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Thinking differently about infants and toddlers: Exploring the reflections of future Australian early childhood teachers

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Abstract: In Australian early childhood teacher education programs there is typically a greater focus on the age group of kindergarten children compared to that of infants and toddlers (Garvis, Lemon, Pendergast and Yim, 2013). As a consequence, pre-service teachers may have little opportunity to interact and learn about this important age range. This paper reports on the incorporation of videos of young child and educator interaction into early childhood teacher education programs at one Australian university. The cohort of pre-service teachers (18) were asked to think in a structured way about the videos with the help of a structured reflection template, which challenged them to apply higher order thinking with regard to the scenarios presented. As a culminating point of the template, the pre-service teachers were asked to create a reflective practice question to improve their professional practice. In this study, the reflective questions were analysed using content and pronoun analysis. Findings suggest that the pre-service teachers were focused on the continuity of learning of young children, personal skill development and social emotional development. To a lesser degree reflections explored working with families. The pronoun of 'we' also appeared as the most likely response on personal reflective questions. This suggests the future teachers had already positioned themselves within the group of early childhood teachers, indicating a strongly developed professional identity.

Introduction

Increasingly, researchers believe that reflection is a vital process for all professionals to develop competence and understandings of their field (Miller, Cable and Devereux, 2005). It is therefore important that early childhood educators are equipped with the capabilities to engage in reflective practice, allowing them to extend their professional knowledge, skills and competences (Department of Education, Employment and Workplace Relations, 2009). The skills for reflective practice are often developed during engagement with practice itself in early childhood teacher education. During this time pre-service teachers have the opportunity to learn the processes to reflect between theory and practice setting them up well for their professional lives.

This study focuses specifically on the age group infants and toddlers. It explores the reflections pre-service teachers have about working with infants and toddlers. Pre-service teachers learn about infants and toddlers through their subjects at university and by spending a minimum of ten-days in a placement with infants and toddlers. However, ten-days may only provide a limited opportunity for pre-service teachers to link theory with practice. In light of this limited time allocation, an alternative to accessing the authentic situation is consideration of inclusion in the learning process of videos of educator and child interactions.

In this context this paper explores the implementation of videos in an early childhood teacher education program to enhance knowledge and understanding about infants and toddlers. The study focused on the use of video to provide increased exposure to the age group of infants and toddlers which pre-service teachers are expected to be ready for in their encounters in early childhood services. Eighteen pre-service teachers studying to be early childhood teachers (third year of study) were asked to watch the videos and engage in a reflective process to enhance their links between theory and practice. Their reflections were linked to the National Early Years Learning Framework for Australia (DEEWR, 2010). This paper analyses the reflections students generated to see what changes in learning occurred after engagement with the videos and to see if videos are useful for learning about infants and toddlers. Findings are important for those interested in infants and toddler teacher education as well as policy makers wanting to improve the competence of early childhood teachers.

Early Childhood Teacher Education

The role of an early childhood teacher is recognised to be increasingly complex and demanding because of changing work situations created by a changing society (Pianta & Hamre, 2009). Furthermore, Sims (2007) notes that because society is increasingly complex and demanding, early childhood educators of the next decade will face different work situations from those experienced now, adding to what is guaranteed to be future uncertainty and complexity. It is for this reason, a focus on early childhood teacher education is needed.

While there is strong research relating to the professional experience of primary and secondary pre-service teachers (Moody, 2009), very little is known about pre-service early childhood teachers' experiences, especially with young children under three years of age (Recchia & Shin, 2010). Rouse, Morrissey and Rahimi (2012, p.87) suggest that "this represents a gap in knowledge", particularly in the Australian context, where in some states pre-service early childhood teachers must successfully complete an infant/toddler (birth to two year) professional experience placement to achieve registration as an early childhood teacher.

Results from a United States study found that experiences with infants created opportunities for early childhood pre-service teachers to re-think their existing beliefs about infants' capacities and capabilities (Recchia & Shin, 2010). Furthermore, Recchia and Shin (2010, p.144) advocate that as pre-service teachers learned the power of observation and understood the unique ways in which infants communicate, they came to regard infants as powerful social beings "who taught them something quite meaningful about being an early childhood teacher".

