

## Towards Pre-Service Teachers' Theory-Praxis Nexus in Early Years English and Literacy Education: A Pilot Study

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*Abstract: International literature highlights that a perennial challenge for initial teacher educators is to guide Pre-Service Teachers (PSTs) to develop a comprehensive understanding of the relationship between theory and practice. Whilst there is a growing body of research that examines the relationship and/or the gap between theory and practice in teacher education, there remains a paucity of research that examines this phenomenon in the teaching of English and literacy units in higher education. This pilot study examined how PSTs from two Australian universities made connections and/or links (nexus) between their academic knowledge (theory) and professional experience (praxis) for the teaching of English and literacy in the early years (birth to eight years of age). This article reports on the study's findings and offers propositions for future and ongoing research in this field.*

**Keywords:** Initial Teacher Education, Teacher Education, Pre-Service Teachers, English and Literacy Education, Higher Education.

### Introduction

This pilot study addresses a conundrum in teacher education that pertains to Pre-Service Teachers' (PSTs') understanding of the relationship between theory and practice. Formal theory is described as a tool that practitioners use to inform and reflect on the merits of their practice (Dewey, 1904). Similarly, Freire (1999, p. 106) described how "theory is required to illuminate *praxis*" and that *praxis* is a considered and consciously theorised action or practice. The term *nexus* has been defined as: 1) a connection or link; 2) a connected group or series; 3) centre or focus (Merriam-Webster, 2022). Although the term *nexus* is not commonly employed within teachers' everyday vernacular, it is featured sporadically in research in the field of teacher education, particularly when describing aspects of the research-policy-praxis nexus (Ohi, 2008); the ever-evolving relationship between research, policy and teacher's practice in educational settings. Tilson et al. (2017, p. 461) found that there was an "inseparable nexus of theory and practice" in relation to supporting Pre-Service Teachers (PSTs) to engage in a cycle of praxis that requires both reflection and action. For the context of this pilot study, 'academic knowledge' was conceptualised as *theory* and 'professional experience' was conceptualised as *praxis*. As such, the authors recognise that theory and practice are inextricably linked and therefore adopt the term *nexus* when referring

to the focus upon connections and/or links between theory and practice within this pilot study. Henceforth, the *theory-praxis nexus* is used in this context throughout this article.

This pilot study also addresses a significant gap in the teacher education literature by examining PSTs' theory-praxis nexus in relation to early years English and literacy education. The PSTs were from two Australian universities from the State of Victoria. In order to work in a Victorian school or early childhood setting, all teachers must be registered with the Victorian Institute of Teaching (VIT). They must comply with the requirements for registering and maintaining teacher registration, and this includes demonstrating their ability to engage successfully with the Australian Professional Standards for Teachers (APST). With the recent external accreditation requirements for the teaching of English and literacy (e.g., the teaching of early reading), this study contributes to a paucity of research that examines this phenomenon in the teaching of English and literacy units in higher education (AITSL, 2020). In the State of Victoria, the 'early years' refers to children from birth to eight years of age and this is the definition used in this study (Department of Education and Early Childhood Development [DEECD], 2011). However, it is important to note that across Australia, other States consider the 'early years' to be from birth to five years of age.

The research question for this pilot study was:

*What are the connections and/or links (nexus) that PSTs make between their academic knowledge (theory) and their professional experience (praxis) in relation to early years English and literacy education?*

The following section presents the literature relevant to this study.

## Literature Review

### A Perennial Challenge in Teacher Education

International research has identified a perennial challenge that remains pertinent for teacher educators, which is to guide Pre-Service Teachers (PSTs) in the development of their theory-praxis nexus (Allen, 2009; Orland-Barak & Yinon, 2007; Tilson et al., 2017). Korthagen (2010) suggested that Pre-Service Teacher (PST) learning should not be viewed as a result of teaching valuable educational theories or a result of the serial learning of concepts on a scale of growing complexity. Instead, PSTs' learning should be viewed as being part of the process of participation in social practice, especially the social practice in schools. Conversely, Anderson and Freebody (2012) developed a 'Community of Praxis' approach which emphasised the importance of integrating theory and practice. Similarly, Allen and Wright (2014) contend that the establishment of strong school–university relationships provide the most proven vehicle for establishing and maintaining environments which can help to develop essential professional knowledge and skills. Moreover, Hammerness and Klette (2015) claimed that in coherent initial teacher education programs, core ideas and learning opportunities (i.e., both coursework and clinical experiences) are aligned. However, Goh et al. (2020) highlighted that having a coherent initial teacher education program does not necessarily suggest that all teacher educators' beliefs are the same. But rather, in developing program coherence, teacher educators must consider how they align their beliefs and practices, and work collaboratively to conceptualise and organise how learning experiences for the PSTs are conducted.

While it is not the purpose of this pilot study to explore the theory-practice divide, it is important to acknowledge that international research has also identified that there is a theory-practice divide. It has been reported that when college and university systems emphasise school-based experiences over university-based theory, this could either hinder PSTs from developing their theory-praxis nexus, or that the PSTs' knowledge and application

of theory were diminished during school experiences (e.g., Alcorn, 2014; Mayer, 2014; Murray & Passy, 2014; Zeichner & Tabachnick, 1981; Zeichner, 2014).

