Pre-service Teachers' Comparative Analyses of Teacher-/Parent-Child Talk: Making Literacy Teaching Explicit and Children's Literacy Learning Visible

SHIRLEY O'NEILL*
DEBORAH GEOGHEGAN
University of Southern Queensland

ABSTRACT

This paper reports on the results of a meta-analysis of first year pre-service teachers' investigations of two transcripts of teacher/student talk. The first is set in the home environment and the second in the classroom. Working with specific tools of analysis and knowledge of the role of talk in literate, cultural and social practices they identified evidence of effective literacy pedagogy. They presented their findings in the genre of a written comparative analysis. The results showed the discourse analysis task helped them understand the vital role of the adult's talk in scaffolding children's learning in each context and raised awareness of how the adults' cognitive "moves" impacted on the scaffolding of literacy learning. Outcomes highlighted the need for teacher preparation courses to focus on the way classroom discourse relates to pedagogy and children's literacy learning by providing exemplary teaching episodes, and studying the pedagogical language competencies involved.

KEYWORDS: Literacy pedagogy, classroom discourse analysis, explicit literacy teaching, pre-service teacher education, teacher-talk.

RESUMEN

Este artículo presenta los resultados de un meta-análisis de dos investigaciones sobre la función comunicativa profesor/alumno realizadas por docentes en su primer año de pre-servicio. La primera en el entorno doméstico y la segunda en el aula. Utilizándose instrumentos de análisis y sus conocimientos de la función comunicativa en las prácticas de alfabetización cultural y social, los docentes encontraron evidencia de una pedagogía eficaz de alfabetización. Las conclusiones en el género de análisis comparativo muestran como el ejercicio de análisis de la conversación ayuda a entender la función vital de la comunicación del adulto en el aprendizaje de los niños en cada contexto y concientizó como las decisiones cognoscitivas de los adultos influyen en la pedagogía de alfabetización. Los resultados recalcan la necesidad de formaciones para docentes en la comunicación en clase y como se relaciona con la pedagogía y alfabetización de los niños, proveyendo modelos de enseñanza ejemplar, y estudiando las respectivas competencias lingüísticas y pedagógicas.

PALABRAS CLAVE: pedagogía de la Alfabetización, el análisis del discurso en el aula, la enseñanza de alfabetización explícitas, el profesor habla.

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Address for correspondence: Shirley O'Neill, Faculty of Education, University of Southern Queensland, Toowoomba, Qld. 4350 Australia. Tel: +61746312604; E-mail: oneills@usq.edu.au

1. INTRODUCTION

Being literate is of vital importance to people's ability to learn, and ultimately for their good health and wellbeing (DeWatt, Berkman, Sheridan, Lohr & Pignone, 2004). It is also vital to pathways to work and further education, and lifelong learners (Nguyen, 2009; Perkins, 2009). Parents, teachers and community have a major role in placing children on the road to literacy and lifelong learning. In everyday conversations, children are simultaneously learning both the language of their community and their community's theory of experience. Wells (2010) stresses that as a result of children having different linguistic and cultural experiences, what they become depends on the company they keep and on what their learning community do and say together. Halliday (1993: 107) emphasizes: "language has the power to shape our consciousness; and it does so for each human child, by providing the theory that he or she uses to interpret and manipulate their environment". A view of literacy instruction through the lens of such sociocultural theory helps educators understand that literacy and literacy learning moves beyond a narrow skills and processes view of reading and writing. It promotes a wide range of literacy practices that are carried out for a range of purposes, and which occur in a range of social and cultural contexts (Barratt-Pugh, 2002).

However, current classroom learning environments may not reflect this ideal and may treat children from diverse backgrounds as having inadequate language and skills to learn. In an attempt to move beyond this deficit mindset, Thompson (2003: 41) uses the 'virtual school bag' metaphor. By thinking of each child as having a 'virtual school bag' of resources to bring to school it becomes easier to appreciate that <u>all</u> children's school bags are full of equally important and highly valued resources. From this stance "the question changes from what they don't have to what they do, and how their capacities might be brought to bear in appropriating new school knowledges". So teachers need to be able to take the issues of language and culture into account, and particularly the socio-cultural and linguistic discourse of the classroom if they are to promote children's literacy learning.

This is also relevant to the ongoing calls for school reform and improvement of literacy outcomes. These remain high on the agenda a decade into the twenty-first century (Christie, 2004; Federalist Paper 2, 2007; Lingard, Nixon, & Ranson, 2010; OECD, 2003; Teddie & Reynolds, 2000). While discussions continue on established strategies and approaches (Campbell & Green, 2006; Rowe, 2005) and there is recognition of the importance of linguistic and sociocultural background in literacy achievement, the role of teacher-student communicative interactions as evidence of the quality of pedagogy is neglected. Importantly, recent research (Blank, 2002; Culican, 2005; Hardman, Smith, Wall & Mroz, 2004; Rose, 2005a, 2005b; van Es & Sherin, 2002; Wells, 2010) demonstrates that teachers need to understand the nature of classroom discourse and how their control of it influences pedagogy and learning. It follows that regardless of other strategies for improving pedagogy and learning without action at this level there would be a ceiling on the potential for

improved learning outcomes. Specifically, Van Es and Sherin (2002: 592) describe how the novice teacher typically gives a literal description of what they observe is happening in a lesson compared with the expert teacher who interprets the events to discuss pedagogy and pedagogical decisions. In their argument for reform they conclude that, "reform requires that teachers develop new routines and attend to new aspects of practice in new ways". On this basis future teachers need to be able to aspire to this ideal and acquire a deeper understanding of the concept of effective literacy pedagogy. This places the onus on those involved in tertiary teacher preparation to design their courses and pedagogy accordingly.

With this in mind this research focuses on a first year teacher education foundation course that is designed to introduce pre-service teachers to the concepts and importance of socio-cultural context and the quality of teacher-student discourse in the effective teaching of literacy. The depth of pre-service teachers' understandings and the value of their completion of a comparative analysis of transcripts of interactive talk as a pedagogical and assessment strategy are examined.

2. THE COURSE AND ITS PEDAGOGY

2.1. Course background

At the start of their bachelor degree, regardless of teaching area or sector, students begin with a mandatory course in the foundations of literacy and language. This is a large course of approximately 400 students, who are enrolled both on campus (one city and two regional) and online. The latter students may be situated locally, nationally or abroad. The course revolves around an online "Study" site that is accessed by all students and staff. Students attend tutorials on campus and online and participate in structured discussion forums in tutorial groups. The study site is the also the "hub" for lectures, readings, resources, learning modules, supporting information, communication, discussion forums, messages and news, as well as self-assessment quizzes and access to assignment management.

2.2. The course theoretical framework

The course focuses on the way children develop language and literacy and how the discourse of the classroom impacts on their literacy learning. In essence the students need to come to grips with Vygotsky's sociocultural theory and the constructivist approach to learning, which are key theoretical bases that underpin their degree. In practical terms they need to grasp the major concept of explicit literacy teaching (Edward-Groves, 2011) and also apply specific tools of analysis to identify how teaching talk may impact positively or negatively on children's literacy learning (Bull & Anstey, 1996; Culican, 2005). The theoretical framework that underpins the course's focus on explicit literacy teaching through the study of classroom

discourse is in keeping with contemporary research in the area of pedagogical reform Martin & Rose, 2005; Wilks, 2010). For instance, research by Blaise and Nuttal (2010) and Hardman, Smith, Wall and Mroz (2004), focused on teachers' understanding of how classroom discourse can reveal the quality of their scaffolding of children's learning and use of high order thinking skills. More specifically, it is well recognised that the study of teachers' talk reflects their thinking or "cognitive decision-making" processes during their teaching in an effort to scaffold children's learning. Bull and Anstey's (1996) research into talk differentiates between effective literacy pedagogy and two other types of interactions that demonstrate how children are merely kept busy following directions but not learning or are not informed about what they are supposed to be learning. This allows pre-service teachers to first categorise talk and identify effective and ineffective literacy pedagogy. Then the their analysis using Culican's Scaffolding Interactional Cycle (SIC) allows them to examine each teacher utterance in terms of that teacher's thinking or "cognitive move" taken to facilitate children's learning (or not).

