CONSTRUCTING WORD/WORLD KNOWLEDGE TOGETHER:
YOUNG CHILDREN'S EMERGING UNDERSTANDINGS
OF/WITH INFORMATIONAL TEXTS

by

MARGOT JESSICA FILIPENKO

B.Ed. (Elem.) The University of British Columbia, 1982
M.A. (Educ.) The University of British Columbia, 1989

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

THE FACULTY OF GRADUATE STUDIES

(Department of Language and Literacy Education)

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

April 2003

© Margot Jessica Filipenko, 2003
In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Language & Literacy Education
The University of British Columbia
Vancouver, Canada

Date April 23, 08
ABSTRACT

Although young children’s developing understandings of the concept of story have been thoroughly researched, children’s informational literacy development has gone largely unexamined. This descriptive, naturalistic study in an emergent-literacy preschool classroom investigated what young children’s talk revealed about their understandings of informational texts and the ways in which their teacher enabled and scaffolded those understandings. Over a 3-month period children’s responses were videotaped in five contexts: full and small group readalouds, full and small group activities incorporating informational texts and child-to-child informational text sharing. Other data included observational field notes and an interview with the focus teacher. Data (observational field notes and selective transcriptions or complete transcriptions) were collected on a total of 45 episodes of children engaging with informational texts. From this data set, 19 transcripts (2 full group readalouds, 6 small group readalouds, 5 full group activities incorporating informational texts, 3 small group activities incorporating informational texts, and 3 child-to-child sharing of informational texts) were chosen for coding and in-depth analysis. The other data were used in a supplementary way.

Six broad conceptual categories of children’s talk emerged from the data analysis: informational text knowledge; world knowledge; representing meaning; building connections; reflective talk, and relational talk. These categories represented the various facets of children’s engagement with informational texts and revealed the ways in which these children constructed meaning about and with informational texts. The teacher scaffolded the children’s emerging understandings of informational texts by taking the
roles of: recruiter (orienting and recruiting the children to the text); director (directing the children’s attention to particular features of the text); model (modelling the reading process); elaborator (providing elaborative feedback); connector (making life-to-text and text-to-life connections); provocateur (prodding children to think more deeply about a topic); and conductor (facilitating the day-to-day routines of a classroom community).

Individual styles of engagement with informational texts were identified and explored for two of the children. A grounded theory of young children’s informational literacy development was developed that proposes:

- Young children’s informational literacy development consists of six aspects: informational text knowledge, world knowledge, representation, reflection, connections and relational talk. During an informational literacy event these six aspects dynamically engage and blur as the child works to construct meaning.
- Informational literacy development is the dynamic process whereby this engagement results in a transformational moment.

iii
# TABLE OF CONTENTS

Abstract ........................................................................................................................ ii

Table of Content .......................................................................................................... iv

List of Tables ................................................................................................................ viii

List of Figures ............................................................................................................... ix

Acknowledgements ...................................................................................................... x

Chapter 1: The Problem ............................................................................................... 1
  Background to the Problem ....................................................................................... 4
  Emergent Literacy and Teaching Practice .............................................................. 8
  Importance of Reading Aloud to Young Children ................................................... 10
  Informational Texts .................................................................................................. 12
  The Purpose and Questions for the Study ............................................................... 18
  Methodological Choices Flowing from the Research Question:
    A Summary ........................................................................................................... 19
  Scope and Limitations of the Study ...................................................................... 21
  Significance of the Study ....................................................................................... 22
  Summary ................................................................................................................. 23
  Overview of the Chapters ....................................................................................... 23

Chapter 2: Review of Related Literature .................................................................. 26
  A Sociocognitive Constructivist Perspective on Learning
    and Development .................................................................................................. 28
  Zone of Proximal Development and Scaffolding
    Children’s Learning .............................................................................................. 34
  The Role of Talk in Children’s Learning ............................................................... 43
  Genre and Literacy Development ......................................................................... 49
  Summary ................................................................................................................. 55

Chapter 3: Research Methodology ............................................................................ 58
  Overview of the Methodology ............................................................................... 58
  Qualitative Research and the Constructivist/Interpretivist Paradigm ................. 60
  The Research Site .................................................................................................. 65
    Choice of the Research Site ................................................................................ 66
    Issues of Access ................................................................................................... 70
    Description of the Research Site ....................................................................... 73
    The participants .................................................................................................. 75
  Data Collection ....................................................................................................... 77
    The Researcher’s Role ......................................................................................... 77
Examples of the Seven Categories .................................................. 168
Scaffolding in Recruiter Role ......................................................... 174
Scaffolding in Director Role .......................................................... 176
Scaffolding in Model Role .............................................................. 179
Scaffolding in Elaborator Role ....................................................... 181
Scaffolding in Connector Role ........................................................ 184
Scaffolding in Provocateur Role ...................................................... 185
Scaffolding in Conductor Role ........................................................ 188