Initial teacher educators are tasked with the responsibility of ensuring that PSTs are provided with opportunities to study and engage critically with a range of formal theories. For example, in English and literacy units, formal theories are presented to help PSTs think critically and to contextualise their learning (e.g., Bruner, 1983; Chomsky, 2006; Clay, 2001; Piaget as cited in Barrouillet, 2015; Vygotsky, 1962). While some theories date back as early as the 18th century, they continue to be refined and developed over time (Barrouillet, 2015). Research has demonstrated the importance of providing PSTs with opportunities to critique research and formal theories, and to reflect on how research and theory can inform their pedagogical practice. For example, Wetzal et al. (2018) found that reflective routines allowed PSTs to prepare for some of the tensions that they would encounter between their practical knowledge of literacy teaching and the situations they would have to negotiate in their first year of teaching. Additionally, Meeks et al. (2020) found that PSTs require the most up-to-date research relevant to early literacy content and pedagogical knowledge to support PSTs' understanding of the research-practice relationship. This affirms a need for more research within the field of early years English and literacy education within ITE courses. Hence, the significance of this study.

#### **Teaching Early Years English and Literacy in Initial Teacher Education Courses in Australia**

For more than two decades and to this present day, Australia's education sector has emphasised the broader notions of literacy, thus moving definitions of literacy beyond the technical competence of reading and writing. For example, Green's 3D Model places an emphasis on situated, authentic learning and cultural apprenticeship within a critical-sociocultural view of discourse and practices (Durrant & Green, 2000; Green, 1988). In addition, research has demonstrated the application of the 3D Model and its relevance in literacy practices within the preschool years (e.g., Scull et al., 2013). Importantly, a historic occasion was marked in 1997, when all Federal and State Federal Education Ministers of Education created common and agreed national goals for schooling in Australia and all agreed upon a single definition of literacy:

*Literacy is the ability to read and write and use written information and to write appropriately in a range of contexts. It includes the integration of speaking, listening, viewing and critical thinking with reading and writing, and includes the cultural knowledge which enables a speaker, writer, or reader to recognise and use language appropriate to different social situations.*

(Department of Employment, Education, Training and Youth Affairs, 1998).

This extended definition included a focus on oral and aural language, comprehension, critical thinking, and an emphasis on the social context of literacy. Soon after, Luke and Freebody (2000) posited a definition of literacy as, "The flexible and sustainable mastery of a repertoire of practices with texts of traditional and new communications technologies via spoken language, print and multimedia" (p. 9). This definition of literacy gained traction in Australia and was valued for its emphasis on flexibility, sustained mastery and the recognition of the role of technology and multimedia in literacy practices.

Also, during this period, Australia began to embrace the New London Group's (1996) introduction of multiliteracies and its emphasis on acknowledging multiple modes of communication as a part of literacy, valuing cultural and linguistic diversity, and developing multiliteracies pedagogies. From the above discussion, definitions and conceptions of literacy

have evolved over time and evidently a sociocultural perspective of literacy development has long been prevalent in Australian education settings.

Furthermore, identifying the most effective way to teach reading has been the focus of a host of research and public debate on an international scale (Adams, 1990; Anderson et al., 1985; Chall, 1967; Snow et al., 1998). The great debate about best practices in reading continues into the 21st century with a report from the National Reading Panel (National Institute of Child Health and Development [NICHD], 2000) that identified the following five components as being critical to the development of independent reading: phonemic awareness, phonics, vocabulary, fluency, and comprehension. Subsequently, Konza (2014) proposed that there is a sixth component that is critical to the development of independent reading which was identified as 'oral language' and this was valued in prior research (e.g., Snow et al., 1998; Wise et al., 2007). All six components are adopted by schools within Australia and have gained major currency through the Australian Primary Principals Association and the Principals as Literacy Leaders Program (Dempster et al., 2012). More recently, it is a mandatory content requirement for English/literacy to include the teaching of the six key components of early reading instruction (Australian Institute of Teaching and Leadership [AITSL], 2020; Konza, 2014). Hence, early reading instruction is considered an important aspect of teaching English and literacy in ITE courses, and this was accepted and reflected in this pilot study.

## **Method**

### **Pilot Study Design**

To investigate PSTs' theory-praxis nexus in relation to early years English and literacy education, the pilot study was conducted in two phases using an explanatory sequential mixed-methods approach to collect, analyse, and integrate the findings of both quantitative and qualitative data. An online survey was implemented in the first phase and semi-structured interviews were conducted in the second phase. An explanatory sequential design, according to Creswell and Clark (2011), is "a mixed methods design in which the researcher begins by conducting a quantitative phase and follows up on specific results with a subsequent qualitative phase to help explain the quantitative results" (p. 135). This design was selected as it allows the researchers to gain a better understanding of the research problem. In addition, by utilising quantitative and qualitative approaches within the same study, mixed methods research minimises the weaknesses of monomethod approaches and incorporates the strengths of both methodologies.

The PSTs' perspectives on effective English and literacy practices in early years education were first collected through an online survey (quantitative phase). Then the survey responses were discussed in a semi-structured interview (qualitative phase), which helped to explain the quantitative data acquired in the first phase. During the interview, questions concerning the PSTs' academic training and professional experience including work-integrated learning were also asked to explore how these factors influenced their views on effective English and literacy practices in early years education. While the quantitative results provided a general picture of PSTs' perspectives, the qualitative findings helped to probe more deeply, to gain a better understanding of the PSTs' views and experiences and to explore factors that contributed to their perspectives. This research design was deemed appropriate in addressing the research question as presented in the previous section.