In a recent Australian survey of early childhood pre-service teachers in one Australian institution, Rouse, Morrissey and Rahimi (2012) noted many comments from students dissatisfied about the infant/toddler practicum in which they had engaged. Participants commented that they 'already knew' how to work with this age group, and that they aspired to work with older children. Rouse, Morrissey and Rahimi (2012, p.97) concluded that "as it currently stands, the infant/toddler practicum, while essential in building competent early childhood teachers, is problematic and a challenge". Responses indicated significant dissatisfaction with the quality of supervision, the absence of teacher-mentors, and the lack of opportunities to practice new approaches. However Australian research also reports infants and toddler placement being a positive experience for students. Thorpe, Ailwood, Brownlee and Boyd (2011) explored the beliefs of pre-service teachers in their third year of study of a Bachelor of Education (early childhood specialisation). Students who had a positive practical experience during a childcare placement were more likely to consider

entering the childcare workforce. The positive experience was created by teacher educators who were aligned with the learning happening during placement.

Infant and toddler teacher education also appears problematic in Nordic countries. In a recent Nordic Network Project (Alvestad et al., 2014), teachers in Iceland, Sweden and Norway highlighted a number of dilemmas when working with very young children, suggesting that the youngest of children in care are marginalized, with early childhood teachers having a limited understanding of what professional work with very young children included. Attitudes such as “just changing nappies” (Alvestad et al., 2014, p. 682) were expressed. The project also suggested a lack of understanding from policymakers regarding the issues such as size of groups, with economic profit valued more than children’s wellbeing. One teacher in the study stated (Alvestad et al., 2014, p.682) “[W]ho is supposed to make the voice of the child heard?” This enforces the needs for early childhood leaders in the early childhood field along with the support of professional organisations. For Australia, it means we need to also recognise the voices of the youngest of children.

The Australian Early Childhood Context

Over the past decade there has been increased recognition of the importance of the early years for children’s learning. This is evident by the recent proliferation of government policies aimed at supporting children’s learning and well-being. A key initiative has been the endorsement of the *National Early Childhood Development Strategy— Investing in the Early Years* in 2009 by the Council of Australian Governments (Council of Australian Governments (COAG, 2009). The strategy is a “collaborative effort between the Commonwealth and the state and territory governments to ensure that by 2020 all children have the best start in life to create a better future for themselves and for the nation” (COAG, 2008).

An important area for change in the early years has been raising the standards of qualifications of early childhood educators. This was formalized in the *National Quality Framework* (2009). Early childhood centres and preschool services must now have a qualified early childhood teacher. An early childhood teacher must meet the requirements of the Australian Children’s Education and Care Quality Authority (ACECQA, 2013), which was established to guide the implementation of the National Quality Framework for Early Childhood Education and Care nationally.

ACECQA (2013) require universities offering early childhood teacher education programs to apply for approval. The application requires justification of alignment with guidelines for curriculum and professional experience requirements. The key areas include psychology and child development, teaching pedagogies, education and curriculum studies, family and community contexts, history and philosophy of early childhood and early childhood professional practice.

Pre-service teachers are also required to undertake professional experience placement during their studies. In undergraduate studies, the requirements are 80 days of professional experience which consists of 10 days working with children aged birth to 2 years, and a significant number of days working with children aged 2 to 5 years (ACECQA, 2013). The remaining balance may be undertaken with children aged over 5 years. In graduate studies, the requirements are 60 days of professional experience (ACECQA, 2013). What can be seen are immediate differences in professional experience with infants and toddlers compared to children aged 2 years and above. This may have hidden meaning for the profession and students, with the majority of pre-service teacher learning spent with older children.

The Government initiatives for improved qualifications were based on research that links higher qualifications of early childhood staff to improved outcomes for children. The evidence suggests that early childhood teachers with higher-level qualifications are more likely to engage in appropriate interactions that are sensitive, responsive and engaged (Norris, 2010). Qualified early childhood teachers have also been linked to greater staff-initiated learning, and to staff more engaged in play and social interactions with children (McMullen & Alat, 2002).

