyd, 2020; Osgood, 2012; Zhang, 2021);

• Three of the four countries - New Zealand, England and Australia - have market driven ECEC systems; and

• Finland is an important comparative country as it is consistently ranked for provision of quality ECEC by the OECD (2019b), however were not included in the OECD report (2019b)

To investigate similarities and differences in the countries' ECT ITE programs, a systematic review of the EC ITE programs published in recent research for each country was undertaken. Content analysis was applied to the literature documents using a 'conventional approach' (Hsieh & Shannon, 2005, p. 1277) where coding categories were directly derived

from the literature. The categories were (i) the content covered to equip students with requisite knowledge and skills of ECTs; (ii) the age focus of ECT programs, and (iii) the provision of professional experience. The four publications were Zhang, (2021) for New Zealand; Hevey (2019) for England; Onnismaa, (2018) for Finland and ACECQA (2020) for Australia. Each of these publications provided a review of the country's EC ITE programs' content and design.

A content analysis of the ECT ITE programs was conducted to determine common and different key design components, as identified in the literature as important considerations in EC ITE programs (ACECQA, 2020; Couse & Recchia, 2016; OECD, 2019b; Whitebook & Ryan 2011). The intention was not to provide a thorough critique of all of the countries' EC ITE program provision, but rather to provide a direct analysis of the programs as reported in the literature.

## Method One: Findings and Discussion from Four Countries

To make a comparison of the four countries' EC ITE programs three categories were common across all EC ITE programs: content, the age of the child, and the professional experience undertaken within the program. Each of these categories are now presented.

### Content

The first category of content of the EC ITE programs was investigated across the four countries' EC ITE programs to understand the similarities and differences provided. After review of the four publications, five key content areas were found to be common:

1.      ECEC curriculum and pedagogy
2.      Child development and learning
3.      Assessment of children's learning
4.      Partnerships with families
5.      Inclusion and cultural diversity.

Each of the four countries has a strong focus on curriculum and pedagogy, especially play-based learning, which was also evident in the OECD study of nine countries (OECD, 2019b). Within Australia and England, ECT programs that straddle the early childhood and primary school sectors included curriculum and pedagogy for both sectors. Play-based pedagogical approaches are key for children's learning in ECEC contexts, while a more instructional approach is acceptable in primary school teaching (Boyd & Newman, 2019). However, pre-service teachers have reported confusion in studying both pedagogical approaches in the combined birth to eight or birth to 12 years' programs, suggesting that covering both approaches in the one degree may be challenging for student teachers (Boyd & Newman, 2019).

All of the ECT programs in the four countries focused on child development, which aligned with the nine countries of the OECD report (see Figure 1, 2019b). Across all four countries, ECTs are required to have specialist knowledge of child development theory and its application to support children's learning (Australian Early Childhood Education and Care Quality Authority [ACECQA], 2020; Hevey, 2018; OECD, 2019b; Onnismaa, 2018; Zhang, 2021). This knowledge includes a focus on infant and toddler development (birth to three years), and pre-schoolers' development (three to five years). It is recognised that ECTs require in-depth knowledge of child development to provide quality ECEC for children (Couse & Recchia, 2016).

The assessment of children's learning was another common content area across the four countries' programs. Assessing children's learning included the planning cycle of observing children, planning, and implementing learning experiences, followed by evaluation and reflection on children's learning (DEEWR, 2009; Hevey, 2018; OECD, 2019b; Onnismaa 2018; Zhang, in press). The ECT graduate is required to learn these skills and apply them in practice to support children's learning.

The fourth area common to all four countries' EC ITE programs, and the nine countries of the OECD report, was the study of working with families (DEEWR, 2009; Hevey, 2018; OECD, 2019; Onnismaa, 2018; Zhang,2021). The importance of the place of the family in ECEC services, and consequently in ECT programs, represents a global approach for inclusion of guidelines for educators' partnerships with families with meaningful engagement (Hadley & Rouse, 2020). Engagement with families shapes ongoing practice and fosters inclusiveness and belonging for all (Hadley & Rouse, 2020).