**Participants and Procedures**

After receiving human research ethics approval from two Australian universities that were in the State of Victoria, PSTs who were enrolled in initial Early Childhood and Primary teacher education courses were contacted via email and invited to volunteer as study participants. Seventy-seven PSTs completed the survey out of 2397 potential respondents (response rate of 3.2%).

Of the 77 PSTs, 13 were international students (16.9%) and 62 were domestic students (80.5%). Two PSTs did not identify whether they are international or domestic students (2.6%). The PSTs were also asked to identify their age, gender, and course of study. Table 1 below presents the median age and gender across the different courses of study.

	Bachelor of Education (Early Childhood)	Bachelor of Education (Primary)	Master of Teaching (Early Childhood)	Master of Teaching (Primary)
Age (years)	<i>M</i> = 24 ( <i>SD</i> = 27)	<i>M</i> = 25 ( <i>SD</i> = 26)	<i>M</i> = 37 ( <i>SD</i> = 7)	<i>M</i> = 36 ( <i>SD</i> = 39)
Gender	0 male (0%) 29 females (100%)	3 males (10%) 27 females (90%)	1 male (16.7%) 5 females (83.3%)	1 male (8.3%) 11 females (91.7%)

**Table 1: Median age and gender of participants (across course of study)**

As shown in Table 1, the median age of the undergraduate groups was 24-25 years, while the median age for the postgraduate groups was around 36-37 years. Large variations in age were observed within all groups except for the PSTs studying Master of Teaching (Early Childhood), where the standard deviation was the smallest compared to the other groups. Moreover, the majority of the PSTs were female which is reflective of the gender balance of teaching staff in Early Childhood and Primary schools in Australia.

At the time the survey was conducted, 59 PSTs were undergraduate students (76.6%) and 18 were postgraduate students (23.4%). Fifty-two PSTs indicated that they were Australians (67.5%), 24 (31.2%) were from other countries and one did not respond (1.3%). Fifty-seven PSTs (74%) indicated that English was their first language, and 20 (26%) indicated a language other than English as their first language. The data collection was conducted in the English language.

At the end of the survey, PSTs were asked to provide their contact details if they were interested in an opportunity to participate in a recorded semi-structured interview to explore: 1) their perspectives on effective English and literacy practices in the early years education; 2) the academic training that they had received to date; and 3) their professional experience (or placement or practicum); and 4) their theory-praxis nexus. A total of 11 PSTs agreed to engage in an audio-recorded, semi-structured phone interview. An integrated conclusion that discusses the qualitative and quantitative findings of this study is presented near the end of the discussion section.

The study’s design is represented in the flowchart below (see Figure 1) which outlines how each step of the procedure met the parameters of an explanatory sequential design.

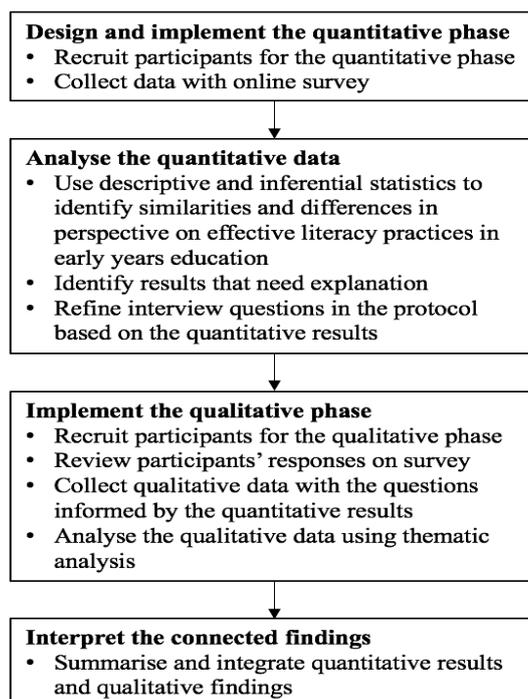


Figure 1: Flowchart of The Pilot Study Design

### Quantitative Phase: The Online Survey Measure

The online survey was developed by the authors, and it consisted of 46 statements that drew upon perspectives of English and literacy development in the early years that were taught within the teacher education courses at the participating universities. The 46 statements referred to children's oral language development, emergent and early reading and writing development, play-based pedagogy, children's literature, family/home literacy practices, and support for children with English as an additional language or dialect (EAL/D). While the survey is theoretically driven, the validity of the instrument is unknown.

Using the online survey, the PSTs were asked to identify the response that best represented their perspectives about children's literacy acquisition (from *Strongly Disagree* to *Strongly Agree*). Due to a small sample size and a small number of responses in some of the categories, *Strongly Agree* and *Agree* have been grouped and recoded into a single category (i.e., *Agree*). Likewise, *Strongly Disagree* and *Disagree*, have also been grouped and recoded into a single category (i.e., *Disagree*). The final groupings were: (1) *Agree*, (2) *Disagree*, and (3) *Neither Disagree nor Agree*. The results of the online survey are presented in the results section.