Summary ....................................................................................... 189

Chapter 6: Conclusions: Young Children’s Informational Literacy Development ..... 190
Summary of Findings, Relation to Current Research and Significance .......... 190

Findings related to Question 1: Young Children’s Informational Literacy development ................................................................. 191
Informational Text Knowledge ....................................................... 192
World Knowledge .......................................................................... 194
Representing Meaning ..................................................................... 195
Reflective Talk ............................................................................... 196
Building Connections ..................................................................... 198
Relational Talk ............................................................................... 200
The Engagement Styles of Individual Children ................................... 202

Findings related to Question 2: Scaffolding by the Teacher ..................... 203

Toward a Grounded Theory of Young Children’s Informational Literacy Development ................................................................. 208
Aspects of Young Children’s Informational Literacy Development ............ 209
The Process of Young Children’s Informational Literacy Development ..... 213

Pedagogical Implications of the Study .............................................. 219
Readaloud Practices ........................................................................ 219
The Role of Informational Texts ...................................................... 222
The Role of the Teacher ................................................................. 223

Recommendations for Further Research ........................................... 227
Conclusions .................................................................................... 229

References ..................................................................................... 231

Appendix A: Questions used for teacher interviews ............................... 248

Appendix B: Informational texts used for full and small group readalouds, full
and small group activities and child to child book sharing ..................... 249

Appendix C: Transcription system used in the study .............................. 250

Appendix D: Sample transcript of a child to child informational text sharing .................................................................................. 252
Appendix E: Information texts used for readalouds and activities chosen for in-depth analysis.
LIST OF TABLES

Table .................................................................................................................. Page

Table 1: Chronological phases of data collection................................. 81

Table 2: Frequencies and percentages of all children’s talk by type............ 128

Table 3: Frequencies and percentages of coding categories for all Tina’s
talk in the coded data .................................................................................... 156

Table 4: Frequencies and percentages of coding categories for all Leon’s
talk in the coded data .................................................................................... 162

Table 5: Frequencies and percentages of coding categories for all adult
talk in the coded data .................................................................................... 167
LIST OF FIGURES

Figure ........................................................................... Page

6.1 Six aspects of young children’s informational literacy development: A theoretical model ....................... 210

6.2 A theoretical model representing young children’s dynamic engagement with an informational text ........... 214

6.3 A theoretical model of the process of young children’s Informational literacy development ....................... 218
ACKNOWLEDGEMENTS

After so much time and work, it is with great satisfaction that I have arrived at the point of completion that allows me to acknowledge all those whose efforts are also reflected in this work. I begin with a very special thanks to the wonderful children, teachers and parents who made me welcome in their classroom and allowed this study to take place.

My committee also deserves special thanks and recognition for their efforts on this project. They are a group of outstanding individuals and I was fortunate to receive the collective benefits of their insights, expertise and friendship. Ann Anderson provided constant support and clear, insightful feedback throughout the process of creating this document. The time given by Marlene Asselin was extremely valuable and I especially appreciate her sense of humour and commitment to keeping me abreast of current research in informational literacy. Marilyn Chapman, my dissertation supervisor, deserves special thanks and acknowledgement for her role not only in the completion of this study but also her role in my work throughout my graduate studies. She is an extraordinary individual who has had a strong impact on my thinking and on the professional work I do in the future.

I also owe a debt of gratitude to many of the support staff in the Faculty of Education. Carol Kelly, the administrative assistant in the Department of Language and Literacy Education, for her friendship and gentle reminders about procedures and deadlines. Ann Eastham, the graduate secretary, who takes such good care of us all. Theresa O’Shea and Anne White for willing sharing their technical expertise. And, Keith
McPherson, supervisor of the Language Education Resource Centre, who helped me put
colour and life into my doctoral presentation.

I owe a special thanks to Lynne McGivern (fellow doctoral student and peer
debriefer) who generously gave her time, advice and friendship toward completion of this
document and insisted that on occasion I ‘down tools’ and enjoy a guilt free coffee or
lunch. Other friends and family were equally supportive of my commitment to this
project. In particular I would like to thank my sons, Matt and Sam, who sacrificed hours
of their computer time so that I could finish this report! My son, Geoff, who always
knew I could do it and my husband, Doug, for his continuous support of all my many
endeavours!