Despite the improvement in teacher qualifications, the requirement to have a qualified early childhood teacher may actually work as a counter-force to providing all children in long day care with quality education and care. An underlying expectation with the policy reform has been that degree-qualified teachers will work with children under three years of age through a leadership and mentoring role, however government requirements demand that qualified teachers work with pre-school aged children (Rouse, Morrissey & Rahimi, 2012). Other research reports that qualified teachers in childcare centres end up working with older children, while diploma and certificate qualified educators (or sometimes unqualified staff) are more likely to work with the younger children (Ireland, 2006; Norris, 2010; Rouse, 2008). Nolan and Rouse (2013) also note that pre-service early childhood teachers prefer to work with older children as opposed to younger children. This may reflect the low professional status of teachers working in child care. The professional status of teachers in childcare settings is not comparable to that of teachers in school settings, with a widespread perception that teachers in childcare are not 'real' teachers (Sumsion, 2007). Ireland (2006) also notes that there is not a strong tradition of teachers being involved in infant/toddler programs across Australia.

Another problem is the inconsistency in focus on infants and toddlers for undergraduate early childhood teacher education programs. An investigation of early childhood teacher education programs at Australian universities by Garvis et al. (2013) highlighted differences in the delivery of theoretical and practical experiences with infants and toddlers. Only a small group of universities incorporate subjects specifically dedicated to infants and toddlers, while most universities embedded knowledge about infants and toddlers across all subjects. Variation also occurred in the amount of professional experience with infants and toddlers - some had 10 days while other pre-service teachers had more - and the amount of assessment items in teacher education that focused specifically on infants and toddlers. Such variation creates differences in early childhood teacher education.

Part of the national government initiative has also included the development of a learning framework - *Belonging, Being and Becoming: The Early Years Learning Framework for Australia* (hereafter referred to as the Framework) (DEEWR, 2009). This Framework is designed to support informed curriculum decisions, with expectations for children's learning expressed as learning outcomes. The principles within the Framework are "secure, respectful and reciprocal relationships; partnerships with families; high expectations and equity; respect for diversity; and ongoing learning and reflective practice" (DEEWR, 2009, p.10). The last principle - ongoing learning and reflective practice - is a specific focus in this study. In a context of rapid sociocultural, political, economic and technological change, it is important educators are aware of the broader issues and are able to reflect on how these impact children's services. As Sumsion and Goodfellow (2002, p.1) report, educators need to be "able to manage and respond effectively to change and its inherent demands, challenges and tensions".

A further initiative has been the introduction of the National Quality Standard (NQS) (AECQA, 2012) as a key aspect of the National Quality Framework. The NQS introduces ratings for children's education and care services that apply to Australian long day care, family day care, outside school hours care and preschools/kindergartens.

Context of Study

In 2013, a cross institutional research team received an Australian Government Office for Learning and Teaching Seed Grant to enhance pre-service teacher understanding of children from birth to three years through the use of engagement with videos. The project was designed to address the gap in the availability of age specific and high quality resources for this age group, as well as to provide opportunities for developing capabilities in relevant tertiary education programs. To enable pre-service teachers' engagement with the series of videos of very young children in early childhood services, a Reflective Template was created by the research team to scaffold pre-service teacher understanding about the National Quality Standard with a particular focus on the learning outcomes and the practice principles in the Early Years Learning Framework for Australia (EYLF). The videos produced were made available on a password protected website for the institutions involved in the study only due to the nature of the grant, that is to trial a concept. No commercial use was granted for the continued use of the videos. Eight videos that showed interactions between educators and young children were viewed by the students. In brief, they can be described as:

- 1) Helping Friends - A young girl helps another girl put on an art smock with the help of the educator. The educator supports the child's language with the other child.
- 2) Grandma and the Pirates - The educator reads a picture book to the young children
- 3) Thomas and Sam - The two young children negotiate the use of a toy. The educator enters the episode and supports the children in negotiation by scaffolding and modelling language.
- 4) Time for a Break - Children are given choice by the educator about taking a break for morning tea.
- 5) Raking in the Sandpit - A child is raking in the sand with an educator asking questions about the activity.
- 6) Angus and Water - Angus is at the water trough playing in the water. He negotiates his entry into the water play with the help of the educator.
- 7) Bubble Blowing - A child is blowing bubbles with an educator asking questions about the activity to extend understanding.
- 8) Spinning on the swing - Two children and an educator are singing a song on a swing. The educator also asks questions to engage the children in conversation.