### Data Analysis of the Surveys

The quantitative analysis of the online survey data was conducted using SPSS version 26 and descriptive statistics. Then, Chi-Square tests of independence were conducted to investigate the association between the level of study and perspective on statements. Statistical significance was set at  $p < .05$  for all tests.

## **Qualitative Phase: The Post-Survey Semi-Structured Interviews**

In qualitative research, interviews are valued as a means of gaining deeper insight into another person's views, values and concerns (Creswell 2008). More specifically, semi-structured interviews employ a few guiding questions and are designed to ascertain subjective responses from persons regarding a situation or phenomenon they have experienced (McIntosh & Morse, 2015). Participants are free to respond to open-ended questions as they wish, and the researcher may probe these responses (McIntosh & Morse, 2015). In this study, semi-structured interviews were the chosen method for interviewing the PSTs, valued for the capacity to utilise a framework and yet have the flexibility to explore participants' responses and interests. These characteristics make it unique among interview methods for the degree of relevancy it provides the topic while remaining responsive to the participant (Bartholomew et al., 2000).

### **Interview Protocol Development**

Prior to conducting each of the semi-structured interviews, the researcher (interviewer) reviewed the individual PSTs' survey responses to identify points of interest or ambiguity that they would like to discuss. The semi-structured telephone interviews were based on questions about effective literacy practices, challenges encountered, reflections on academic training in preparing them for the classroom, and what is needed to enhance their learning and development of literacy education. Each interview lasted between 30 to 47 minutes and was digitally audio-recorded with permission from the PSTs. The audio recordings were transcribed by a professional transcription company.

### **Data Analysis of the Interviews**

A thematic analysis was conducted on the post-survey interview transcripts in R Studio using the RQDA package (Huang, 2016). Braun and Clark (2006) defined inductive thematic analysis as "a process of coding the data without trying to fit it into a pre-existing coding frame, the researcher's analytic preconceptions" (p. 12), and they had developed a procedural framework for this. The current pilot study adopted thematic analysis with an inductive approach and applied Braun and Clarke's framework (2006). This was deemed valuable for providing a data-driven method for examining the perspectives of different PSTs and the opportunity for unanticipated insights to emerge.

Braun and Clarke's six-step framework for conducting thematic analyses was adopted for the analysis. The steps are: 1) data familiarization; 2) generating initial codes; 3) searching for themes; 4) reviewing themes; 5) defining themes; and finally, 6) writing up the report. To identify recurring patterns and interesting aspects across the dataset, each interview transcript was given equal attention during the data familiarisation stage for the initial coding. The goal at this stage was to code for as many potential themes as possible. In RQDA, coded items are collated automatically under the assigned theme. This makes it easier for the themes to be reviewed and defined. Each process was documented to ensure the dependability of the findings.

## Quantitative Results

The online survey results are reported separately for undergraduate and postgraduate PSTs. This allows for a comparison of whether there are any differences between PSTs in different levels of study. A majority of the survey statements received quite similar responses from both undergraduate and postgraduate PSTs. However, there were other statements where responses were more diverse. These results are presented in the following sections.

### Commonly Agreed Perspectives on Early Years English and Literacy Education

The data analysis of the survey revealed that 36 out of the 46 statements received a high rate of percentage of agreement from both UG and PG PSTs ( $n = 77$ ). The 36 statements referred to a range of English and literacy practices which include children's oral language development, emergent and early reading and writing development, play-based pedagogy, children's literature, family/home literacy practices, supporting children with English as an additional language or dialect (EAL/D), and various socialisation processes. The 36 statements also align with the definitions of literacy that were presented earlier in this article which included students listening to, reading, viewing, speaking, writing, and creating oral, print, visual and digital texts, and using and modifying language for different purposes in a range of contexts (Australian Curriculum Assessment and Reporting Authority [ACARA], 2016a; Department of Education, Skills and Employment, [DESE], 2009). Interestingly, 100% of the PSTs agreed on statement 32: "*It is important for teachers to cultivate an understanding and respect towards cultural and linguistic diversity in the learning environment/classroom.*" Table 2 highlights some examples of the statements that the PSTs had commonly agreed on.

Statement	Percentage of Agreement (%)		
	UG	PG	Overall
S1. In order to learn to read, a child needs to know the letters of the alphabet and the corresponding letter sounds.	91.5	100	93.5
S2. Becoming literate is a continuous, developmental process that begins very early in life.	96.6	100	97.4
S13. Play is one of the best ways for young children to learn about written language.	86.4	88.9	87
S22. Literacy practices are often 'culture-specific' and these practices contribute to children's sense of identity.	81	100	85.3
S24. There are different literacy practices for a variety of literacy purposes.	98.3	94.1	97.3
S27. Children should be provided with opportunities to develop an awareness and an appreciation and respect for the literature of Aboriginal and Torres Strait Islander peoples including storytelling traditions (oral narrative) as well as contemporary literature.	93.1	94.1	93.3
S30. Children with English as a second language should be provided with opportunities to use their first language in their learning environment/classroom.	87.9	94.1	89.3
<b>S32. It is important for teachers to cultivate an understanding and respect towards cultural and linguistic diversity in the learning environment/classroom.</b>	<b>100</b>	<b>100</b>	<b>100</b>
S43. Social interaction is fundamental in children's literacy learning and teaching.	98.3	100	98.7
S45. Literacy begins at birth.	93.1	82.4	90.7

Note. UG = Undergraduate, PG = Postgraduate.