2.3. The course content and pedagogical approach

The course begins with a focus on children's language development from birth to beginning school. This leads into introducing students to the way children learn to read and the importance of the home school connection and environmental print, besides approaches to the teaching of reading. There is a gradual lead into the study of teacher talk and creating an understanding of explicit literacy teaching. This is scaffolded through observation/critical structured discussion of video clips of literacy teaching episodes. The application of Bull and Anstey's categories of literacy pedagogy and Culican's (2005) scaffolding interactional cycle are demonstrated and a variety of transcripts of talk are collaboratively analysed with course tutors. This includes working in small groups to develop alternative scripts to challenge and change the talk that represents ineffective pedagogy. The importance of the nature of talk is also exemplified in their textbook (Campbell & Green, 2006: 118-119). In addition, the course includes six independent online learning modules of which "teacher talk" is the focus two-thirds of the way through the 13 teaching weeks of the semester. At first students merely "react" to a transcript of classroom talk and then work collaboratively with a partner to pair-share their opinions. This raises the question of the significance of talk and how it might be related to the effectiveness of literacy teaching. This aspect of the course is embedded in an investigation of rich literacy learning environments that also relate to weekly study of video clips of literacy teaching episodes. Students work collaboratively to apply the given tools to analyse sample transcripts. They are provided with a matrix as shown in Figure 1 that lists the dialogue by line number and the possible types of instances across the top and space for comments.

TRANSCRIPT 1 Line number/Sentence number	Scaffolding Interactional Cycle (SIC)	Bull and Anstey	Comment
1. S1: Mum: Gosh! Look at the time! S2: We'll have to hurry now or Grandma and Grandad will be here before we're ready. S3: You will have to help me.	Prepare Elaborate Identify	Pedagogy of literacy lesson - cognitive emphasis with "Look at", decision-making is verbalised with reasoning and purpose for Sarah's involvement explained.	Mum alerts Sarah to the urgency of the situation by referring to the clock and then explaining why so prepares Sarah to expect the visitors.
2. Sarah: What shall I do?	Identify	Authentic purposes for involvement. Real life situation.	Sarah pays attention and shows she is engaged in asking how she can help.
3.Mum: You can help me put the shopping away and then set the table.	Prepare Identify	Pedagogy of literacy lesson Explaining and giving directions	Mum gives Sarah some responsibility regarding an authentic task.
TRANSCRIPT 2			

Mr. Hammond has been working with his Year 3 class on a theme of farm animals and growing one's own food. He introduced the theme through reading and dramatising aspects of the fairy tale *Jack and the Beanstalk* (adapted from O'Neill & Gish, 2008: 157).

Mr Hammond was reviewing part of the story with the children. Together they read the following, which was presented on the white board.

One day in the middle of spring Jack and his mother found they didn't have any food or money. Jack's mother said, "We are in terrible circumstances Jack. I have to make a big decision that will have serious consequences. We will have to sell Daisy. You will have to take her to the markets and sell her so we can buy some food".

1. Mr Hammond: S1: The first part of the first sentence tells us when this happened. S2: When was that Abbas?	Prepare Identify	Pedagogy of literacy learning	Utility talk explaining the purpose of the sentence and tests comprehension of "Spring".
3. Abbas: It was in the middle of Spring Sir.	Identify		Lesson structure based on extract of familiar story displayed on the board.
4. Mr Hammond: S1: Yes well done! S2: That's right. S3: Let's circle that. S3: The season was Spring and they should have had new crops growing on their farm.	Affirm Elaborate		Circles key words and explains and clarifies meaning of Spring.

Figure 1. Extracts from course talk analysis matrix

At the same time students are being taught how to write the genre of a comparative analysis essay as part of the course objective to enhance their own literacy skills. Again this is modelled with the assistance of graphic organisers and structured into their tutorial work. The assignment has specific criteria that are central to guiding students' through the writing process. Altogether students spend five hours of direct involvement in supervised analysis of transcripts of talk. But they also spend two hours in lectures on the topic and are required to spend a minimum of approximately 25 hours personal study through a range of structured,

independent activities.

The course is designed to model the explicit teaching philosophy and the scaffolding of pre-service teachers' learning. With this in mind the importance of language and socio-cultural context is first introduced though their text book (Campbell & Green, 2006: 2-4) where a scenario is presented to illustrate how a person can be an outsider and misunderstand because of different socio-cultural context. A parallel situation of a child in a classroom is considered and Thompson's (2003) metaphor of the 'virtual school bag' is used to illustrate and reflect on how teachers might conceptualise connecting to children from diverse socio-cultural and linguistic backgrounds. This is in opposition to seeing them as being in deficit because they are unfamiliar with the Standard English that pervades the socio-cultural context of school.

3. THE PEDAGOGICAL CHALLENGE

The pedagogical challenge for teaching this course is how to situate/engage/orientate first year pre-service teachers (largely drawn from year 12) to make sense of the concept of literacy learning. In response to this, the present research critically examines the value of the course's final assignment in its contribution towards assessing whether students have met the relevant course objectives. These include:

- understanding socio-cultural contexts for language and literacies learning
- analysing teacher talk and understanding the implications for effective literacy teaching.

After completing various modules of study on theory and practice and finally on the analysis of classroom discourse the assignment requires them to compare the talk involved in a classroom-teaching episode with that of a parent-child communicative interaction. They are required to analyse the characteristics of the talk in these two "instructional" situations to compare the effectiveness of literacy pedagogy. They are advised that their comparative analysis "should discuss the evident differences between the social worlds of home and school, the roles of adults in both settings and the role of children in both settings, within the genre of this essay [and that] . . . some questions to consider are: How is learning conducted at home and in school? What are the differences and similarities? [They are also advised that] . . . your essay should demonstrate insights about why students in classrooms participate in particular ways and what changes may be necessary to classroom pedagogy because of this" (Course Materials, 2010: 19).

4. LITERATURE REVIEW

The study of teacher talk and classroom discourse is grounded in Bull and Anstey's (1996; 2005) work on categorising pedagogy according to the nature of teacher talk and Culican's (2005) Scaffolding Interactional Cycle (SIC) approach to the study of teachers' cognitive "moves". Teachers' cognitive moves are represented in their dialogue with students. As they initiate talk and respond to students the thinking behind their pedagogical intentions becomes evident. The way they sequence their "in-the-moment" talk (Van Es & Sherin, 2002) or dialogic spells (Leung & Mohan, 2004) typically indicates the way they scaffold students' learning. For example, as cited in Culican (2005: 5), Rose (2004; 2005a) describes the following "series or 'chain' of moves . . . [in a reading lesson] as follows:

> *Prepare*: giving position and meaning cues for students to recognise wording
> *Identify*: affirming and highlighting
> *Elaborate*: defining, explaining, discussing".

Other research (Christie, 2004; Gibbons, 2002; Nassaji & Wells, 2000; Nystrand, Wu, Morgan, Zeiser & Long, 2001) also reinforces the value of the analysis of classroom discourse in being able to reveal the essence of literacy pedagogy and help prepare future teachers for working with families and/or communities that represent cultures and/or languages different from their own. The importance of teachers' understanding of the socio-cultural context and the need to build positive interpersonal relationships for successful literacy learning is also pertinent to projecting an alternative to the traditional deficit view.

An additional advantage of this focus on teacher talk is evident in the work of several other researchers (Bhaba, 1994; Gutiérrez, Baque-dano-Lopez, & Tejeda, 1999; Moje et al., 2004; Soja, 1996). They have advanced the idea that educators work to develop a *third space* in which students' primary discourses (those used in the home, community, and informal social interactions) and students' secondary discourses (those endorsed in school and other formal institutions) intersect to form this third space, where primary and secondary discourses are merged. If educators were more attentive to the creation of these third spaces in schooling it would follow that greater attention would be paid to incorporating students' prior knowledge and experience, as well as current literacy practices in the school curriculum and classroom. Research conducted by Varellas and Pappas (2006) illustrates the productive instructional use of discourse in third spaces to promote science learning. Bodrova and Leong (1996) explain that the social situation of development includes both the social context and the way children react to this context. This is reinforced by Schleppegrell (2001: x), who notes that supposed learning difficulties may be the result of children not being familiar with the discourse of school and as a consequence teachers need to analyze linguistic problems and take account of the fact that language is the primary medium of learning and instruction. The application of functional linguistic analyses is seen as being able to "move us toward a classroom environment that builds on the strengths children bring to school and assists them

in gaining control of the linguistic resources that are powerful for maintaining or challenging the current social and educational order".