A focus on inclusion and cultural diversity was the fifth common content area identified across the four ECT programs reviewed, (ACECQA, 2020; Hevey, 2018; Onnismaa, 2018; Zhang, 2021). The OECD report (2019b) also identified working with children from diverse backgrounds as being important and common across the nine countries investigated. There has been a global push for teaching inclusion and cultural diversity in EC ITE programs over the past 20 years as part of the UN Sustainable Development Goals 2030 (United Nations, 2015). In recognition that all children have the right to feel they belong in early childhood settings, ECTs need to have a deep appreciation of inclusive practices (Miller, 2017).

While there were five areas that were common, there were three areas that were different in the ECT programs across the four countries including:
1.     using technology for children's learning: This was evident in ECT programs in Finland and New Zealand (Onnismaa, 2018; Zhang, 2021), but not in Australia (ACECQA, 2020) or England (Hevey, 2019).
2.     learning to conduct research: This was evident in the Finnish (Onnismaa, 2018) and New Zealand ECT programs (Zhang, 2021), but not in Australia or England.
3.     The study of sustainability and social justice: These were explicit in New Zealand (Zhang, 2021) and Australian (ACECQA, 2020) ECT programs, but not in the Finnish or English ECT programs.

It is not clear why using technology for children's learning, learning to conduct research, and the study of sustainability and social justice, differed across the four countries. It could be concluded that as the context of each country's approach to early childhood education and care varies then these areas are valued differently and warrant further investigation which is beyond the scope of this study. The similarities and differences across the content of ECT programs confirm there are varying beliefs about what constitutes a quality early childhood program of study.

**Age Focus**

The second category of EC ITE programs was the age focus of the program. The focus of this paper is on the preparation of ECTs to work in prior-to-school early childhood education services – which in Australia is typically for children aged from birth to five years. However, there is variation within countries regarding the age range of children that early childhood ITE programs target. Across the countries investigated there was differing foci on teaching children in age groupings. Programs taught graduates to teach children aged birth to two years; birth to five years; birth to eight years; birth to12 years; or 12 months to seven

years. These variations are contextually based: for example, in Finland children commence school at seven years of age (Boyd, 2020), and so the ECT programs prepare ECTs to teach children aged from 12 months to seven years. New Zealand's ECT programs align with their early childhood education system, with ECT programs being only for training teachers for birth to five years (Teaching Council, 2019).

Programs that focused on birth to eight years have been abolished in New Zealand (Kane et al., 2005), but are still common across parts of Australia. In Australia, ECT programs may qualify the early childhood graduate to teach children aged from birth to five years; birth to eight years or birth to 12 years, depending on the program's structure. Graduates from the latter two programs have dual career options of working in either ECEC settings (birth to five years) and primary school settings (five to12 years settings). While ECEC centres in England focus on children aged from birth to five years, ECT programs qualify graduates to teach children aged birth to five years, or three to 12 years (Hevey, 2018). The great variation across the age range of children has implications for the design of the program of study that prepares quality ECTs.

**Professional Experience**

The third category reviewed was the professional experience, which is central to education programs (McArdle, 2010). Professional experience offers early childhood preservice teachers real-world opportunities to apply and develop their content knowledge, skills and theories of how children learn (Couse & Recchia, 2016; Girod & Girod, 2008). Research from Australian studies has shown that there is a disconnect between preservice teachers' knowledge of child development and applying that knowledge, with recommendations made for greater assessment of students' application of theories of child development during their professional experience (Boyd et al., 2020; Mahony et al., 2020; Ryan & Gibson, 2016).

Each of the four reviewed countries' professional experience included wide variation of days for the birth to five years professional experience component which ranged from 60 to 120 days. England included 120 days professional experience for EC and primary teaching combined (Hevey, 2018); Finland had 75 days in ECEC centres catering for children aged 12 months to seven years (Boyd, 2020); New Zealand has 120 days focused solely on birth to five years (Zhang, 2021). In Australia, preservice ECTs are required to complete a minimum of 80 days professional experience for undergraduate EC ITE programs (which can include for five to 12 years), and 60 days for postgraduate students with children aged from birth to five years (ACECQA, 2020). A minimum of ten days with children under three years of age and a minimum of 30 days in an ECEC service from three to five years of age must be included (ACECQA, 2020). Whilst all ECT programs must meet these minimum standards, Australian studies show that the number of days of professional experience varies significantly across Australian universities (Boyd, 2020; Rowley et al., 2011; Ryan & Gibson, 2016). The OECD report (2019a) found that only 70% of the nine countries included professional experience as part of the design of the EC ITE program, highlighting the diversity of approaches to this area of the EC ITE programs.