**Table 2: Examples of statements about early years English and literacy education that Pre-Service Teachers commonly agreed on**

Furthermore, the chi-square tests of independence were conducted to investigate the association between the level of study and perspective on statements (S) 3, 4, 7, 8, 9, 14, 15, 16, 18 & 35. Two (S15 & S16) out of the 10 Chi-Square tests indicated a significant association between the variables, indicating that the pilot study provides insufficient evidence to suggest the relationships between the level of study and perspectives on early years English and literacy education.

### Diverse Perspectives on Early Years English and Literacy Education

There were 10 statements in total that received more diverse responses, and they are summarised below in Table 3. It is noted that responses to statements 3 (direct instruction), 7 (oral reading mistakes), and 16 (systematic teaching) were almost evenly split between agree, disagree, and neither disagree nor agree. These statements and S9 (teacher controls literacy development) received the most disagreement. Furthermore, S4 (meaning vs phonic cues), 8 (repetition and sight vocabulary), 14 (reading subskills), 18 (root words and inflectional endings) and 35 (views of self and success), received the most neither disagree nor agree responses.

Statement		Percentages (%)		
		Agree	Disagree	Neither
S3. Beginning reading and writing practices exhibited by young children result from direct instruction.	UG	33.9	32.2	33.9
	PG	22.2	55.6	22.2
S4. Meaning, rather than phonic cues, should be emphasised during children's early experiences with print.	UG	55.9	8.5	35.6
	PG	44.4	22.2	33.3
S7. Oral reading mistakes should be corrected immediately.	UG	32.3	28.8	39.0
	PG	22.2	55.6	22.2
S8. Repetition of new words will guarantee their inclusion in a child's sight vocabulary.	UG	64.4	6.8	28.8
	PG	50.0	5.6	44.4
S9. It is the teacher's responsibility to control the child's development in becoming a literate individual.	UG	25.4	39.0	35.6
	PG	11.1	44.4	44.4
S14. Proficiency in the basic reading subskills has to be acquired before one can act in a literate way.	UG	29.3	29.3	41.4
	PG	27.8	27.8	44.4
<b>S15. Reading is essentially the mechanical skill of decoding or turning printed symbols into sounds that are language.</b>	UG	<b>71.2</b>	<b>13.6</b>	<b>15.3</b>
	PG	<b>50.0</b>	<b>44.4</b>	<b>5.6</b>
<b>S16. The teaching of literacy must be systematic and sequential in operation.</b>	UG	<b>40.7</b>	<b>25.4</b>	<b>33.9</b>
	PG	<b>23.5</b>	<b>58.8</b>	<b>17.6</b>
S18. Root words should be taught to beginning readers prior to inflectional endings.	UG	61.0	8.5	30.5
	PG	47.1	0.0	52.9
S35. Children who start school having acquired positive views of 'self' have been accepted and taught how to succeed.	UG	62.1	1.7	36.2
	PG	35.3	11.8	52.9

Note. UG = Undergraduate, PG = Postgraduate.

**Table 3: The statements about early years English and literacy education that received diverse responses from Pre-Service Teachers**

Overall, the quantitative results present useful insights into how PSTs have perceived the early years English and literacy education. These will be explored further in the discussion section.

## Qualitative Results

### Pre-Service Teachers' Theory-Praxis Nexus

The 11 interviewed PSTs had shared information about a range of topics in relation to early years English and literacy education. Consequently, there were three major themes that had emerged from the thematic analysis of the resultant interview transcripts: 1) Application of Theory; 2) Practical Experience; and 3) Learning Different Literacy Programs. The first major theme, the Application of Theory, relates to how PSTs might have used theory gained from the English and literacy units as a tool to help illuminate their practice (Dewey, 1904; Freire, 1999; Luke & Freebody, 2000). The second major theme, Practical Experience, relates to the early years English and literacy practices that PSTs had observed or experienced during their professional experience including work-integrated learning, and how they might have linked it back to the theories that they have acquired from the English language and literacy units. The third major theme, Learning Different Literacy Programs, relates to how PSTs had perceived their learning could be enhanced within the ITE courses. Each theme will be discussed in turn.

#### The Application of Theory to Practice

Most of the interviewed PSTs believed that the university literacy units of study prepared them well for teaching, as they were able to apply knowledge of the theoretical perspectives in practical classroom settings. Interestingly, the following PSTs identified and valued that they have experienced clear, nexus between literacy teaching theory and practice, and they had expressed satisfaction with their university course. A couple of examples are as follows:

*From learning some of the theoretical perspectives, I'm able to notice them a lot more in the classroom. I was able to plan and assess and I was able to use some of the strategies and teaching strategies to help me.*

In contrast, a PST commented on the challenge that they had encountered in trying to find and understand the applicability of theories in practice:

*I've found it hard. I find a lot of what we learn at university, especially some of the assignments we've done, are written around why we need to do things, not what's currently in place [in schools].*

Another PST was under the impression that they had to adopt a theory for literacy teaching considering that there is a lot of public debate about which approach is the most effective (Luke, 1998; Snyder, 2008). Puzzled by this, they had decided that they would just follow the status quo approach adopted by a school, once employed:

*I feel like I'll just get into a school and then the school is going to have their approach and then I'm just going to be going with that, even if I don't necessarily think that it's the best approach.*

While some PSTs were of the view that the English and literacy units of study prepared them well for teaching given that they were able to apply and draw on their knowledge of theoretical perspectives in practical education settings; other PSTs commented on the challenges that they had encountered in trying to understand the applicability of theories into their professional teaching experience.