Underpinning this context is Vygotsky's socio-cultural teaching-learning process central to which is the theory that human cognition and learning are social and cultural rather than an individual phenomenon. This sociocultural perspective has important implications for students, parents and school communities. A key facet of this view of human development is that higher order functions develop out of social interaction. This means that children's external social world, in which they have developed, needs to be considered through (a) their engagement in social experiences and (b) their interactions with other adults that require both cognitive and communicative functions. Kublin et al (1998: 6-7) state that "Vygotsky (1934/1986) described learning as being embedded within social events and occurring as a child interacts with people". This highlights the caregiver's role in imparting cultural knowledge and the need for social interaction to promote developmental change. The child's gradual mastery is seen as being qualified with cultural agency. This socio-cultural perspective situates children as learners in authentic settings that create communities of practice within a contextualized model (Falk & Storksdieck, 2005). Further argument for the need to reform literacy teacher preparation pedagogy is evident in Hardman, Smith, Wall and Mroz's (2004) research. They found that in spite of national reform strategies involving 'interactive whole class teaching' to improve literacy and numeracy teaching in the UK, teachers maintained a traditional pattern of classroom discourse. It was concluded that positive changes in teacher-pupil interactions depended on teacher-awareness of the lesson discourse interactions and the ability to self-monitor and self-evaluate to be able to adjust their talk. Coaching and talk analysis feedback were suggested as professional development activities. Van Es and Sherin (2002: 571) also raised the issue of teachers being able to adapt their instructional talk "in the moment" as they interact with the children in their classes. They noted, "a key tenet of mathematics and science education reform is the creation of classroom environments in which teachers make pedagogical decisions in the midst of instruction". In relating their research to the importance of understanding teacher cognition (Berliner, 1994) they highlighted its relevance to action for reforming pre-service teacher education. They noted that, "teaching is a complex activity, pointing out that teachers cannot possibly respond to all that is happening in any given moment. Instead, teachers must select what they will attend and respond to throughout a lesson" (van Es & Sherin, 2002: 573). Leung and Mohan (2004) also discuss how the role of classroom, spoken discourse influences teacher-pupil pedagogy and assessment interactions. Children are seen as learning best when they are actively involved in the production of knowledge in a dynamic, interactive environment. Their research takes a systemic functional linguistics approach to analysing classroom discourse involving primary school children in multilingual classrooms. For example, when describing a teacher it is observed, "his scaffolding takes the students through the process of

justifying a correct answer on reasoned grounds, rather than rejecting an incorrect answer. Andy then moves to consider the next student answer and . . . again presses for reasons" (Leung & Mohan, 2004: 352). They attribute the constructive sequence of relationships between the various strings (pedagogical rich sequences) of lesson talk (or dialogic spells) to teachers' cognition in aiming to make learning explicit.

Importantly, it was found that quality interactions/dialogic spells were infrequent and that it was the presence of students' questions that had the strongest positive effect for promoting dialogic spells and discussion. The research also revealed that in low-stream classes authentic questions and uptake tended to occur at random compared with high-stream classes. This suggests that where teachers are not skilled in developing dialogic spells to scaffold children's learning there will be an impoverishment of the learning environment. Thus, it is concluded that analysing classroom discourse provides a vital key to understanding and implementing pedagogical talk that is able to engage children in deep learning.

Analyses of classroom discourse have also been shown to reveal how traditional pedagogical approaches create barriers for children's learning. Blank (2002: 159) for instance, cites Blank and White (1986) as arguing traditional "classroom discourse serves largely as a test of the students' acquired knowledge rather than as a vehicle for teaching concepts not yet mastered". This is borne out in the work of Bull and Anstey (1996) who show how children learn to respond in particular ways depending on the teacher's behaviour. The notion of "pedagogy of school" is seen as evident when teachers practice a question-answer routine that causes children to simply try to "guess what's in the teacher's head" rather than think about the concepts to be learnt. They also identify the "pedagogy of literacy lessons" where the classroom discourse focuses on children carrying out the teachers' instructions without making connections to learning. These two styles, which are seen as marginalising some children, are contrasted with the "pedagogy of literacy lessons" where the discourse shows how the teacher models and scaffolds the children's literacy learning to make it explicit.

This latter discourse style is explored by Culican (2005) through the use of the SIC (Rose, 2005a, 2005b). She also considers the limitations of the triadic dialogue of Question-Answer-Evaluate (QAE) as a means of analysing discourse, although Nassaji and Wells (2000) argue its usefulness depends on the goal of the activity that the discourse serves to mediate and, in particular, on the use that is made of the follow-up move. Concentrating on the teacher's talk the SIC breaks the talk into the series of "moves" of: 1. Prepare, 2. Identify and 3. Elaborate. Each move is described in terms of a sequential prompt to scaffold learning. Culican (2005: 7) notes "the theory and practice of the Scaffolding Interaction Cycle is designed to ensure that all students are equipped with the knowledge resources required to participate successfully in classroom discourses that take place around texts". This approach replaces the typical repeated questioning involved in QAE (see Table 1) with teaching statements that direct children's attention to making meaning through inference, location and analysis (see Table 2).

Transcript Two – Teacher-children classroom discourse	
QAE moves	Discourse pattern of moves
Question	Mr. Hammond: Now children what was the big problem that Jack and his mother had at their farm?
Answer	Gary: They didn't have any money. Abbas: No – they needed rain to grow the grass to feed Daisy. Kate: That's not right there was a drought.
Evaluate Question	Mr. Hammond: Well you are all right in a way . . . who can tell me what a drought is?
Answer	Gary: It's when we don't get enough rain to fill the dams and we can't water the garden. Abbas: (Cuts in) A drought's when nobody gets enough rain for years.
Question	Mr. Hammond: So what difference does it make to farmers like Jack and his Mum when there's a drought? [Children offer answers and teacher continues to question regardless of children's understanding or lack of participation.]

Table 1: The triadic dialogue of Question-Answer-Evaluate (QAE) as a means of analysing discourse (After O'Neill & Gish, 2009)

In Table 1 the teacher, Mr. Hammond, has been working with his Year 3 class on a theme of farm animals and growing one's own food. He introduced the theme through reading and dramatising aspects of the fairy tale *Jack and the Beanstalk.* This excerpt, taken from transcript two (O'Neill & Gish, 2009) reflects the QAE sequence that, in this case, illustrates Bull and Anstey's pedagogy of school where the dialogue is not engaging the class group in literacy learning. Table 2 shows two extracts from adult-child discourse in the home-environment (see full transcripts in the appendix) where the dialogue reflects the application of SIC in the mother's use of shopping items and the Aunty's shared story. Elaborating is the "move that maximises the learning for all students by focusing on literate language, exploring meanings and inferences, unpacking metaphors, developing metalinguistic awareness and connecting with students' prior knowledge and experience" (Culican, 2005: 13).

In summary, this literature review highlights the importance of pre-service teacher education courses incorporating the study of classroom discourse as a means of raising awareness of the impact of language use on children's learning. It also highlights the need for teachers to ensure that they are in tune with the socio-cultural context and diverse backgrounds of children in the way that they engage in classroom dialogue. Examples of how students are expected to analyse the transcripts by applying SIC and Bull and Anstey (1996) categories are provided.

The need for pre-service teachers to analyse such transcripts of adult/child discourse is justified as a valuable approach to gaining insights into explicit literacy teaching. Similarly, the researchers' approach to the conduct of a meta-analysis of pre-service teachers' interpretations of discourse to evaluate the effectiveness of the task is supported. It assists in gauging students depth of understanding of the influences of the socio-cultural environment on children's literacy learning and how teachers need to be aware of their talk and cognitive moves in attempting to scaffold children's literacy learning.