Finally, I would like to express my appreciation for the support I have received
from the University of British Columbia in the form of a University Graduate Fellowship.
CHAPTER 1: THE PROBLEM

In this Information Age the importance of being able to read and write informational texts critically and well cannot be overstated. Informational literacy is central to success, and even survival, in advanced schooling, the workplace, and the community. (Duke, 2000, p. 202)

Yet, despite the importance of informational literacy, research indicates that students are struggling with informational (expository) reading and writing in the intermediate and senior grades (Alverman & Boothby, 1982; Applebee, Langer, Mullis, Latham & Gentile, 1994; Dreher & Sammons, 1994). The study by Alverman and Boothby, for example, indicates that although fourth grade children are able to tell the differences between informational and narrative text, they still need guidance in how to read the two types of materials. Applebee et al. investigated the writing skills of students in grades 4, 8 and 12 on three writing tasks: informative writing, persuasive writing and narrative writing. Their report indicates that students perform poorly on informative and persuasive writing tasks. Dreher and Sammons investigated whether fifth grade students could preview a textbook strategically, use a textbook’s information access features, and successfully complete a textbook search task. The study revealed that 50% of the children had difficulty with the tasks even when assisted by guiding questions.

It has been suggested that an almost exclusive emphasis on story in the early childhood education years has left children with little experience in reading informational texts (Applebee et al., 1994; Caswell & Duke, 1998; Duke, 2000; Moss, 1995; Pappas,
1991, 1993, 1997; Senacore, 1991) and this, coupled with little experience in informational writing, has led to what Daniels (1990) calls an "expository gap" (p. 107). Daniels (1990) reports that the writing experiences of many students in the elementary grades is essentially:

[S]tory, story, story, story, story, story, story, story, term paper. This collision with the dreaded term paper assignment is the most dramatic, most worried over and perhaps emblematic demonstration of the 'expository gap' in the curriculum. A predictable outcome of this unbalanced curriculum is today's students write much better stories than they write reports, arguments, or essays. (p. 107)

Scholars suggest that providing young children with more experiences with informational texts in the early grades may help mitigate the difficulties with informational texts in the later grades (Applebee et al., 1994; Caswell & Duke, 1998; Duke, 2000; Pappas, 1991, 1993, 1997; Senacore, 1991).

However, there are other powerful reasons for sharing informational texts with young children. Many young children are simply not "turned on" by narrative texts or storybooks. Caswell and Duke (1998) point out that informational texts can play an important role in motivating beginning readers to read:

Our experience revealed that non-narrative texts provided a rich array of benefits for our students beyond simply preparing them for future encounters with these texts. Specifically, through interactions with non-narrative texts, these students became more interested, purposeful, perseverant, knowledgeable, confident, and active in their reading and writing. Non-narrative texts, therefore,
served as an important catalyst for their overall literacy development. (p. 109)

Experiences with informational texts, therefore, may not only help children avoid difficulties with these texts in later grades, but they may also broaden children's literary experiences and increase the likelihood of "turning on" as many children as possible to reading by capitalizing on their interests and curiosity (Caswell & Duke, 1998; Duke, 2000; Moss, Leone & Dipillo, 1997).

Finally, it is important to note that informational texts can be read for pleasure. Rosenblatt (1991) writes that when we read for information "we are also conscious of emotions about it and feel pleasure when the words we call up arouse vivid images and are rhythmic to the inner ear" (p. 445). It seems sensible to suggest that, if children find reading information books pleasurable, they will be inclined to read more and, in doing so, become more familiar and comfortable with this particular genre.

Experiences with informational texts in the early childhood years may help alleviate the difficulties some children have with these texts in the intermediate grades (Applebee et al., 1994; Caswell & Duke, 1998; Duke, 2000; Pappas, 1991, 1993, 1997); provide a "way-in" to literacy for children who are not "turned on" by narrative texts (Caswell & Duke, 1998; Duke, 2000; Moss et al., 1997); and provide a pleasurable experience which in itself may lead to further reading (Rosenblatt, 1991). Yet, although there is a base of support for greater attention to informational texts in the early childhood education classroom, a thorough search of the literature reveals that there is little research published about what young children know about information texts or how such knowledge progresses. The intention of this study is to fill this gap by investigating
what young children’s talk reveals about their knowledge of informational texts and how teachers in a preschool classroom support and extend that knowledge.