### Practical Experience

The following responses are representative of comments from a group of PSTs that identified that it would be important for PSTs to receive more practical literacy teaching experience while undertaking the ITE course. Some PSTs had agreed that the knowledge of literacy learning theories was important but that the benefits of engaging in practical teaching in classrooms outweighed university learning experiences. An example is as follows:

*We need to have more time in the classroom, more experience seeing how others teach, seeing how kids learn. Because [knowing and understanding] how kids learn on paper, gives us an idea, but it's not the same as seeing how a kid is learning in the classroom.*

In another PST's experience, theories were not drawn upon in immediate moments of need in the classroom. They suggest ITE providers should train teachers how to respond in real-life situations:

*... all the theory is more like psychologists and children's learning and development kind of theory - which is still important and relevant. But in the classroom, that's not what you draw upon in the moment, so you need more - more training on the things that would help you in the moment of teaching, more real-life models, and structures school's use.*

A few other PSTs expressed that they prefer and believe that they learn better from being involved in real literacy teaching experiences in educational settings as opposed to learning in abstract or disaggregated, out of context, learning experiences. An example is as follows,

*I would say that my practical experience placements have helped a great deal because I have been working closely with experienced teachers, who have been able to help me develop my ideas... When I did primary literacy, I felt like it was much more theoretical and less able to be applied in the classroom.*

These results will be examined further in the discussion section.

### Learning About Different English and Literacy Programs

When PSTs were asked how their English and literacy teacher training could be enhanced, several of the PSTs mentioned that when they had entered education settings, they felt that they lacked familiarity with different commercial literacy programs used. For example, PSTs had identified that it would have been helpful if the university taught them about different literacy programs. An example is as follows:

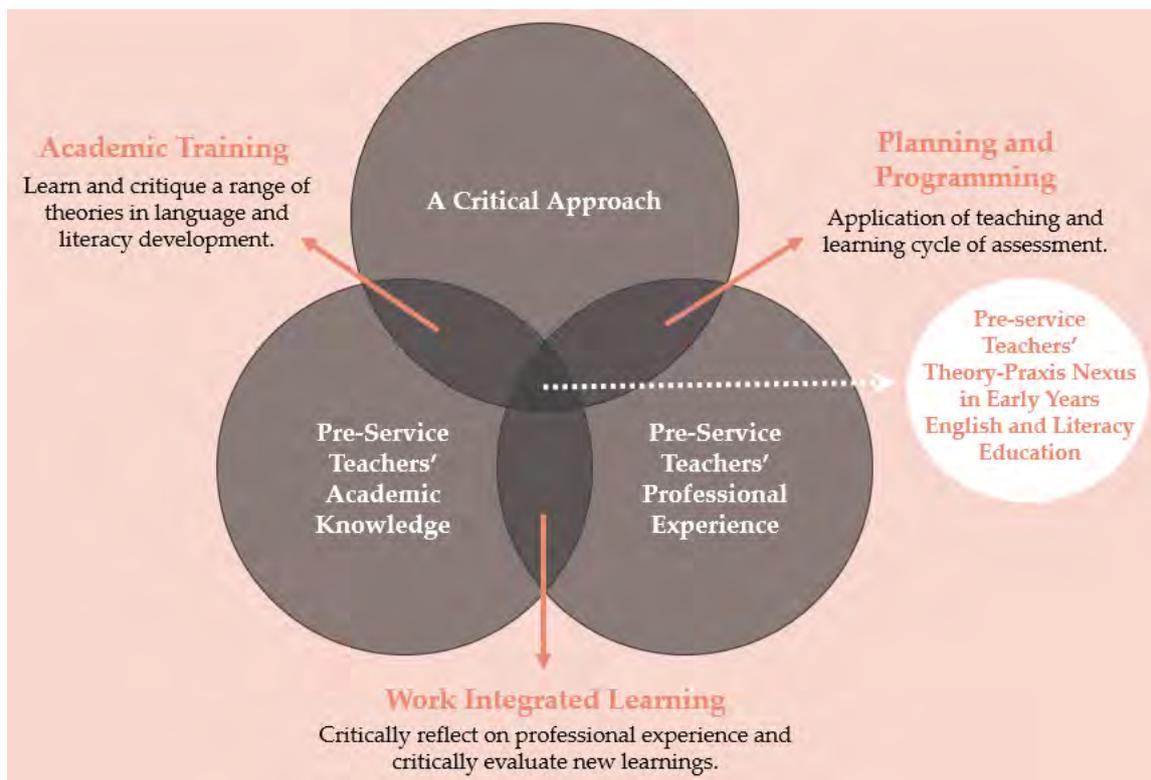
*I think probably real scenarios... [For example] here's one way of learning your letters and sounds and it's THRASS... here are some different models' schools use like CAFÉ...*

Overall, the qualitative results present useful insights into the experiences that PSTs have had while on professional experience including work-integrated learning and how they made connections and/or links between theory and practice in relation to early years English and literacy education. These results will be discussed further in the next section.