Transcript One – Adult-child home discourse – *Mother-daughter*	
SIC moves	Discourse pattern of moves
Prepare	Mum helps Sarah match each egg to a name. She also helps her count them into the bowl saying: [position cue] One for Daddy, one for you and one for me – that makes . . . ? (Sarah: Three)
Identify	Mum: You can do it now. (Sarah: One for Grandma makes 4 and one for Grandad makes 5) Mum: [affirm] Yes – well done. (Sarah: And this one for Aunty Jane makes six, and Uncle Bob seven - as she picks out another one)
Elaborate	Mum: So how many people for dinner? [Mother discusses how many eggs remain and what to do with them.]
Transcript One – Adult-child home discourse – *Aunty-niece*	
SIC moves	Discourse pattern of moves
Prepare	Aunty Jane: [position cue] Look what I've got for you.
Identify	Aunty Jane: [meaning cue] This story is all about a little gingerbread man just like the one in this packet (producing a real gingerbread man biscuit). Come and sit down. Let's read the story now.
Elaborate	Aunty Jane: Once upon a time there was a little old woman who lived in a little old cottage near the woods. One day she decided to bake a little gingerbread man. Can you see what she is using to bake? [Aunt Jane and Sarah use the picture to identify and discuss the ingredients and utensils needed to make the recipe.]

Table 2: The application of the Scaffolding Interactional Cycle as a means of analysing discourse (O'Neill, 2009)

5. METHODOLOGY

5.1. Stages in the compilation of data and other methodological issues

The research applied a mixed methods approach where the research was conducted in two stages. Quantitative data were gathered on the scope of students' comparative analysis essays, followed by qualitative analyses of a sample of those that received the highest scores as scored by the course markers. Assignments are marked by staff employed in the course using specific criteria. Since assignments are marked only once by different markers a moderation process is invoked to address issues of reliability and validity. Each marker presents essays that reflect the range to a group meeting, and the course team leader and moderator (researcher one and two, respectively) are also available for consultation, which is ongoing through the marking period of three weeks.

The two transcripts of talk were adapted for the purposes of the course from the first author's past research (O'Neill & Gish, 2008). They reflect the range of transcripts available from other sources. They also include some dialogue that is specifically created on the basis of the researcher's teaching and professional experience. This was to stimulate discussion about pedagogy and facilitate students making their own changes for improvement. This approach is taken to encourage students to "play" with the dialogue and role-play in conjunction with the study of videos of real life literacy teaching episodes.

In stage one a 15% random, stratified sample of assignments (48) was selected from a total number of 317 in a first year foundation literacy course of four-year teaching degree. This course was offered across three campuses and online and, as a cohort, the students were supported by a single, common, online Study Desk that contained a variety of resources and discussion forums (further information on the course pedagogy and content is presented in the background to the study). Sampling took into account the proportion of students in each offer and the proportion of those receiving passing grades for the total course within the four ranges of 50-64%; 65-74%; 75-84% and 85-100%. The distribution of the sample across offers and grade ranges is shown in Table 3. (Other assessments included a small portfolio of literacy resources and seven mandatory, short, online self-assessment quizzes that tested understanding of course content, literacy pedagogy and basic knowledge of the English language).

Offer		1		2		3		4	
Grading	N=48	n	%	n	%	n	%	n	%
85-100%	12	2	14	2	16	2	13	2	19
75-84%	18	5	29	3	14	7	38	4	25
65-74%	12	5	40	4	35	3	27	3	21
50-64%	6	1	17	2	35	1	22	2	35
	48	13	100	11	100	13	100	11	100

Table 3: Stratified random sample of comparative analyses based on original course assessment scores across offers

5.2. Rating of the essays

In order to answer the research question "Overall, what is the level of argument and synthesis evident in the students' texts?" the researchers developed a rating scale of 13 items to assess the essays taking into account only those essay marking criteria that were applicable to their understanding. This is referred to as the "Learning Environment Talk Scale (LETS) (see Table 4). The original essay marking criteria considered evidence of knowledge of the role of talk in literate, cultural and social practices, scope of the characteristics used to analyse the talk involved in the two situations, evidence of critical analysis, comparison and conclusion, use of transcripts to support the argument, extent to which the essay exemplified the genre of comparative analysis and overall competence in and appropriate use of language and literacy, including spelling, grammar, punctuation and application of the APA referencing system. These criteria were weighted for the course assessment requirements, but for the purposes of this research the items required for the scale were designed to examine the essays from a different perspective. This was to gauge the extent to which the pre-service teachers' arguments referred to the topics/concepts involved and what depth of argument was achieved. A rating of "1" was allocated when the script omitted any reference to the item and a rating of

"2" was allocated when the script raised the topic of the item or alluded to the topic. When the script linked the topic of the item to the transcripts then "3" was allocated and if the reference to the transcripts was reiterated or reinforced a rating of "4" was allocated. Only when a script linked the topic of the item to the transcript, reiterated or reinforced the topic and went on to treat the topic in greater depth, in terms of the role and applicability of language and culture, did the script receive a "5". Through this application it was possible to gain insights into the students' breadth and depth of thinking and understanding of the role of talk and its analysis. These essays were then independently rated by the two researchers using the five-point rating scale LETS. When the ratings were compared it was found that there was 100% agreement.

In Stage two a purposive sample of five exemplary assignments was selected according to the application of LETS. The rationale for this selection was to gain insights into the highest quality texts since according to the rating scale descriptors any consideration of the lower level scripts would be limited in being able to reveal any depth of argument. While analysis of the lower level scripts may have assisted in identifying how students could improve their essay writing it was not counted as necessary for the purposes of this research focus on students' demonstration of higher level understanding. A qualitative analysis was then undertaken to investigate in more depth how these pre-service teachers used the transcripts to demonstrate their understanding of the power of talk and the impact of the socio-cultural environment on literacy learning. It also considered the extent to which they were able to make recommendations for change to improve children's literacy learning (which lower level scripts did not do). Finally, the researchers consider the findings in terms of tertiary pedagogy for engaging pre-service teachers with the issues and good practice involved in developing children's literacy learning in today's diverse learning contexts. The research questions were:

 "How did the comparative analysis task demonstrate pre-service teachers' ability to critically reflect on practice?" and "What insights did the meta-analysis provide with respect to improving tertiary pedagogy and assessment for pre-service literacy teachers?"

6. RESULTS

The results of the application of the LETS are shown in Table 4. It shows the percentage ratings across the five-point scale for each of the 13 items. A graphic interpretation of these data is also shown in Figure 2.
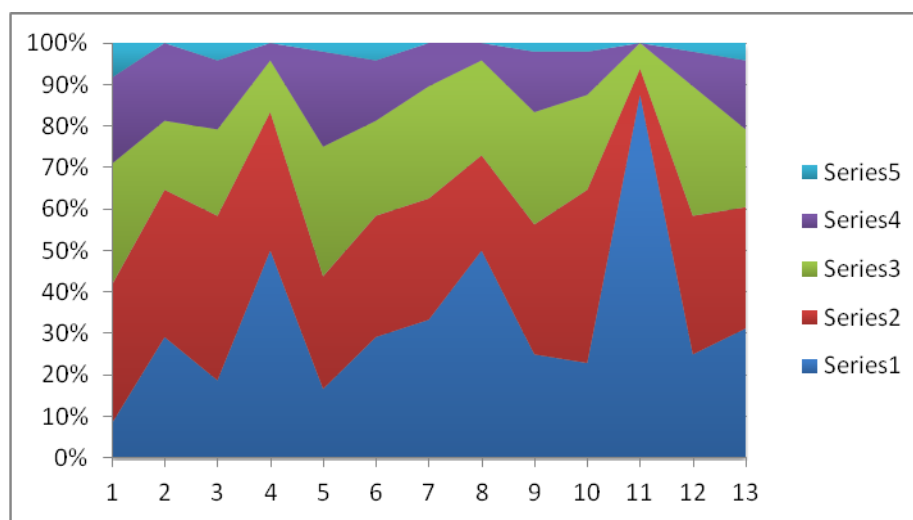
6.1. Application of the Learning Environment Talk Scale LETS

Overall, application of the LETS shows substantial variation in the distribution of ratings across the 13 items with very few ratings of five. Table 5 shows the percentage positive ratings for the items listed from highest scoring to lowest. This shows that 29% of the scripts

went into more depth with respect to their acknowledgment of the importance of the home/school context and 25% provided a deeper application of the Scaffolding Interactional Cycle. Approximately 20% of scripts reflected a more in depth understanding of the need to link teaching to children's prior learning and consider the child's cultural background. These were able to identify evidence of explicit teaching and also reveal insights into the way the learning environment culture may support and value children's voice to promote literacy learning. While 17% dealt with Bull & Anstey's pedagogy of literacy learning in more depth only 12% made suggestions for improving literacy learning. Bull & Anstey's pedagogy of school was considered in more depth in only 10% of scripts and similarly only 10% dealt with the implications for good pedagogical practice in more depth. Only a small proportion of scripts (4%) focused in more depth regarding language as a socio-cultural tool for meaning making and also in recognising the significance of Bull & Anstey's pedagogy of the classroom. Also of note was the fact that the possibility of identifying alternative pedagogical talk to support literacy learning was not treated in depth such that no script was rated above a 3 and 87% of scripts did not allude to the way the teacher or mother might have specifically adjusted their discourse i.e. offer alternative talk (even though this had been the focus of tutorial activities).