The EC ITE programs examined in this section revealed similarities and differences between and within countries. The differences in design of an EC ITE programs suggests that there is little consensus as to what constitutes a quality ECT program of study, and that each country, and indeed each university, has different criteria for designing ECT programs. To further understand the variation of the early childhood ITE programs this paper now turns to

early childhood education employers' perspectives in Australia on the design of EC ITE programs.


**Method Two: Employers' Perspectives on Programs of Study**

A second method was used to explore the research question: What is viewed as essential in a university early childhood teacher degree, and why? In this phase of the study, the focus was to gain employers' perceptions of what is essential in a university EC ITE degree, and why. Employers were asked about the content of EC ITE programs based on their experience of employment of graduates from these programs. Employers are directly invested in ECTs' abilities to provide quality early childhood education and care, and they have direct experience of the preparedness of ECTs in their role. Research related to employers' perspectives on the preparedness of new graduates in Australia has shown that ECT graduates were generally not considered to be well-prepared to teach in the early years (Boyd, 2020). No previous papers are known to have reported employers' perceptions on ECT ITE programs. This omission seems surprising, given that employers are at the front-line of assessing the preparedness of ECT graduates. It is argued therefore that employers' perspectives on what should be included in an ECT ITE should be considered.

The next section presents Australian employers' perspectives on what should be included in the design of ECT programs, based on their experience in working with the graduates, and their expertise in early childhood education and care. This phase of the study aligned with a qualitative interpretive paradigm that views human understanding as socially constructed (Denzin & Lincoln, 2017). Whilst acknowledging that employers of ECT graduates may have commercial interests, for the purposes of this study they were viewed as experts with the requisite knowledge and experience to have informed understandings about what ECTs should know to practice as high-quality teachers in ECEC settings.

Nineteen employers were purposefully selected (Patton, 2015) to develop an understanding of their perspectives of ECT program design. Employers were all in leadership roles and involved in recruiting and working with recent university graduates from early childhood initial teacher education programs. Participants included early childhood centre owners, centre directors, school principals, chief executive officers and senior management staff in early childhood organisations. Recruitment was from different-sized early childhood organisations as illustrated in Table 1. The 19 employers represented a total of 1,168 early childhood centres which employed 1,645 ECTs across Australia.

|  | Small (less than 10 centres) | | Medium (10-49 centres) | | Large (more than 50 centres) | |
|---|---|---|---|---|---|---|
| For-profit | 5 centres | 14 teachers | nil | nil | 943 centres | 1100 teachers |
| Not-for-profit | 14 centres | 36 teachers | 76 centres | 195 teachers | 130 cenres | 300 teachers |
| **Total** | **19 centres** | **50 teachers** | **76 centres** | **195 teachers** | **1073 centres** | **1400 teachers** |

**Table 1. Summary of Participants**

Semi-structured interviews lasting between 20-55 minutes were conducted. The interviewers were academics teaching in birth to five or birth to 12 early childhood degrees, across six universities in New South Wales, Australia. Interviews were audio recorded with permission from participants and later transcribed verbatim. Ethical approval to conduct the

study was obtained from XX University [de-identified for review], Ethics Committee Approval number 18-134. Prior to commencement of the interviews, participants were provided with details about the project, including the interview questions, and subsequently signed a form indicating their consent. The range of views was spread across the participants.

## Method Two: Findings and Discussion of Employers' Perspectives

This section reports on findings from the analysis of participants' responses, recorded in the transcripts, to the interview questions: What do you believe is essential in a university early childhood teacher degree? Why? Data were first analysed thematically (Patton, 2015) that is, coded, and similar codes grouped together into key themes. The key themes that emerged from the data about what should be included in an EC initial teacher education program were:
1. Child development
2. Teaching pedagogies
3. Education and curriculum studies
4. Family and community contexts
5. History and philosophy of childhood
6. ECEC professional practice including leadership and advocacy; and
7. Preparedness regarding employment, induction, and support of new graduates

### Theme 1: Child Development.

All participants identified that EC ITE programs needed to include content related to child development and psychology that is, human behaviour. For example, one participant said:

*Child development and the regulation context. When I say child development, it's being able to observe children, to analyse those observations, to communicate that in a meaningful way to families. It is the cycle of planning but grounded in an understanding of brain development - from birth.*