**Background to the problem**

There is an assumption in theories of literacy development that children’s understanding of narrative precedes their ability to understand non-story written language (Moss, 1995; Pappas, 1991, 1993). This assumption is based on the notion that narrative is “a primary act of mind” (Hardy, 1977, p. 12), which is itself premised on the notion that narrative is the fundamental way that humans organize themselves and their world (Britton, 1970; Hardy, 1977; Meek, 1977; Rosen, 1980).

For we dream in narrative, daydream in narrative, remember, anticipate, hope, despair, believe, doubt, plan, revise, criticize, construct, gossip, learn, hate, and love by narrative. In order really to live, we make stories about ourselves and and others, about the personal as well as the social past and future. (Hardy, 1977, p. 13)

In short, proponents of the idea that narrative is “primary” believe that the most basic human mind is a story-making one.

Using the idea that children make sense of experience through narrative or storying, there has been a call for educators to focus extensively on story particularly in the early childhood education years (Egan, 1988; Wells, 1986). Wells (1986), for example, in *The Meaning Makers* argues eloquently for the central role of stories across the early childhood education curriculum and Sutton-Smith (1981) maintains that children with an extensive background and experience with narrative are more capable of developing understandings of more abstract concepts. He writes that the human mind
dreams of the rise and fall of heroes, ideologies, marriage, war, mortality and biography. Onto this more basic mind stuff, the increasingly rational calculations of probabilism, strategy and planning are subsequently grafted" (Sutton-Smith, 1981, p. 37). Responding to this call for a more central role for narrative or story in the early childhood education classroom, many early childhood education teachers have moved away from basal series and now use literature as the basis of their reading programs (Hiebert & Fisher, 1990; Sanacore, 1991). In keeping with the notion that narrative is "primary," these literature-based programs frequently consist entirely of fiction (Moss, 1995; Pappas, 1991, 1993). The research of Hoffman, Roser and Battle (1993), for example, reported that in 537 elementary classrooms surveyed (kindergarten to grade 6) none of the most frequently read titles at any grade level were non-fiction. The research of Hiebert and Fisher (1990), which investigated the literacy tasks of eight grade 2 and 6 classes, found that the literacy tasks undertaken by this group of children were generally narrative in nature.

Scholars are now questioning the primacy of narrative and the assumption that children more readily understand narrative than exposition (Applebee et al., 1994; Caswell & Duke, 1998; Duke, 2000; Moss, 1995; Pappas, 1991, 1993, 1997; Wells, 1999). Pappas (1991), for example, investigated a group of kindergarteners’ ability to retell both a child’s narrative trade book and a child’s non-narrative (i.e., informational text) trade book. Her findings showed that this group of children was as capable of retelling an informational text as they were of retelling a narrative text. The research of Moss (1995) which examined the extent to which 20 first graders were able to comprehend expository text, as measured through an oral retelling of a child’s information trade book, confirmed Pappas’s (1991) finding that young children are
capable of comprehending expository text. Indeed, the experiences of Caswell and Duke (1998) demonstrated that for some students non-narrative texts are a “way in” to the world of literacy.

Research, therefore, suggests that theories about the primacy of narrative in genre development are questionable (Caswell & Duke, 1998; Duke, 2000; Moss, 1995; Pappas, 1991, 1993, 1997). Further, research findings suggest that an overemphasis on narrative in the early childhood education years has led to students’ poor informational reading and writing skills in the intermediate and secondary grades (Applebee et al., 1994; Hiebert & Fisher, 1990; Littlefair, 1993). The research of Duke (2000) confirms the scarcity of informational texts in many early childhood education classrooms. Her study suggests that:

> [C]ontinued low levels of achievement in informational reading and writing should not be attributed solely to the difficulty of these forms of text. Rather, there is now greater reason to hypothesize that students perform poorly with informational text at least in part because they have insufficient experience with it. (p. 221)

Moss and Newton (2002) demonstrated a scarcity of informational literature even in classrooms that continue to use basal readers. Their study of the quantity of informational literature found in six basal readers at the grade 2, 4, and 6 level, found that only 20% of the pages at all grade levels were devoted to informational literature (Moss & Newton). The researchers suggest that these findings demonstrate the need for publishers to devote more attention and space to informational literature.
A review of the research, therefore, suggests that children's difficulties with informational texts in the intermediate and secondary grades may be a result of their lack of experiences with these types of texts in the early childhood education years rather than something that is inherent either in children's cognitive capacities or the structures of informational texts. Further, it is both suggested and implied that sharing information books with young children may result in the ability of such children to both read and write informational texts more successfully in the later grades (Duke, 2000; Moss, 1995; Pappas, 1991, 1993, 1997). The belief that sharing information texts with young children will lead to a greater facility with these texts in the later grades is based on the notion that "the single most important activity for building the knowledge required for eventual success in reading is reading aloud to children" (Anderson, Hiebert, Scott & Wilkinson, 1985, p. 23). This belief is one of the central tenets of the theoretical perspective known as "emergent literacy."