This study focuses on the reflections written by the 18 pre-service teachers in their final year of study in one university setting in a Bachelor of Education (primary) who specialized in early childhood. In Australia, as early childhood teacher education programs tend to have lower numbers, it is expensive to run programs that are exclusively early years. As the Australian Productivity Commission Report (2011) notes, primary teaching is a more attractive business option. This may explain why early childhood education in Australia is often embedded as part of a primary teaching degree as in the past it has been difficult to justify offering specialist degree level programs (Elliot, 2007).

The pre-service teachers had only experienced 10 days of placement with infants and toddlers, as is mandated in their program requirements. The videos were designed to support further learning and allow reflection between theory and practice.

Reflection in this study was considered an important skill for an early childhood teacher. According to Dewey, reflection is defined as "active, persistent and careful consideration of any belief or supposed form of knowledge" (1997, p.6). Reflective practice is the action of reflective thought. Mason (2002, p. 7) introduces the notion of "noticing" in relation to reflective practice and suggests that "every act of teaching depends on how what is

noticed will influence the nature of reflection and action”. Throughout the process of noticing, and through the framing of self, “reflection becomes a necessary mechanism for the enhancement of professional learning and therefore engenders much more active and demanding prospects for practice” (Loughran, 2006, p. 52).

Method

This study was located in the interpretivist paradigm (Cohen, Manion & Morrison, 2000). An interpretivist approach can facilitate insights into emotions, meaning and reasons for actions. As Schwandt (1994, p. 118) suggests, “to understand the world of meaning, one must interpret it”. An interpretive approach was used for this study to explore the perceptions of graduating pre-service teachers about working with infants and toddlers. A mixed methods design was used consisting of a content analysis and a pronoun analysis. This would allow the key themes and ideas to emerge from the reflection activities based on interpretivism.

The pre-service teachers involved in this study were studying a Bachelor of Education with a specialisation in early childhood education. The early childhood education specialisation had been approved by ACECQA. The pre-service teachers were in their third year of study. They had undertaken a practicum of 10 days with infants and toddlers during their second year of study.

All of the full-time 18 pre-service teachers were female and were aged 20 to 36 years. None of the pre-service teachers worked in long day care at the time of the study.

During a nine week teaching semester, videos of young children were shown to the pre-service teachers. When the pre-service teachers observed the video (one video a week), they were asked to complete a Reflective Template that had been specifically developed to enable reflection utilising the theoretical framework of Blooms’ revised taxonomy (Krathwohl, 2002). Reflecting on the videos is designed to encourage higher order thinking. The process consisted of 6 stages (Anderson & Krathwohl, 2001, pp. 67-68):

- Remembering: Retrieving, recognising, and recalling relevant knowledge from long-term memory.
- Understanding: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarising, inferring, comparing, and explaining.
- Applying: Carrying out or using a procedure through executing, or implementing.
- Analysing: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing.
- Evaluating: Making judgments based on criteria and standards through checking and critiquing.
- Creating: Putting elements together to form a coherent or functional whole; reorganising elements into a new pattern or structure through generating, planning, or producing.

These stages have been combined with the Early Years Learning Framework for Australia to develop higher order thinking regarding early childhood education and care. The National Quality Standard which contains seven quality standards, 23 standards and 58 elements is a key component of the National Quality Framework. The requirement to undertake reflective practice is contained in Standard 1.2 ‘Educators and co-ordinators are focused, active and reflective in designing and delivering the program for each child’

(ACECQA website, 2013). The particular element within this standards is 1.2.3 ‘Critical reflection on children’s learning and development, both as individuals and in groups, is regularly used to implement the programs (ACECQA website, 2013). Reflective practice is also a component of *Belonging, Being and Becoming: The Early Years Learning Framework for Australia* (DEEWR, 2009) as Principle 5 ‘Ongoing learning and reflective practice’.