Importantly, participants commented that knowledge about child development needed to be related to practice. It is not sufficient to know child development; but rather graduates need to be able to engage in the planning cycle, and work with families while applying their understanding of human development. Three participants also commented that graduates should have the knowledge to identify children with additional needs, as the following two comments highlight:

*There's a lot (of children with additional needs) and there will be a number of children with either some sort of disability or behavioural issue – additional needs. So I think there needs to be more taught on that .. it's hard though as there is such a broad range, there could be autism and you can have so many different ranges within that.*

And:

*I think we are getting many more children with a diagnosis these days and those with trauma with refugees, there's no diagnosis but they need more.*

These two comments, while demonstrating a need for understanding child development, also highlight that inclusive practices must be embedded, as asserted by Miller (2017).

**Theme 2: Teaching Pedagogies.**

Other content that all participants considered essential in an EC ITE program were grouped as teaching pedagogies. These included knowing how to implement the planning cycle; observe; plan a play-based learning environment; critically reflect on practice; and communicate ECEC pedagogical practices to families. For example, this participant commented:

> *Students need to have a good understanding of the pedagogical practices applicable to early childhood education. They need to understand how children aged from 0-5 years learn, and the value of play; how to create a program for the children; understand the value of observing; of being 'in tune' with children; and understanding what you do with this information. This is a very different pedagogical approach to being a teacher in a school where you seem to have to start with the curriculum – in early childhood education we start with the child (and their family).*

As the following participant noted, ECEC curriculum is not rigid. Consequently, EC ITE preparation programs need to instil flexibility, innovation, and problem solving, as one participant stated:

> *The ability to be flexible, to have innovation, to be fearless. Understanding that frameworks are not prescribed.*

The participants perceived that ECTs' skills needed to include critical reflection:

> *To have rigorous discussion and debate, to have the ethics of situations and unpack that critically. I think universities have a responsibility around those things.*

Moreover, many participants considered that EC ITE programs need to prepare ECTs not to 'just deliver' pedagogical programs to children, but to also articulate and explain their pedagogical practices to families, for example:

> *Understanding, applying, and articulating the benefits of play-based learning to families is really important because a lot of families feel like: what are you doing, just throwing a ball around for the kids? I want them to know arithmetic, spelling, blah blah blah. But if they (parents) understand, the play-based framework and the way it works, and the child is learning, and they learn within those activities. I think that's an opportunity for any early childhood teacher to make sure that's embedded.*

**Theme 3: Education and Curriculum Studies**

In addition to key learning areas such as literacy, numeracy, science, and health and physical education, five participants identified that they would like the creative arts to be included more than it currently is, in EC ITE programs. Music was especially considered important, and participants lamented the loss of focus on music in EC ITE programs, for example:

> *I'd like to see more of the creative arts … You know, it's [music] just fundamental. It's wonderful–it's universal–for children who don't speak English everybody can communicate through music.*

**Theme 4: Family and Community Contexts**

A focus on the family and the social context was considered by ten participants as essential in an ECT program, especially families with complex needs:

> *The value of context of families in society: I'm not saying they're not getting that but the complexities of how families impact children, how children impact families, where teachers fit in with families and families in society ... It's extremely complex work.*

The ability to effectively communicate with families was highlighted by employers as being essential to cover in EC ITE programs. It was recognised that some ECT graduates lack confidence communicating with families:

> *Parent interaction skills and confidence to talk to other people. Our best educators are comfortable having a chat with a family, working with a colleague about how they could do something differently and improve, and then working with the kids.*

**Theme 5: History and Philosophy of EC**

Content about the history and philosophy of ECEC was viewed as important by five participants, with one commenting that working in ECEC is political:

> *The history and philosophies are really important. That's really important to be having those students exposed to it. ... Because they have to do the critical reflection and our services are political places*

Another participant commented on how the components of the EC ITE program are inextricably linked:

> *It's got to have theories and practice, historical and current day, it's got to have contemporary thinking, evidence-informed practice.*

**Theme 6: Early Childhood Professional Practices**

The majority of the participants stated that EC ITE programs need to include management, leadership and advocacy skills, understanding of policy and the regulatory environment, and adequate practical experience to put their learning into practice. For example:

> *The teacher will usually take on a role that includes management, so compliance knowledge, managing others, and budgeting is essential. They are often seen as a leader, and this can be a difficulty. It is about how to influence the team, not just how to lead programming, but also thinking about how to get others to reflect.*