### Discussion

Whilst the findings from both phases of this study hold strength and meaning on their own, it must be highlighted that strong connections also exist between the two. Figure 2

depicts the key findings of this pilot study and it works towards theorising PSTs' theory-praxis nexus in relation to early years English and literacy education.



**Figure 2: Pre-Service Teachers' theory-praxis nexus in early years English and literacy education**

Firstly, the findings reveal that there was a dominance of a sociocultural view of early years English and literacy education. This was evident in the quantitative findings where at least 80% or more of the PSTs had commonly agreed upon a range of perspectives of early years English and literacy development that were mostly derived from a sociocultural theoretical framework. The PSTs understood that teaching early years literacy is multifaceted and it goes beyond the historic, focusing upon only reading and writing (Luke & Freebody, 2000). The dominance of a sociocultural view of early years English and literacy teaching and learning was also reflected in the qualitative findings which revealed the PSTs' insistence and expectations to be able to apply theories learned at a university, into their teaching practice. This emphasis upon meaningful, authentic engagement and connections and/or links to be made in social spaces and contexts, is a characteristic of a sociocultural theoretical framework.

The findings also revealed that 100% of the PSTs that were surveyed valued the notion that teachers must demonstrate an understanding and an appreciation of cultural and linguistic differences in the learning environment which also derives from a sociocultural view. This suggests that PSTs are mindful of their context that the State of Victoria in Australia is culturally diverse and understanding and supporting children with English as an additional language or dialect is pertinent in the process of the teaching and learning cycle of assessment (ACARA, 2016a; DESE, 2009; Victoria State Government, 2016). Also, it could be an indication that PSTs are aware of the literacy demands of the 21st century and that they recognise and value the importance of multicultural awareness, intercultural capabilities, and intercultural understanding (ACARA, 2016b; NCTE, 2019; Victorian Curriculum and Assessment Authority [VCAA], 2019). These findings align with the aim to provide

opportunities to promote, amplify, and encourage these variations of language (National Council of Teachers of English [NCTE], 2019).

A proposition is to ensure that PSTs are offered a range of opportunities to engage in critical thinking, critical application, and critical reflection of theories in relation to professional experience (Hammerness and Klette, 2015; Wetzel et al., 2018; Wideen et al., 1998). This is reflected in Figure 2 where it is theorised that a critical approach in ITE can support PST's development of theory-praxis nexus in early years English and literacy education.

Secondly, the findings revealed that 10 out of the 46 statements from the online survey had garnered diverse responses from the PSTs (as shown in Table 3). This finding suggests that the PSTs either had extremely varied views or were unclear about a range of issues related to the teaching of early reading. The diverse responses could be attributed to the following reasons: some of the terms or ideas presented in the statements may have been unfamiliar to the PSTs; the wording of the statements was too definitive, inciting confusion and uncertainty; there was a lack of practical experiences among the PSTs; and there might have been a distinct mix of views among the PSTs. However, despite the PSTs' diverse responses to the 10 statements, the themes from the qualitative findings revealed that the PSTs were determined to enhance their professional knowledge; they were driven by a strong interest to make connections and/or links between theory and practice; they had indicated an interest for additional practical experiences; and they wanted to learn about commercial literacy programs that were used in educational settings. Additionally, the PSTs' perspectives from the qualitative findings, are laden with statements that evidence their interest to learn more, to know more and to understand how to meet the challenge of teaching literacy while on professional experience.

Interestingly, nine out of 10 statements that had received diverse responses were related to the six key components of early reading instruction and children's development in early reading. Additionally, the themes from the qualitative findings revealed that PSTs considered that being taught about various commercial literacy programs (e.g., THRASS chart and the CAFÉ program) would add value to their learning. Interestingly, the commercial literacy programs that were identified in the qualitative data were linked to early reading instruction. These findings that are related to early reading instruction are relevant in this current climate for the development and accreditation of English and literacy units in ITE courses in Australia (AITSL, 2020). Furthermore, these diverse responses align with the notion that the most effective way to teach reading remains a challenge in the 21st century (see Anderson et al, 1985; Hill, 2012; Luke & Freebody, 1997; Paris, 2005; Snow et al., 1998).

Therefore, another proposition is to consider the benefits of establishing a strong partnership between an institution and participating schools to offer work-integrated learning experiences that are specifically related to early reading instruction and more broadly English and literacy education (Allen and Wright, 2014; Anderson and Freebody, 2012; Korthagen, 2010; Hammerness and Klette; 2015; Meeks et al., 2020). In turn, PSTs could observe commercial English and literacy programs in action during their professional experience(s) and proactively relate them to theories, evidence-based research on methods and pedagogical practices, or vice versa. Hence, PSTs could be better informed when making judgements on what might consist of effective pedagogical practices in the early years English and literacy and the theoretical underpinnings as to why. This is reflected in Figure 2 where it is theorised that the connections and/or links between PSTs' academic knowledge and professional experience can be strengthened via work-integrated learning.