The study undertaken here rested on a theoretical foundation provided by the paradigm of emergent literacy. Teale and Sulzby (1991) write that Marie Clay (1966) first employed the notion of emergent literacy in her doctoral dissertation research. However, since then the concept has been further refined and developed (Goelman, Oberg & Smith, 1984; Holdaway, 1979; Sulzby, 1985; Teale & Sulzby, 1991). In *Emergent Literacy as a Perspective for Examining How Young Children Become Writers and Readers*, Teale and Sulzby (1986) provide an historical overview and a thorough review of the research pertaining to emergent literacy. They conclude the review by stating that the study of literacy development in early childhood has expanded to the
point where we can now say that the new perspective (emergent literacy) has become legitimized, as opposed to “reading readiness.”

The remainder of this section will focus on a discussion of the theory and research as it relates to emergent literacy and the principles that guide instruction in an emergent-literacy classroom; the importance of reading aloud to young children; and what constitutes an informational text.

**Emergent Literacy and Teaching Practice**

A theory of emergent literacy holds that:

1. Literacy development begins long before children start formal instruction.
2. Listening, speaking, reading, and writing abilities (as aspects of language – both oral and written) develop concurrently and interrelatedly, rather than sequentially.
3. The functions of literacy are an integral part of learning about reading and writing.
4. Children are doing critical cognitive work in literacy development during the years from birth to six.
5. Children learn written language through active engagement with their world. They interact socially with adults in writing and reading situations; they explore print on their own; and they profit from modeling of literacy by significant adults.
6. Although children’s learning about literacy can be described in terms of generalized stages, children can pass through these stages in a variety of ways and at different ages. (Teale & Sulzby, 1991, p. xviii)
Although the concept of emergent literacy has been thoroughly developed (Goelman et al. 1984; Holdaway, 1979; Sulzby, 1985; Teale & Sulzby, 1991), questions persist as to what instruction should look like in an emergent-literacy classroom (Labbo & Teale, 1997). Labbo and Teale (1997) suggest four principles that should guide the teaching practice in an emergent-literacy classroom. These principles are as follows:

- Literacy should be experienced as part of the everyday life and activities of the classroom;
- teachers should view the child as active constructors of their own literacy knowledge and should see their role as that of a guide;
- different developmental paths into literacy learning should be supported and teachers should be flexible in philosophy, activities, and assessment procedures to accommodate the range of paths children take and strategies children employ in learning to read and write conventionally;
- curriculum should offer integrated language arts experiences since evidence suggests that listening, speaking, reading and writing are learned interrelatedly, rather than sequentially. (Labbo & Teale, 1997, pp. 250-251)

The role of the teacher in the emergent-literacy classroom, therefore, is to support and extend children's literacy development. Specifically, the teacher should facilitate literacy development by: embedding literacy in daily classroom routines, designing literacy-involving centre activities, and creating opportunities for children to develop literacy strategies and concepts about books through a variety of book reading activities.
The emergent-literacy classroom represents a seamless curriculum in which reading, writing, speaking and listening are all viewed as integrated aspects of literacy which are woven throughout the everyday activities of the classroom (Chapman, 1997; Labbo & Teale, 1997).

Through this embedded-literacy approach, children have opportunities to develop a basic understanding of the forms and functions of literacy: what written language is like, what it is for, the differences between the written and spoken word, and an appreciation and enjoyment of written language. (Labbo & Teale, 1997, p. 252)

Above all, an emergent-literacy classroom is a literate environment that includes books, writing materials, environmental print, art supplies, and comfortable places set aside for browsing through books. Free access to books, some of which might have been made by the children themselves, helps children link their beginning hypotheses about literacy with the ‘real thing’ (Chapman, 1997; Salinger, 1996, p. 157). An emergent-literacy classroom also includes frequent read aloud sessions.