> *Desirable is advocacy – well it's probably essential. Currently we are experiencing no professional development, no investment; we are here because we are providing a service that is promoting women's participation in the workforce. We have never been a united sector because we have the profits and not-for-profits fighting against each other, so we can't just go on strike, like the teachers can. I think if every single course for early childhood has an advocacy view, then that will change the sector over a few years, when we get more people speaking up, and say this is not ok.*

Also considered important by participants, was knowledge on how to support the wellbeing of children, families, and colleagues. The following quote illustrates this:

*We are dealing with mental health issues, in relation to children, families and teams. We need to ensure teachers have knowledge and skills in this area.*

Several participants noted that quality professional experience placements during the ECITE program were essential for pre-service teachers to put learning into practice.

*I think a lot of 'pracs' are essential. The fact that they [some universities] don't do any pracs anymore in the first year of their degree is a real problem. And I think there is not enough time for them to be able to apply knowledge or to apply practice in the rolling five days of prac.*

One participant noted that an ECT's first professional experience should be with a high-quality teacher who demonstrates good practice. Another noted however, that no degree can prepare graduates for everything they need to know. New graduates need to be prepared for feelings of unpreparedness, as well as the need for continuous learning:

*They [new graduate ECTs] need to know they don't know everything when they go into the service and no course can prepare them for what they're going to be hit with.*

**Theme 7: Employment, Induction and Support**

Participants identified that the structure of an EC ITE program needs to align with the roles and responsibilities of the job. The EC ITE program needs to be 'fit for purpose' so that graduates are prepared for their work. Participants recognised that new graduates need to be inducted into services. However, several participants expressed frustration that they felt that they were having to provide 'remedial' professional development on topics – such as child development – that they expected graduates to know. This participant said:

*We don't necessarily expect them to have an understanding of the regulations. But we don't think it is our job to be teaching child development and how it applies in teaching, but we're actually having to do that. The other things like leadership and some understanding, we need to lay out those things. We probably have to do that more than we'd like.*

While some participants felt graduates were not prepared for their work, they also were aware that they had a responsibility to provide support for new graduate ECTs. For example, some of the larger organisations have *new graduate programs* to induct the new graduate to the workplace. Participants from small organisations, without large infrastructure expressed a desire for *professional networks* to support new graduates.

Employers expressed a keen desire to collaborate with universities to develop ECT programs that aligned with the roles and responsibilities of the job as highlighted by these two comments:

*How do we have more ongoing discussion between the institutions and the employers and understand that what you're currently designing and its intent and what does that mean in a workplace, and how do we then make sure we're bridging the gap?*

And:

*I do think we could both benefit by having much closer relationships, and understanding what's being taught and what's being needed, and making sure that we're maximising both.*

In summary, employers identified common content areas of an early childhood teacher degree, including understanding of: ECEC leadership, child development, learning

and assessment, pedagogical practice, applying theory to practice, ECEC regulatory environment, supervision of other educators, effective relationships with families, and provision of play-based learning experiences. These areas were also common content areas identified for inclusion in EC ITE programs in the OECD report (2019b) and the four countries reviewed.


**Discussion of Phase 1 Findings with Consideration of Phase 2 Findings**

It is widely documented that the early years are critical in young children's learning and development and quality ECEC services and teachers are central to promoting learning and development (Manning et al., 2017; Sylva et al., 2010; Urban et al., 2012). However, little is known of what constitutes a quality EC ITE program to produce 'job ready' graduates, and not all teacher education programs are equal (OECD, 2019b). The aim of this paper was to inform understandings about ways EC ITE programs are designed to prepare high-quality ECTs and thus to illuminate the design of EC ITE programs. This was addressed by firstly exploring similarities and differences of ECT programs across international contexts, and secondly by asking employers about their perspectives of the preparedness of their graduates from EC ITE programs within Australia.