To what extent does the comparative analysis	1	2	3	4	5
1. Acknowledge the importance of the home/school context.	8.33	33.33	29.17	20.83	8.33
2. Recognize the need to consider the child's cultural background.	29.17	35.47	16.67	18.75	0
3. Note the need to link teaching to children's prior learning.	18.75	39.58	20.83	16.67	4.17
4. Consider that language is a socio-cultural tool for meaning making.	50.00	33.33	12.5	4.17	0
5. Apply the Scaffolding Interactional Cycle.	16.67	27.08	31.25	22.92	2.08
6. Identify evidence of explicit teaching.	29.17	29.17	22.92	14.58	4.17
7. Identify Bull & Anstey's pedagogy of school.	33.33	29.17	27.08	10.42	0
8. Identify Bull & Anstey's pedagogy of the classroom.	50.00	22.92	22.92	4.17	0
9. Identify Bull & Anstey's pedagogy of literacy learning.	25.00	31.25	27.08	14.58	2.08
10. Make suggestions for improving literacy learning.	22.92	41.67	22.92	10.42	2.08
11. Identify alternative pedagogical talk to support literacy learning.	87.5	6.25	6.25	0	0
12. Identify implications for good pedagogical practice in general.	25.00	33.33	31.25	8.33	2.08
13. Reveal insights into the way the learning environment culture can support and value children's voice to promote literacy learning.	31.25	29.17	18.75	16.67	4.17

Table 4: Percentage ratings of the Learning Environment Talk Scale (LETS)

Series refers to ratings 1 to 5.

Figure 2: Graphic presentation of the results of the Learning Environment
Talk Scale (LETS)

To what extent does the comparative analysis:	Overall positive % responses*	1 is highest %
1. Acknowledge the importance of the home/school context.	29	1.0
5. Apply the *Scaffolding Interactional Cycle.*	25	2.0
3. Note the need to link teaching to children's prior learning.	21	3.5
13. Reveal insights into the way the learning environment culture can support and value children's voice to promote literacy learning.	21	3.5
2. Recognize the need to consider the child's cultural background.	19	5.5
6. Identify evidence of explicit teaching.	19	5.5
9. Identify Bull & Anstey's pedagogy of literacy learning.	17	7.0
10. Make suggestions for improving literacy learning.	12	8.0
7. Identify Bull & Anstey's pedagogy of school.	10	9.5
12. Identify implications for good pedagogical practice in general.	10	9.5
4. Consider that language is a socio-cultural tool for meaning making.	4	11.5
8. Identify Bull & Anstey's pedagogy of the classroom.	4	11.5
11. Identify alternative pedagogical talk to support literacy learning.	0	13.0

*These percentages are a combination of the percentage of ratings of 4 and 5 for each item – positive percentage response ratings

Table 5: Positive percentage response ratings from the Learning Environment Talk Scale (LETS)

6.2. Extracts from high scoring texts

The task required all students to attach a matrix of their analysis of the transcripts by line number against the application of the selected tools (e.g. Scaffolding Interactional Cycle; Bull & Anstey's pedagogical styles; QAE). The value of the assignment as a reflective process and strategy to gain insights into literacy pedagogy, the socio-cultural context and the home-school connection is exemplified in the scope and depth of the following extracts taken from the highest scoring texts. The first extract demonstrates to a high extent the acknowledgment of the importance of the home school context. By using examples of interactions from the transcripts throughout the essay this pre-service teacher (Text 1) provided evidence of effective literacy pedagogy and in-depth knowledge of the effectiveness of 'talk' and the need to draw together the home and school contexts for learning. She contrasts the parent's obvious awareness of the child's prior knowledge in the way the parent scaffolds the child's learning with the teacher's preoccupation with behaviour management. The failure of the teacher to constructively counter the child's behaviour by understanding how to engage him in learning through interest and/or understanding his learning style is identified:

> The home is usually an environment of co-construction having a good understanding of a child's prior knowledge as a key role in an emergent literacy development e.g. T1, L43 as shown by FIA (Anstey & Bull, 1970), (Vygotsky as cited in Smidt, 2009). . . . the teacher in T2, L32 FIA, appears to have little background knowledge or clear observations of Gary's learning style with no awareness of his desire to learn through the dramatic role play and criticises him over the next few interactions focussing on behaviour instead of his learning . . . This is where sensitivity to the child's socio-cultural learning may come into play in 'how' and 'when' this particular child acquires language, generating knowledge and understanding uniquely as in T1, L7, SIC and Bull and Anstey (Muspratt et al., 1997). (Text 1)

This pre-service teacher goes on to use this contrast to further highlight and reiterate the importance of the home-school connection and the development of language as a basis for literacy learning:

> Therefore the importance for the 'teacher/adult' to bridge a child's literacy learning from home to school, based on their socio-cultural background is vital for a sense of accomplishment as is getting to know each child for a successful learning journey and the construction of meaningful text linked to their world (Thompson, 2003). This can be assisted by the home and school being in constant contact, sharing experiences from home to school and vice versa, that are meaningfully linked for the whole development of language (Malaguzzi, 1998). (Text 1)

Text 23 shows how the task allowed pre-service teachers to provide evidence of their ability to critically analyse, compare and draw conclusions. Through the application of Bull & Anstey's pedagogy of school; Flander's (1970) Interaction Analysis (FIA) and Culican's

Scaffolding Interactional Cycle this text provides insights into why students in classrooms and at home participate in particular ways:

> To gain some insights into the comparison of these transcripts we need to look at the tools of analysis and their functions in literacy pedagogy. When we examine Bull and Anstey's ideas of three styles of pedagogy; pedagogy of school, pedagogy of literacy lesson and pedagogy of literacy learning, you begin to notice a pattern forming in transcript two (Bull & Anstey, 1996). The teacher in transcript two follows the pedagogy of school predominately with small fragments of pedagogy of literacy lessons unlike the parent in transcript one. The teacher spent a lot of time just accepting students' answers, rather than engaging the students with careful explanations and developing their skills in literacy. There are significant benefits for students when the teacher explains the cognitive processes and makes connections for students that relate to real life (Bull & Anstey, 1996) . . . (Text 23)

Attention is drawn to the importance of the adults' "cognitive moves" and the way they impact on children's behaviour and learning:

> Mum was able to quickly recognise confusion and respond accordingly. Transcript two was weakened by the lack of moves from the SIC. For example, the teacher prepared the students with minimal cues to recognise and create any meaning to the activity (Culican, 2005). Both the teacher and the parent provided affirmations to the children however the teacher failed to support his efforts through elaboration. This hindered the depth of the learning process for the students as they had to rely on their prior knowledge for understanding . . . Transcript two however lacked significantly from the learning opportunities explicit teaching can bring; for example there was limited scaffolding and modelling . . . (Text 23)

In Text 14 the pre-service teacher uses excerpts from the classroom transcript to argue how the teacher's role might better support students' literacy development through more appropriate questioning techniques. She notes the contrast in this regard with the home discourse:

> Contrary to Transcript 1, Transcript 2 contains many questions delivered by Mr Hammond (L1, 5, 8, 13, 17, 22, 24, 32, 34, 36, 38, 43, 48 and 53). Rather than preparing his students with a statement which would allow them to make meaning, Mr Hammond takes one response and furthers the questioning in relation to that matter, rather than allowing children to elaborate on their initial responses. By his line of questioning, Mr Hammond is encouraging the children to call on their prior knowledge, but he is not allowing them the opportunity to participate in and experience discussions of higher levels of meaning. (Text 14)

This pre-service teacher's critique highlights the important role of the teacher in being able to facilitate children's in-put, draw upon their prior knowledge and engage in thinking about the topic:

> Where the children had prior knowledge, Mr Hammond did not create a learning environment where personal experiences, knowledge and ideas could be shared and incorporated into the activity (L18). Mr Hammond's questioning method led to

interactive trouble where his questions received a variety of answers, none of which were elaborated on by the students, and which did not create a learning environment where children were extending on, or developing new skills and resources (Culican, 2005). (Text 14)

Perusal of Text 14 illustrates how the pre-service teacher has recognised the role of teacher's cognition and the need for children to be aware of what they are supposed to be learning and why. Conclusions are drawn about the role of children in learning and the specific resources that teachers may use to support children's literacy development. Firstly, she recognises how the teacher's approach controls the dialogue and structures it to constrain the children's ability to respond in a way that enables their literacy learning:

Mr Hammond fails to explicitly explain the desired result of the discussion, or model the activity, or identify how the learning will be a useful literacy lesson for lifelong learning (Bull & Anstey, 1996). With his questioning method, Mr Hammond already has in his mind the direction of where he wants this discussion to go. The children are simply playing a guessing game and the answers they offer are based on personal, prior knowledge. The children are actively participating in the discussion with their responses, but they are unable to identify where the discussion connects with and intended literacy learning, or what role the text plays in literacy skills and processes. (Text 14)

Secondly, this pre-service teacher is able to analyse the discourse in terms of how the teacher's language in use, and particularly the types of verbs, might be changed to better enable children to participate and learn. The contrast between the teacher's apparent intent and his lack of awareness of how his talk may be received by the students is succinctly described in the last sentence:

By failing to prompt the children with perceptive cues such as think, consider or reflect, Mr Hammond misses literacy learning opportunities. As well, his lack of modelling is shown by the inability of the children to further their discussions and decision-making activities. Organisational trouble (Campbell & Green, 2006) is an issue in this classroom. Mr Hammond disregards most responses of the students because he has a preconceived idea of where this lesson will lead to, but one of which the students are completely unaware. (Text 14)

It becomes clear that the discourse analysis task allowed pre-service teachers' to provide evidence of their understanding of the need to consider diversity of children's linguistic and cultural backgrounds and that language is a socio-cultural tool for meaning making. As shown in Text 37 this pre-service teacher recognises that some of the children may not speak the language of instruction and that some of the concepts and language in the story may be culture bound:

Language in all its contexts can be seen as a tool for personal, social and cultural production (Reunamo & Nurmilaakso, 2007). Given the diverse multicultural society we live in, it is highly likely that the home language of many children could differ from the

language that is used for direction and learning at school (Combs, 2006). It is important for teachers to be aware of such differences, and to be able to use language that correlates according to each student's individual needs (Winch, Johnston, March, Ljungdahl, & Holliday, 2006). These ideas could possibly relate to the way language is used in transcript two by Mr Hammond. He may not realise that some of the children are unable to understand such Western terms as "Jack and the Beanstalk and magic beans" (O'Neill, 2009). In future he may need to consider what is inside each student's "virtual school bag" before conducting particular lessons . . . (Text 37)

This pre-service teacher also presents a detailed analysis of the teaching strategies evident in the parent's discourse:

The Mother praises and encourages the child (Transcript one [T1] Line [L] 20, 22, 26, 32, 34). Clear directions are given (T1, L3, 5, 10) so the child is aware of expectations. There is evidence of coaching (T1, L10, 17), modeling (T1, L18), drawing on the child's prior knowledge (T1, L12, 28, 30) and enabling the child to explore and discover answers for herself (T1, L7, 13, 23, 24, 26). The Aunt also demonstrates explicit teaching (T1, L37, 39-43) within pedagogy of literacy learning (Bull & Anstey, 1996); the reading is related to everyday life (T1, L37, 43) and there is demonstration of reading strategies including predicting the story and realizing picture cues (T1, L39, 41). Metacognition is facilitated (T1, L41); thinking about previous experience and applying it to the story (Campbell & Green, 2009). The adult places the text in context, giving the child purpose for making meaning by relating it to her cultural experiences (Campbell & Green, 2009). There is positive talk and explicit teaching that supports the child's participation in the language and literacy learning. (Text 37)

Text 16 raises the issue of the adult-child relationship in communication for learning. It examines implications for good pedagogical practice and outlines suggestions for improving the quality of literacy pedagogy in the classroom:

The first step towards pedagogical improvement must be improved teacher talk; this is students' central element of classroom instruction (Campbell & Green, 2006). Teacher talk must be explicit, making the learning available and accessible to all students (Edwards-Groves, 2003). Success in language and literacy learning can depend on positive teacher talk (Stanulis & Manning, 2002). Teachers must consider that use of language to construct meaning has influencing factors particular to individuals and settings; this can include classroom discourse, individuals' experiential background, the context of the communication and the relationship between the communicators (Emmett, Komesaroff & Pollock, 2006). Positive language and literacy learning outcomes require pedagogy that supports, and is consistent with, the socio-cultural backgrounds and experiences of students. (Text 16)

Besides the need to incorporate strategies such as modelling and coaching this pre-service teacher also recognises the need to teach children how to learn:

Teachers must know students' backgrounds, diverse abilities, interests, individual learning styles, and bridge the literacy practices between home and school. The best pedagogy incorporates explicit literacy teaching: clear explanations; students' awareness of teacher expectations; time devoted to talking, thinking and reflecting; students

encouraged to explore and discover their knowledge and that of their peers; scaffolding learning with questions and examples; modelling strategies; coaching students needing assistance; and most importantly encouraging students (Campbell & Green, 2006). At the heart of literacy pedagogy must be teaching students strategies, how to learn, as opposed to focusing primarily on curriculum content (Edwards-Groves, 2003). (Text 16)

Overall the stance taken in these texts was in keeping of that of Text 37, "although transcript two's classroom discussion proved successful in some areas, it is clear that transcript one's, supportive, positive home environment exceeds the expectations for laying the foundation of the concepts of language and literacy, and fostering the child's understandings of literacy for the future".

7. DISCUSSION AND CONCLUSIONS

In general the pre-service teachers' were able to understand and contrast the discourse of the classroom and home environment. They were also able to recognise the key features of the pedagogy in use in each context and its implications for literacy learning. While their ability to critical reflect appears to have been limited by the word length of the essay, evidence of their understanding was both implicit and explicit in the texts. However, those with highest results were able to use excerpts from the transcripts as evidence to support and reinforce their argument with references to authoritative sources. In addition, these pre-service teachers were able to make connections between the key concepts and show awareness of teachers' cognition. They were also able to use the given tools of analysis to recognise explicit teaching in terms of teacher-moves in the teaching of literacy and the scaffolding of literacy learning. Those whose essays scored low in this regard tended to carry out the analysis but failed to use the results to make the connection between the teacher's moves and explicit literacy learning. This suggests the cognition aspect of the study of teachers' moves should receive more in-depth treatment in the course as a foundation for language and literacy learning. It also suggests that the significance of teacher talk and classroom discourse analysis are difficult concepts for first year pre-service teachers who have only their own schooling experience upon which to draw. The research shows that the course needs to expose students to a greater array of literacy lessons that exemplify explicit teaching through real-life teaching episodes that directly link to transcripts of the discourse involved. It would be advantageous to be able to revisit and replay to focus on specific "in-the-moment" talk (Van Es & Sherin, 2002), dialogic spells (Leung & Mohan, 2004) and chains (Rowe, 2005).