The Importance of Reading Aloud to Young Children

Educational researchers and teachers generally agree that reading aloud to children is one of the most powerful and influential of all the literacy acts in which adults and children engage (Sipe, 2000; Wells, 1985). The research of Wells, for example, identified that children who have had a wide experience with shared book reading in the years prior to the commencement of formal schooling are generally more academically successful than those children who have not. Wells’ suggestions as to why the sharing of books may be beneficial to later academic achievement are as follows:
• Through shared book experiences children are able to extend the range of their experience beyond the limits of their immediate surroundings and develop the vocabulary to talk about such experiences;
• listening to books read aloud familiarizes children with the literary language and structure of books; and
• through listening to books read aloud children begin to experience the symbolic potential of language.

In fact, the research of Wells (1985) suggests that the single most important activity for later academic success is reading aloud and sharing books with children.

Other cited benefits of reading aloud to children include the following:
• Providing young children with a strong sense of what reading is all about (Salinger, 1996);
• helping young children develop a love of books (Holdaway, 1979);
• helping young children acquire knowledge about the conventions of print and books (e.g., directionality, sound-symbol relationships etc.) (Clay, 1991);
• helping young children learn that book language differs from everyday speech (Purcell-Gates, 1989);
• developing children’s listening comprehension (Dickinson & Smith, 1994);
• developing children’s background knowledge (Labbo & Teale, 1997).

The overall significance of adult-child shared book reading experiences during early childhood is indicated in the meta-analysis of the available research related to adult-child reading completed by Bus, Van Ijzendoorn and Pellegrini (1995). The purpose of
the review was to test empirical evidence regarding the importance of joint book reading (adult-child) as “the single most important activity for developing the knowledge required for eventual success in reading” (Bus et al., 1995, p. 2). In selecting the studies to be included in the meta-analysis, Bus et al. (1995) focused on studies examining the frequency of book reading to preschoolers. The results of the review support the hypothesis that adult-child reading is related to outcome measures such as language growth, emergent literacy and reading achievement.

Research suggests the importance of involving children in shared reading experiences that present them with a wide variety of both topics and text types (Caswell & Duke, 1998; Duke, 2000; Labbo & Teale, 1997; Pappas, 1991, 1993, 1997; Senacore, 1991). Labbo and Teale (1997) write that experiences with a variety of texts (including predictable books, folk and fairy tales, realistic fiction, informational/nonfiction books and poetry) will help children construct rich schemata for features of genres.

**Informational Texts**

The primary purpose of informational texts is to provide users with facts and information (Gunning, 2000; Vacca & Vacca, 1999). In order to make the information accessible authors use format features and internal text structures. Vacca and Vacca (1999) refer to the format features as the external text structures. However, for the purposes of this study, it was felt that the term format features better reflected those aspects of text (e.g., table of contents, glossaries, indexes etc.) that are intended to facilitate the reading of informational texts. In addition to the overall organization of the text, each chapter will often include introductory or summary statements, headings, graphs, charts, illustrations, and guide questions (Vacca & Vacca, 1999, p. 394).
The internal text structures refer to the ways in which authors organize their ideas. For example, the author “may develop an idea by listing a series of reasons, describing a location, supplying causes, or using some other technique” (Gunning, 2000, p. 254). Vacca and Vacca (1999) explain that the patterns of organization “represent the different types of logical connections among the important and less important ideas in informational material” (p. 394). The following five text patterns seem to predominate in informational writing (Gunning, 2000; Meyer & Rice, 1984; Vacca & Vacca, 1999):

- enumeration/description (i.e., ideas are connected through description by listing important characteristics or attributes);
- sequence (i.e., facts, events or concepts are arranged in sequence);
- comparison/contrast (i.e., pointing out differences and/or similarities among facts, people, events or concepts);
- cause and effect (i.e., an effect is presented along with the cause or causes);
- problem and solution (i.e., a statement of a problem is followed by a possible solution or series of solutions).