Based on the two method approach, three key findings from the paper emerged. First, there is considerable variation in the focus of EC ITE programs both across and within countries. Common content was identified across EC ITE degrees. This included child development; ECEC curriculum and pedagogy; planning for and assessing children's learning; inclusion; and partnerships with families. Child development and learning was identified as the most common across the review of 13 OECD countries, and by Australian employers as a critical inclusion in an EC ITE program. Australian employers identified ECEC teaching pedagogy that aligns to facilitating play, creativity and problem solving, be included. These inclusions align with the literature that asserts that teacher knowledge and practice, holistic curriculum and work integrated learning are essential in an EC ITE program (McArdle, 2010). These content areas are valued worldwide and many programs incorporate these to a certain degree. Acknowledging that programs should not necessarily be standardised, as they need to be responsive to the context of the institution providing the EC ITE program, the findings support the idea that there are key areas of content that need to be included in EC ITE programs so that graduates are well prepared. Whilst there were many similarities found across the EC ITE programs reviewed, there were also variations. For example, Australian employers valued EC ITE programs that included history and philosophy of childhood - this was not included in the OECD report (2019b), and there was not consensus on inclusion of technology, ECT research skills, or supporting sustainable practices in the EC ITE program across the four countries investigated. This finding indicates there is a lack of consensus on what should be included in EC ITE programs designed to 'prepare' teachers for their work in early childhood settings so that they might contribute to the provision of quality ECEC.

The second finding relates to the ages covered in the EC ITE programs. If the program covers a broad age range, such as preparing graduates for teaching across birth to 12 years, then it may not be possible to adequately prepare ECTs to be 'job ready', that is, to provide them with all the requisite skills and knowledge needed for work in both ECEC and school settings. Employers have concurred with this finding indicating a preference for EC ITE degrees to be focused on the birth to five age range (Boyd, 2020). Conversely, having a degree that focuses on the early years of school as well as birth to five, that is from birth to eight years, may better enable ECTs to support children's transition to school and support the

extension of learning for children, as was identified in the OECD report (2019b) as a necessary inclusion for an EC ITE program.

The third finding was grounded in a strong, but not universal, agreement across EC ITE programs, of the need for professional experience. Both the OECD report (2019b) and the findings from the employers' perspectives acknowledged the importance of professional practicum experience. Commentators assert that professional experience is imperative to provide ECT students with real-world experiences to apply their knowledge to practice (Couse & Recchia, 2016; Girod & Girod, 2008; McArdle, 2010). Likewise, professional experience in high quality placements was recognised by the employers as crucial for ECEC students to have the opportunity to apply their knowledge and skills in practice (Boyd et al., 2020). However, the employers in this study expressed frustration that ECT graduates were not always competent in applying theory they had learned at university to their practice. It is recommended that the application of theory be investigated so that students have a deep understanding of practices.

Given the universally agreed importance of early childhood education in children's lives (O'Connell et al., 2016; Couse & Recchia, 2016; Dalli et al., 2018; Taggart et al., 2015), it seems untenable that the people with the highest required qualification in early childhood settings are starting careers with such inconsistent preparatory programs. The employers' perspectives gave voice to a group previously neglected in research around teacher education programs. Employers of ECT graduates collaborating with higher education providers and accreditation specialists as identified by Kagan and Roth (2017) could provide a stronger foundation for ensuring necessary content is addressed in EC ITE programs and include a stronger opportunity for the required theory/practice nexus.

**Conclusion**

This one small-scale study focused on design of ECEC initial teacher education programs. Future research is needed for a substantive review of how the content is delivered, in terms of quantity and approaches, to more fully prepare ECTs to be ready to 'hit the ground running'. One approach is to conduct longitudinal studies that compare the pre-service experiences of ECTs from a range of EC ITE degrees.

The findings of this study concur with the OECD (2019b) stance that while pre-service education and training are central to the construction of a skilled and knowledgeable ECEC workforce, a qualification alone will not guarantee high quality teaching. In this paper the focus was on EC ITE program design, however ECTs' personal dispositions and the context where the graduate is employed may also influence the quality of teaching. Further research is needed that considers the holistic initial teacher education training of ECTs (Couse & Recchia, 2016; Fenech et al., 2021; Nuttall, 2018). Early childhood initial teacher education programs are, and need to be, context specific and prepare early childhood preservice teachers to be prepared to work in the communities that they serve. As such, a standardised approach to designing an EC ITE program is not advocated. However, the findings of this study have illuminated those elements that are considered necessary to be included in all EC ITE programs to produce quality graduates. Further, with the global crisis in the shortage of early childhood teachers the findings in the paper are particularly salient.

**Limitations**

The authors are all involved in the preparation of ECTs, and work in different universities across Australia, and potential bias is acknowledged. However, within the authors' experience, there is significant variation across the expectations and age focus in the EC ITE programs they represent.

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