Ethical clearance was gained for this project for the participants involved.

Participant’s reflective templates were analysed, especially regarding the creating stage of Bloom’s Revised Taxonomy. The final stage of the template (creating) asked the participants to create a personal reflective question for improvement. Participants (n=18) had to choose two videos to watch and reflect on. The videos most watched were Thomas and Sam, and Helping Friends. The frequency for each video watched is shown below in table 1.

Video	Frequency of views
Thomas and Sam	9
Helping friends	6
Grandma and the Pirates	5
Raking in the Sandpit	5
Time for Break	3
Angus and the Water	3
Blowing bubbles	3
Spinning on the swing	2

Table 1. Frequency of video viewing

The reflective questions from the final stage of the taxonomy (known as creating) were analysed using content analysis, which is “a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the context of their use” (Krippendorff, 2004, p. 18). Coding for manifest content (Wallen & Fraenkel, 2001) was used, acknowledging what was directly written in the open-ended questions. Coding consisted of frequency counts (quantitative) and substance (qualitative). An adapted version of Cavana, Delahaye and Sekaran’s (2001, p.171) stages of content analysis was used and consisted of five steps:

1. Read through the responses
2. Code themes as they emerge (open coding)
3. Check material coded to each theme for consistency and clarity (axial coding)
4. Identify rules for inclusion/exclusion from the themes
5. Recode responses based on rules for inclusion/exclusion (selective coding)

A pronoun analysis was also used within the themes to show the different positioning of the pre-service teachers. The use of pronouns within texts can be analysed to ascertain how people use inclusive pronouns such as “we” and “you” (Fairclough, 2003, p.106). In this case pronouns were frequency counted and analysed in terms of the text surrounding the use of the term.

Findings and Discussion

The National Quality Standard (ACECQA, 2013) and the Early Learning Framework (DEEWR, 2009, p.10) explicitly highlights the importance of ongoing learning and reflective practice in conjunction with other important learning domains. This study

engaged with that priority, setting about to investigate the types of reflective questions pre-service teachers ask after engaging with videos of infants and toddlers interacting with educators. Seven main themes emerged from the reflective questions of the pre-service teachers.

The first main theme (9 responses) to emerge was around how individuals could *explore the continuity of learning* for a child based on the experience shown in the video. The reflective questions were based on exploring the next stage of learning for the child. Questions raised by the pre-service teachers showed a strong connection to thinking about the child's learning in terms of a continuum. These included:

1. How can we build on this experience to create a continuity of learning?
2. How can we provide opportunities for children to engage in and continue to develop more in-depth knowledge in the subject of pirates within different learning contexts?
3. How can we effectively identify children's interests and contributions within our centre to increase children's sense of belonging and create continuity between different settings?

All of the response for the first main theme had the pronoun of 'we'. In this instance, 'we' refers to the concept of educators in which the pre-service teachers feel like they are part of the group within the early childhood centre and responsible for children's learning. Interestingly the word 'I' (showing an individual perspective toward the continuity of learning) was not used. 'We' is often used within writing to show that the educator is part of a community to allow greater authority to the subject matter that is being described.

In the Early Years Learning Framework (DEEWR, 2009), providing continuity in experiences is listed as a practice. It is stated in the framework (p. 16) that by "building on these experiences educators help all children to feel secure, confident and included and to experience continuity in how to be and how to learn". This suggests that some of the pre-service teachers were starting to consider the importance of building on learning experiences for infants and toddlers. The pre-service teachers were aligning their reflective questions with practices from the Early Years Learning Framework.

The second theme to emerge was around *individual educator skill development*. The videos challenged six pre-service teachers to consider if they had adequate skills to cater for the situations in the video. This appeared to be a very self-reflection, based on what areas they considered needed improvement within their own teaching practices. This included providing feedback to the child, responsive strategies and engagement skills for language. Examples of questions included:

1. How can I better engage children in comprehending a text when reading?
2. How can I improve my feedback to further support children's learning?