Informational writing can be complex, as authors may use different types of text structures in the same text to represent their ideas. Vacca and Vacca (1999) write:

Authors do not write texts in neat, perfectly identifiable patterns. Within the individual paragraphs of a text assignment, several kinds of thought relationships often exist. Suppose an author begins a passage by stating a problem. In telling about the development of the problem, the author describes a set of events that contributed to the problem. Or perhaps the author compares or contrasts the
problem under consideration with another problem. In subsequent paragraphs, the solutions or attempts at solution to the problem are stated. In presenting the solutions, the author uses heavy description and explanation. These descriptions and explanations are logically organized in a sequence. (p. 398, emphasis in original)

Slater and Graves (1989) synthesized current findings from research studies of comprehension of informational texts conducted with elementary school, middle school, high school, and college students. The authors focused on studies that used passages found in classroom textbooks and that implement instruction similar to that found in classrooms. Slater and Graves (1989) concluded that:

• students who identify and use text structures remember more of what they read than do students who cannot;
• informational text structure can be taught;
• training in the use of text structures improves reading comprehension; and
• students’ ability to use text structure increases with age (pp. 163-164).

Pappas (1991) identified and described three further textural features of informational texts. It is easier to understand these textural features if they are compared to the textural features of a narrative text. Pappas (1991) identified the first of these textural differences as co-referential versus co-classification. In the story *The very hungry caterpillar*, for example, after being introduced, “a tiny and very hungry caterpillar” is referred to as “he” or “she” or “the caterpillar.” References to this particular character, throughout the story, create a co-referential ‘thread’ or ‘chain’ of meaning that holds the story together. In an information book on caterpillars, however,
the mention of "a caterpillar" does not refer to a particular caterpillar (character) but rather a class of caterpillars in general. The pronoun "it" is used to refer to the caterpillar class and creates a co-classification 'thread' or 'chain' of meaning regarding caterpillars.

The second difference in textural features between story and information books is the use of verb tenses. In narrative texts past-tense verbs are generally used, while in information texts present tense verbs are generally used (Pappas, 1991). The third textural feature difference between narrative and information texts is the degree to which descriptive constructions are included in each text. A descriptive construction is what linguists call "relational processes." Pappas (1991) identifies three such processes: 1) attributive processes, for example, the caterpillar looks content; 2) identifying processes, e.g., the swallowtail caterpillar is black, and, 3) possessive processes, e.g., the caterpillar seems to have built a cozy home. Finally, Pappas (1991) writes that stories and information books are realized by different linguistic patterns. Specifically:

(S)tories involve interpersonal understandings – how characters' goals interrelate, how their plans to achieve these goals mesh or clash. In contrast, the information genre does not deal with specific characters and their goals, personal motives for actions, and the like. Instead, information books make general statements about animals, objects, people, and so forth, because their purpose is to inform. To realize these different cultural purposes, texts from different genres are structured in two interrelated ways – through differences of texture and through differences of global organization. (Pappas, 1991, emphasis in the original, p. 451)

However, although the above discussion establishes that what distinguishes informational texts from other written genres is their format features and internal text
structures, a close scrutiny of some popular children’s informational texts reveals that there is not necessarily a clear boundary between storybooks and informational texts. For example, *Jack’s Garden* by Henry Cole (1995) tells the story of a boy’s garden in a poetic form. Although narrative and poetic in form, the book, nonetheless, offers accurate scientific information (the purpose of informational texts), including labeled diagrams of plants and instructions on how to start your own garden. In this text, poetry, narrative and information are fused together.

Duke (2000) identified three types of informational texts:

1. Expository texts. Expository texts deal with general categories, for example, “Cats” as opposed to a particular cat. An example of an expository text is Jennifer Coldrey’s (1988) *Snails*. The book is factual and informative; information is organized under headings and sub-headings; the generalizable present tense is used; and the text includes co-classification chains and relational descriptive processes. The book has a table of contents, a glossary, an index, and a bibliography of books that offer more information on snails. There is a diagram showing the life cycle of a snail and instructions on keeping snails. Generally, this book has many of the characteristics of informational texts discussed earlier (i.e., format features and internal text structures and a purpose to inform).

2. Narrative-informational text. This is defined as a narrative text in which the primary purpose is to inform about the natural or social world (Duke, 2000). *Tale of a Tadpole*, by Barbara Ann Porte (1997), is an example of a narrative-informational text. The story tells of a little girl, Francine, who is carefully
tending her tadpole, Fred, and eagerly awaiting its transformation into a frog. Although the text is narrative in form the information it contains about tadpoles and their transformation into frogs is scientifically accurate, and is the central theme of the story (its purpose is to inform).

3. Informational poetry. Informational poetry is defined as poetry in which a primary purpose is to convey information about the natural or social world (Duke, 2000). *A Seed Grows* by Pamela Hickman and Heather Collins (1997) is an example of an informational poetry text. It is a cumulative poem; each page adds a new line to the poem, which conveys accurate information about how seeds grow. Its primary intention is to inform.