Compared with the results derived from the original essay scoring the LETS ratings provided a different lens through which to view the students' understandings. The LETS proved to be a valuable instrument for the meta-analysis purpose and also raised the issue of the current assessment criteria in terms of incorporating the LETS lens. Subsequently, it was used a basis for developing a scoring rubric for the essay task using the five point scale. The

research suggests that if these pre-service teachers can understand the pedagogy of literacy learning in the context of teacher talk from the start of their program it will enable deeper learning during their later study and professional experiences. It therefore shows a strong need to immerse first year pre-service teachers in the study of classroom interactions from the start of their degree.

These pre-service teachers were clearly able to recognise the major differences between the two learning environments. All but eight percent of the pre-service teachers acknowledged the importance of the home-school context. This was not surprising given the contrasting transcript contexts for learning and the courses major emphasis on socio-cultural theory and language and literacy learning. However, when it came to their ability to consider that language is a socio-cultural tool for meaning making, again the application of deeper analysis and higher order thinking skills was lacking. They were able to "notice" the more informal, co-construction of the dialogue and more authentic learning associated with Sarah's interactions with her mother and Aunty Jane. This is in keeping with Rogoff (1986; 1990), as cited in Bodrova and Leong (1996: 45), "the changes in adult structuring and support followed the learner's lead and [were] not arbitrarily imposed based on the content of the material or the abstract idea of how the information had to be taught". In students' comparison of the home environment with the dialogue of Mr Hammond's classroom they were able to identify how teachers might support and value the way the home culture influenced the child's learning and suggest how the children's voices might be heard and their home experiences used to facilitate learning in the classroom. Up to three-quarters of the pre-service teachers were also able to make clear suggestions for improving literacy learning and identify implications for good pedagogical practice in general.

The investigation also considered the extent to which the comparative analysis task allowed the pre-service teachers to identify the essence of literacy pedagogy and whether it contributed to preparing them for working with families and/or communities that represent cultures and/or languages different from their own. The notion of the "virtual school bag" (Thompson, 2003) formed a core metaphor in the course to facilitate understanding of the need to adapt their pedagogical approach to children's socio-cultural background. However, had the dialogue included more in-depth talk that focused on interactions with children from diverse language and cultural backgrounds, the pre-service teachers would have had more opportunity to reflect on the issues involved. That is, as Thompson (2006: 2), states: "the 'virtual school bag' metaphor works against the idea that children growing up in relative poverty don't have experience or language or know the things that they should." As noted earlier it facilitates a focus on children's strengths and how their capacities might be brought to bear in appropriating new school knowledges.

This meta-analysis also provided a valuable opportunity for pre-service teachers to scrutinise and reflect on how children's literacy learning is influenced by classroom discourse and the related factors of socio-cultural background, together with the importance of the

home-school connection. Further insights are gained as described by Blaise and Nuttall (2010) with regard to the power of discourse and the identification of how power operates in a classroom. This includes "noticing" how people interact and the pedagogical artefacts, and how they are used to identify dominant discourses that alert one to what is valued in the learning environment. The findings also identify how this assignment task and the transcripts of talk can be further developed to scaffold the pre-service teachers' understanding of talk and literacy pedagogy through the use of this interactionst lens. Further, the research highlights the fact that these pre-service teachers were, themselves, exposed to a new language and culture in entering this first year course and that the researchers as lecturers were on the road to success in their efforts to engage them in the required pedagogical learning. The issue of new language and culture is significant in that students need to be immersed in the practical experience of classroom talk. They need to understand the concepts involved prior to being faced with transcripts portrayed in the textbook. Therefore, there needs to be the explicit teaching of the language and concepts involved. From this it follows that effective teachers have acquired a pedagogical language that is discernable through the analysis of their successful scaffolding of children's learning. If this is the case then future research needs to further explore the teacher talk to identify the competencies involved to improve training. Similarly, the notion of third space may act as an additional catalyst to conceptualising and understanding the linguistic and metacognitive skills of the expert teacher.

The research suggests that such introductory courses like the one described here should build all literacy pedagogical discussions around real-life focused teaching episodes, and students should be encouraged to assist in classrooms from the start of their program (if necessary on a voluntary basis). They should also be encouraged to make observations of classroom and home adult-child talk to hone their "noticing" skills (Blaise & Nuttall, 2010). This means a change to tertiary pedagogy to facilitating students' ongoing access to schools. The implication is that programs that facilitate pre-service teachers' participation in classrooms from the start of their study and provide continuity throughout the degree are adding immeasurable value to students' engagement and learning.

The research findings also highlighted the issue of the danger of young children who come from diverse backgrounds being perceived as being in deficit at the start of their schooling and the importance of teachers' sensitivity to the power of classroom discourse to either include or marginalise. The study of the power of talk combined with a focus on teacher cognition and understanding of explicit literacy teaching was shown to be a valuable assessment piece that as a result of the research can be enhanced through providing pre-service teachers with more in-depth involvement in pedagogical experiences that exemplify good practice through discourse. The importance of the ecology of the learning environment and the metaphor of the child as plant growing under optimum conditions for literacy learning (O'Neill & Gish, 2008) embedded in the democratic community of the classroom in a supportive, enriching "culture" is supported by Blank (2002: 121) who emphasises that

"productive change requires a dramatic transformation of discourse". Through the study of the power of talk, in combination with its focus on teacher cognition and understanding of explicit literacy teaching, it is concluded that this important assessment piece can be enhanced by ensuring students have early exposure to in-classroom experience. When explicit teaching can be exemplified in samples of classroom dialogue in this way, then pre-service teachers will have greater opportunity to develop the capacity to understand the vital role of teacher talk and cognition in transforming literacy learning.

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APPENDIX

Transcript One - Spoken text extract parent and Year 1 daughter

It was Friday 4pm. Mrs. Green and her daughter Sarah had just arrived home with some shopping. They had to put the shopping away and get ready for Sarah's grandparents and Aunty and Uncle arriving for dinner. Sarah aged five always looks forward to her Aunty Jane coming because she usually brought her a present. Sarah is also eager to help her mother around the house.

1. Mum: Gosh! Look at the time! We'll have to hurry now or Grandma and Grandad will be here before we're ready. You will have to help me.

2. Sarah: What shall I do?

3. Mum: You can help me put the shopping away and then set the table.

4. Sarah: Where shall I put these? (picking up the eggs)

5. Mum: Put them in the bottom shelf of the fridge then take the soap powder into the laundry.

6. Sarah: Oh Mummy the eggs are all sticky and wet (takes off the soggy lid of a dozen box). Oh! Look two of them are broken.

7. Mum: Oh Dear! I wonder what happened. I'm sure I didn't break them. May be they got squashed when I had to pull up quickly at the lights back there. Well not to worry we should have enough. I need one egg for each person. Will there be enough Sarah?

8. Sarah: Er.. er wh…(fiddling with the egg box and then looking at Mum and knocks the 2 litre milk carton onto the egg box) Urrh! (and begins to cry)

9. Mum: Wow! Aren't we lucky the milk pushed the lid back on and we didn't break any! Can you put the milk in the fridge Sarah please?
    (Sarah returns and wipes her hands on paper towel.)

10. Mum: Now let's start again. Well there's you …. and I, and Daddy! How many is that?

11. Sarah: Three!

12. Mum: Who else is coming?

13. Sarah: Grandad and Grandma, and Aunty Jane and Uncle Bob! (counting on fingers) 1, 2, 3, 4!

14. Mum: So how many people is that altogether?

15. Sarah: Er I think .. (fiddling with the celery leaves that were sticking out of another bag)

16. Mum: Leave the celery for a minute (puts it up on the bench out of reach).

17. Now let's count them as we share them out.

18. Mum helps Sarah match each egg to a name. She also helps her count them into the bowl saying: One for Daddy, one for you and one for me – that makes…….

19. Sarah: Three

20. Mum: You can do it now

21. Sarah: One for Grandma makes 4 and one for Grandad makes 5.

22. Mum: Yes – well done.

23. Sarah: And this one for Aunty Jane makes six, and Uncle Bob seven (as she picks out another one)

24. Mum: So how many people for dinner?

25. Sarah: Seven.

26. Mum: Exactly, well done. There aren't many eggs left now are there Sarah?
How many are there?

27. Sarah: Three!

28. Mum: What can we do with these?

29. Sarah: There's enough for us to have a boiled egg for breakfast on Sunday.

30. Yes one each. That's a good idea or we could use them to bake some cookies! Would you like to do that? (Sarah nods) Well, I'll wash these while you set the table. How many plates will we need?