Thirdly, the findings also revealed that the PSTs who could make connections and/or links between theory and practice in relation to early years English and literacy education had

positive views on their academic training and professional experience including work-integrated learning. On the other hand, the PSTs who had experienced challenges in theory-praxis nexus had highlighted areas that they perceived would require an improvement in either their academic training or their professional experience. Therefore, another proposition is for PSTs to engage in a metacognitive process to develop their theory-praxis nexus over a period of time, as they gain and develop insights within their academic training and their professional experiences (Hoffman-Kipp et al., 2003; Goh et al., 2020). This is reflected in Figure 2 where it is theorised that when a critical approach is integrated with academic training and the practice of planning and programming, the development of PSTs' theory-praxis nexus will be contextualised in meaningful ways.

### Limitations of the Study and Future Research

There are a few limitations in this pilot study that needs to be noted. The first limitation is the low response rates to the online survey (3.2%). Low response rates in PSTs research are not uncommon, as has been observed in other studies (e.g., Meeks et al., 2020). While the possibility of response bias cannot be ruled out, low response rates should not be taken as an indication that the results are uninformative. However, future research into the reasons for low response rates in PSTs studies could help to determine the generalisability of the research findings.

Inevitably, the small sample size led to further limitations of the pilot study, especially for the method and analysis in the quantitative phase. In an ideal scenario, purposive sampling (i.e., selecting participants based on a set of criteria; Creswell & Clark, 2011) is used to select participants for the qualitative phase of an explanatory sequential mixed-methods study. This would allow for a stronger focus on the qualitative phase and an in-depth comparative study. However, this was difficult to achieve in a pilot study with a small sample size. Rather than purposive sampling, PSTs in the qualitative phase of the study were recruited based on their expressed interest in the follow-up interview. This limitation of the present study is acknowledged, and future research should be conducted with a larger sample to allow for purposive sampling.

Lastly, the 46 statements presented in the survey drew upon the perspectives of English and literacy development in the early years that were taught within the teacher education courses at the participating universities. Ideally, quantitative analysis such as factor analysis should be conducted to examine the questionnaire used in the survey. This was not feasible in the present study due to the small sample size. As a general guide, a sample size of 100 or less is considered poor in factor analysis (Comrey & Lee, 1992). Though simplified, this sample size rule is supported by several quantitative analysis researchers (e.g., Gorsuch, 1983; Kline, 1994; Tabachnick & Fidell, 2001). Furthermore, the significance of a Chi-Square test is influenced not only by the size of the association but also by the size of the samples (Gravetter & Wallnau, 2017). It is likely that some of the significant effects were not detected in this study due to the small sample size ( $N_{UG} = 59$ ;  $N_{PG} = 18$ ). Therefore, it is recommended that the study is repeated with more participants. A further step in this study would be to examine the reliability and validity of the questionnaire. Nonetheless, the survey enabled the discussion in the qualitative phase, which in turn contributed insights into PSTs' theory-praxis nexus in relation to early years English and literacy education.

## Conclusion

Guiding Pre-Service Teachers (PSTs) to develop a comprehensive understanding of the relationship between theory and practice matters, particularly in early years English and literacy education where there is a national and international focus on teaching and learning improvement (Meeks et al., 2020; Goh et al., 2020; Tilson et al., 2017). The significance of this study was that it identified that the PSTs held perspectives derived from a sociocultural theoretical framework, as evidenced by their recognition of the multifaceted nature of early years English and literacy and the value that they placed on supporting learning amidst contexts of cultural and linguistic diversity, in genuine and purposeful ways in the learning environment was prioritised. Additionally, the PSTs had clear expectations that their role as teachers requires them to navigate the theory-praxis nexus; to apply theoretical knowledge of English and literacy to their teaching practices in meaningful ways to support children's literacy learning.

This study has addressed a gap in teacher education research by offering propositions that can help to guide PSTs in the development of their theory-praxis nexus in relation to early years English and literacy education. The authors theorise that PSTs' theory-praxis nexus is evident at the intersection of academic knowledge, professional experience, and a critical approach. The diagram of the PSTs Theory-Praxis Nexus in Early Years English and Literacy Education (Figure 2) is offered as a valuable tool that can be used for ITE Lecturers, PSTs, and Teachers to assist in developing and articulating their own understanding of the theory-praxis nexus. For example, by drawing upon their academic knowledge, professional experiences, and having a critical approach; and by being cognisant of how they themselves navigate the complexities of this intersection between academic training, planning and programming, and work-integrated learning. Despite the pilot study's limitations, the findings support the notion that ITE should strive to find an optimum balance of academic training and practical experience that satisfies the governing authorities' quality and qualification requirements, and work towards meeting PSTs' interest to develop and apply quality English and literacy pedagogies based on their theory-praxis nexus.

Overall, this study has provided valuable insights into the perspectives of PSTs in relation to early years English and literacy education which has emphasised the importance of integrating theory and practice through a critical approach, practical experiences, and partnerships between ITE institutions and schools. Teacher education providers can continue to re-imagine the development of English and literacy units and professional experience units within ITE courses to help guide PSTs in their development of theory-praxis nexus in 21<sup>st</sup> century educational settings. Subsequently, PSTs can be supported in becoming agents of change to build on effective English and literacy practices to benefit all children in their educational settings and surrounding communities.

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