Reflections about personal skills were all presented with the use of 'I', showing the personal dispositions reflected on for improving teaching.

Reflective questions about personal skills aligned with principle 5 in the Early Years Learning Framework (DEEWR, 2009, p. 13) "Ongoing learning and reflective practice". With infants and toddlers, educators are continually seeking ways to build their own professional knowledge. Participants who reflected on developing their own personal skills were able to identify personal areas of improvement in their own teaching and learning with infants and toddlers.

The next theme to emerge was based around *supporting social and emotional skill development* of infants and toddlers (n=5). Pre-service teachers had a particular focus on this

developmental area with very young children. The five responses to this theme used the pronoun of 'educator'. The self reference to educator shows the pre-service teachers positioning within a community. Rather than discuss the supporting of social and emotional skill development from a personal level (such as 'I'), the pre-service teachers distanced themselves within a community of educators. They did not appear to move beyond educators towards families (perhaps because they would need to move beyond their comfort zone). This suggests that the pre-service teachers wanted to again give some authority to the dilemma in their reflection and be seen as part of a bigger community of experienced educators.

In this instance, social and emotional wellbeing aligns with holistic approaches to teaching and learning in the Early Years Learning Framework. Supporting social and emotional learning also aligns with the concept of 'Being' in the Framework, in which children explore different elements of their identity (including social and emotional) through their play and their relationships. The educators may also be supporting outcome 3 in the Early Years Learning Framework, 'Children have a strong sense of wellbeing'.

Five participants also reflected on the *importance of establishing a positive learning environment* for infants and toddlers. Setting up the environment is important for allowing young children to experience independence. Questions included:

1. How can we ensure the classroom is a positive learning environment for all children?
2. How can we, as a centre, provide an environment that encourages children to make choices about all aspects of their needs and development?

The participants who reflected on the environment were interested in enhancing the learning environment for infants and toddlers. In early childhood contexts, the environment can be considered the third educator of children in that children learn from interacting with the world around them. The participants realized the importance of creating a supportive environment for all children. Again a focus on the environment aligns with the Early Years Learning Framework, which emphasizes numerous times the importance of the environment in young children's learning.

Allowing infants and toddlers to have choice within the centre appeared to be an important area of reflection for 4 pre-service teachers. They were aware of the importance to allow infants and toddlers to experience choice in their daily lives. The pre-service teachers reflected on choice during activities, especially eating:

1. How can you provide choice within the centre?
2. Should you tell children when to eat, or should you wait for them to tell you they are hungry?

Choice activities had the pronoun of 'you'. The use of 'you' as an educator in a community gives authority to the subject matter and validates the practices of other educators (Fairclough, 2003). The use of 'you' in early childhood settings also gives the impression that there is an endorsed way of practicing early childhood education, with others in early childhood also experiencing similar dilemmas (Kilderry, 2012).

The concept of choice is aligned with agency within the Early Years Learning Framework (DEEWR, 2009). Choice is reflected in "Outcome 1: Children have a strong sense of identity", by "encouraging children to make choices and decisions" (DEEWR, 2009, p.22). The participants who reflected on choice, acknowledged the importance of allowing the youngest of children in care choice as a daily experience.

Three participants reflected on equipment usage. This was based on the positioning of the water trough and the sand pit within the early childhood centre. Equipment usage could be related to the set up of environments within the Early Years Learning Framework (DEEWR, 2009).

Reflections on positive relationships were related to staff modelling positive relationships in front of the children. One of the listed questions was:

1. How can I, as the center’s director, ensure all staff continually maintains secure and supportive relationships within the service?

Relationships are an important element of the Early Years Learning Framework (DEEWR, 2009). They feature as an important part of working with children and their families. The two participants who commented on relationships were focused on the importance of the modelling of relationships and to have consistency in relationships across early childhood services.

Family emerged as the last theme (2 participants). Both responses were based around communicating expectations with families. These were:

1. How can we encourage parents to recognize the importance of play and to experience all aspects of it?
2. How can we improve our communication with families regarding expectations of clothing of the children to ensure children’s full participation in activities?

Family also appears as an important area in the Early Years Learning Framework (DEEWR, 2009). Communication with family is an important role when working with infants and toddlers.