31. Sarah: Seven

32. Mum: Good! That's right Sarah. You did a great job sorting it all out. Can you give them all a knife and a fork as well please?

33. Sarah: Yes Mummy – I know I'll have to get seven each of those too.

34. Mum: There are no flies on you Sarah!

Mum continued to prepare for dinner. Sarah went to play with her doll's house.
It wasn't long before Aunty Jane arrived. She brought Sarah a new story book – The gingerbread man.

35. Aunty Jane: Look what I've got for you.

36. Sarah: Ooo a book and what's this? (Something in a paper bag).

37. Aunty Jane: This story is all about a little gingerbread man just like the one in this packet (producing a real gingerbread man biscuit). Come and sit down. Let's read the story now. Keep your little gingerbread man safely in the packet until after dinner.

38. Sarah: Giggles (Nestling into the sofa next to Aunty Jane focuses on the book).

39. Aunty Jane: Once upon a time there was a little old woman who lived in a little old cottage near the woods. One day she decided to bake a little gingerbread man. Can you see what she is using to bake?

40. Sarah: Oh yes, she's got a bowl and a rolling pin like mine.

41. Aunty Jane: Yes, that's right but won't she need something else to put in the bowl? What has she got on the table there?

42. Sarah: Some flour and eggs…… and look (pointing to the picture) she's got some smarties and there's some sugar …oh and some butter… and a spoon.

43. Aunty Jane: Well done Sarah I can see you've baked biscuits before. Let's read what happens next.

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Unpublished resource.

Transcript Two - Spoken text extract Year 3 teacher and class group

Mr. Hammond has been working with his Year 3 class on a theme of farm animals and growing one's own food. He introduced the theme through reading and dramatising aspects of the fairy tale *Jack and the Beanstalk* (adapted from O'Neill & Gish, 2008, p. 157).

1. Mr. Hammond: Now children what was the big problem that Jack and his mother had at their farm?

2. Gary: They didn't have any money.

3. Abbas: No – they needed rain to grow the grass to feed Daisy.

4. Kate: That's not right there was a drought.

5. Mr. Hammond: Well you are all right in a way…. Who can tell me what a drought is?

6. Gary: It's when we don't get enough rain to fill the dams and we can't water the garden.

7. Abbas: (Cuts in) A drought's when nobody gets enough rain for years.

8. Mr. Hammond: So what difference does it make to farmers like Jack and his Mum when there's a drought?

9. Gary: They don't have enough water to grow food for the animals and to grow food for themselves.

10. Abbas: And they don't have any crops to sell to get money.

11. Kate: (Cuts in) and the giant stole all their money and killed Jack's father.

12. James: And they didn't have Jack's dad to work on the farm any more.

13. Mr. Hammond: Quite right Kate and James. So why did they have to sell their cow? Wouldn't you think it would have been better to keep it to provide milk?

14. Abbas: I think it was because they didn't have jobs to earn any money.

15. Sally: Yes and they were too far away from the city to work.

16. Jenny: And they didn't have a car.

17. Mr. Hammond: But weren't they supposed to earn money with their farm?

18. Gary: My uncle's a farmer and he grows avocados and macadamia nuts. You should see how many he gets when it's picking time.

19. Abbas: I think there was nobody to do the work on Jack's farm.

20. Kate: Yes Jack was too lazy to do anything so they just got poorer and poorer.

21. Sally: They did have some water because the beanstalk grew.

22. Mr. Hammond: You seem to be doing a good job working it all out. I think you're on the right track. It would have been too much for Jack's mother to plant a crop and take care of it. But why do you think Jack's mother let him take Daisy to market all by himself?

23. Gary: Mr. Hammond I need to go to the toilet.

24. Mr. Hammond: Do you really have to go now Gary? If so be quick because we are just about to start on our dramatic excerpts. (Gary dashes off) Gary!! – walk –don't run remember the rule…. Children would you have trusted Jack to take Daisy to market?

25. Abbas: I don't think so.

26. Mr. Hammond: Why is that?

27. Kate: No. I think his mother should have gone with him.

28. Mr. Hammond: Why is that Kate?

29. Abbas: Huh! Jack was stupid.

30. Kate: I don't think Jack really understood how terrible it all was.

31. Gary: (Returned puffing and panting) well I think…..

32. Mr. Hammond: (Cuts in sternly) Gary I hope you didn't run all the way back from the toilet block? You know Mr. Black (the deputy principal) is watching out for people who break that rule after Tommy McDonald fell down and cut his head open. Remember he had to have 3 stitches! You don't want to go on a red card do you?

33. Gary: (Subdued) No Mr. Hammond I didn't want to miss the role play.

34. Mr. Hammond: Okay Gary you wouldn't have missed out. You had plenty of time. Think of the consequences before you run next time. What are consequences?

35. Sally: It's about what happens next if you do something.

36. Mr. Hammond: Yes. That's right. Did Jack think about the consequences when he swapped Daisy for the magic beans?

37. Chorus: No Mr. Hammond.

38. Mr. Hammond: No I'm sure he didn't! You can do better than Jack….. Can anyone tell me a consequence of Jack not taking getting any money for Daisy?

39. Gary: Yes. His mother was angry.

40. Abbas: He was sent to bed starving.

41. Sally: The beans got thrown out of the window…..

42. Kate: (cuts in) Jack got to climb the beanstalk and get his father's money back.

43. Mr. Hammond: Very well done so there should be no more running on the concrete!! ……………Now we were thinking about whether Jack's mother should have let him take Daisy to market all by himself.

44. Abbas: I don't think she should have trusted him.

45. Mr. Hammond: So you think Jack was untrustworthy Abbas?

46. Abbas: Yes he proved it. He didn't even get to market.

47. Kate: Yes but it did all end happily ever after.
48. Mr. Hammond: You have a point there but thinking about Jack's character is there anything else that you noticed besides swapping Daisy for magic beans?

49. Gary and Abbas in competition to say it first: He didn't take any notice of his mother and talked to strangers and climbed the beanstalk.

50. Kate: If he hadn't done these things they would have starved anyway when the money was used up.

51. Mr. Hammond: Yes it seems even though Jack was very silly to talk to strangers and swap Daisy for beans as Kate said they did live happily ever after.
52. Abbas: Yes and Jack's mother was happy they got all the things back that the giant had stolen.

53. Mr. Hammond: (Moves to go to another group) Well done – keep thinking about what Jack could have said differently when he met the funny little man with the beans. Now whose going to be Jack?

54. Gary: I want to be Jack! Can I have his hat?

55. Abbas: I the man? Mhm. (Passes Jack's hat to Gary.)

56. Kate: I'll be Daisy. (Puts the bell around her neck.)

57. Kate: Here's your hat Abbas.

58. Abbas: I want the beans. (Kate passes the bag of beans to Abbas.)

59. Gary: This can be the road (points to divide between carpet and wet area).

60. Abbas: You go there and wait for us.

61. Gary: Come on Daisy. (Takes hold of Daisy's ribbon and walks towards Abbas.

62. Kate: Moo! Moo ooo!!

63. Gary: Sorry Daisy but we have to go to market.

64. Abbas: Hello! I like your cow.

65. Kate: Moo oo!

66. Gary: I'm taking her to market. I have to sell her.

67. Abbas: You know I want a cow.

68. Kate: Moo oo! (Looks at Abbas.)

69. Gary: My mother wants a lot of money for her.

70. Abbas: No money – I've got magic beans!

71. Gary: They're my beans. Give them to me (squabble, squabble).
72. Mr. Hammond: (Angrily turning round from talking with another group to see what's going on) Gary! Abbas! Move over to my desk! Wait there until I've finished here!

O'Neill, S. & Gish, A. (2009). Transcript 2, Classroom interactive talk. Adapted from S. O'Neill & A. Gish (2008). *Teaching English as a second language (p. 115)*. South Melbourne: Oxford University Press.