The last three themes were based around the pronouns of ‘I’ and ‘we’. ‘I’ in the example of the positive relationships between staff was also self-referenced with the centre director, providing a position of being a leader within the early childhood setting. The two reflective questions relating to families also engaged with the pronoun of ‘we’ showing a level of authority within a community.

Across all of the responses, the word ‘we’ appeared the most common (14 times out of 36). The representation of the pronouns is presented in table 2 below.

Pronoun	Percentage (n)
We	39% (14)
I	17% (6)
Educator	19% (7)
You	25% (9)

Table 2. Pronoun usage

Interestingly, the pronoun ‘we’ shows that the pre-service teachers already align their identity with that of the early childhood profession. The use of ‘we’ reveals that the pre-service teachers feel part of a bigger community of early childhood educators.

Implications for early childhood teacher education

The findings from this study reveal that the pre-service teachers were able to create reflective questions about working with infants and toddlers that in general align with the Early Years Learning Framework for Australia (DEEWR, 2009). While the pre-service teachers had only spent 10 days of professional experience working with infants and toddlers, they were able to transfer learning from working with kindergarten children and the Early Years Learning Framework (DEEWR, 2009) to infants and toddlers. The videos provide a prompt of an experience for the pre-service teachers to reflect on. The videos allowed the pre-service teachers to reflect on their own practices and how they could enhance the learning outcomes for infants and toddlers.

Findings are important as they show the potential of videos to help support the learning in early childhood teacher education. The videos provided an authentic context for the pre-service teachers to engage with within an Australian early childhood context.

The use of videos in early childhood teacher education requires further investigation. In particular the use of videos for infants and toddlers after the 10 day placement. It would be interesting to know how students actually engage with the videos and if they would have been able to engage in reflective practice without engaging with Bloom's taxonomy. Videos appear a common form of engagement in contemporary times however as teacher educators we need to be more aware of how they are learning tools.

It would also be interesting to note if the videos were more effective because they were Australian content and based within Australian early childhood settings. If this is true, it may imply that a better understanding and access to Australian early childhood teacher education resources are needed. Rather than a reliance on overseas videos, Australian focused videos would need to be produced locally.

The reflective template also scaffolds the thinking of pre-service teachers to align their reflections with the Early Years Learning Framework. If the intention is for future Australian early childhood teachers to implement and be familiar with the Early Years Learning Framework, it is important they are given activities during teacher education where they can work with and reflect on this learning Framework. Engagement with the Framework also allows pre-service teachers to develop professional identities. This could be identified in the use of their pronouns with each of their reflective questions. The use of the word 'we' pointed to a strong membership within the early childhood community.

As teacher educators it is important that there is sharing of teaching and resources within Australia to promote positive learning experiences for early childhood teacher education pre-service teachers. Sharing of resources that promote reflective activities and examples of teaching examples with infants and toddlers could be one step to allow this process to happen. It may also build research collaboration between universities in regards to infant and toddler early childhood teacher education.

Conclusion

This study has analysed the reflective practice of 18 pre-service teachers who will become future early childhood teachers in Australia. The study has shed light on their beliefs about working with infants and toddlers and their current focus within their own understanding of infants and toddlers. Supporting the continuity of learning for young children appeared the strongest area for reflection. Personal skill development to support young children was also identified as a key area for improvement. Their reflections show strong alignment with the Early Years Learning Framework (DEEWR, 2009).

While the study has collected insights from 18 pre-service teachers, it cannot be generalized beyond the sample size. The views are expressed from pre-service teachers at one institution and may not represent the views of all states and territories within Australia. Further investigation of the beliefs of early childhood pre-service teachers across Australia is needed to help gather information about how pre-service teachers think about infants and toddlers in their care.

This study has provided some insight into the beliefs of future early childhood teachers. It is hoped that as further data is collected around this important issue, policymakers and early childhood employers will be aware of the importance of perceived enablers and barriers to the field of early childhood teacher education. If the overall goal is to improve the quality of early childhood education across Australia, greater attention is needed within early childhood teacher education programs for infants and toddlers.

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