Furthermore, “no one feature necessarily determines whether or not a text is considered informational. Rather, informational texts are seen as having several among a group of features” (Duke, 2000, p. 205). Thus, although the purpose of information books is to document, organize, and store factual information on a topic (Derewianka, 1998, p. 51), that factual information may be, and often is, organized in narrative or poetic form for younger children. However, given the complexity of those informational texts which make use of format features and internal text structures, it seems sensible to suggest that students need many experiences with such texts (beginning in the preschool years) if they are to become efficient readers of informational material (Gunning, 2000; Moss, 1995; Moss, Leone & Dipillo, 1997; Pappas, 1991, 1993; Sanacore, 1991; Vacca & Vacca, 1999).
The Purpose and Questions for the Study

Research suggests that post-primary school students' traditionally poor performance with informational texts may be in part the result of their lack of experience with these texts in the crucial early years of schooling (Alverman & Boothby, 1982; Applebee et al., 1994; Dreher & Sammons, 1994; Moss, Leone & Dipillo, 1997; Pappas, 1991, 1993). Yet, little attention has been given to identifying the ways in which children can be assisted in becoming competent independent users of a variety of texts (Duke, 2000; Littlefair, 1993). It is believed that more experience with informational texts in the early grades may help mitigate the difficulties many students encounter with these texts in the later grades. However, as yet, very little research has been published on young children's understandings of informational texts and how such understandings develop (the extant literature will be discussed in depth in Chapter 2). The purpose of this study was to investigate what young children's talk (during informational text readalouds and activities incorporating informational texts) revealed about their understandings of informational text, and how verbal interactions with teachers during informational text readalouds and activities incorporating informational texts might support and extend such knowledge. The research questions for the study were: In the context of an emergent-literacy preschool classroom of three- and four-year-old children:

1. What is the nature of children's verbal interactions as they share informational texts, participate in informational text readalouds, and engage in activities incorporating informational texts? What does this talk reveal about the children's emerging understandings of informational texts?
How does a teacher in an early childhood education classroom scaffold the children's developing understandings of informational texts during informational book readalouds and activities incorporating informational texts?

Methodology Choices flowing from the Research Questions:

A Summary

The type of research best suited to answering the above questions is descriptive, qualitative research conducted in the naturalistic setting of a preschool classroom (Bogdan & Biklen, 1998). The study took place in a mixed-age preschool classroom of three-, four-, and five-year-old children. The preschool's population was middle-class, with a broad racial and cultural mix. Two full-time teachers and a part-time assistant taught in the classroom. The teachers used trade books for shared reading that was scheduled once daily. Further informal book readalouds with a small group took place in response to children's requests. Information books were also used to support and facilitate some of the classroom activities, for example, to gather information about the environment in which dinosaurs lived for a "Dinosaur Diorama." Since the aim of the study was to capture, as fully as possible, young children's growing understandings of information books and the ways in which teachers support that growing knowledge, the focus of the study became:

1. the associated talk that occurred before, during, and after whole group informational book readalouds in the formal circle-time setting;
2. the associated talk that occurred before, during, and after whole group activities incorporating informational books during the formal circle-time setting;

3. the associated talk that occurred before, during, and after informational book readalouds with a small group in a spontaneous, informal setting;

4. the associated talk that occurred before, during, and after small group activities that incorporated informational texts;

5. the associated talk that occurred before, during, and after child-to-child informational book sharing.

The rationale for the choice of these five contexts was that each of the contexts provided a unique opportunity for children to display their knowledge of informational books. For example, it was felt that the student-driven, spontaneous informal book readalouds and free-choice small group activities (which included informational books) would encourage different types and quantities of responses, particularly from those children who might be less likely to speak in a formal full-group circle situation. In addition, since four of the five contexts included a teacher, it was felt that there would be ample opportunity to observe how a "more expert other" scaffolded the children's understandings of informational texts. The researcher's stance ranged along the continuum from passive participant to moderate participant (Spradley, 1980). The readaloud discussions and activities using information books were videotaped and transcribed by the researcher.

Other data sources included observational field notes, teacher interview, and a research log noting the various types of data collected in chronological order. Data were analyzed using the constant comparative method of analysis (Strauss & Corbin, 1990). Codes and
categories were assigned and modified as the analysis proceeded (Bogden & Biklen, 1998). In this way a grounded theory of these children’s informational literacy development emerged.

**Scope and Limitations of the Study**

Understanding young children’s informational literacy development is best studied in a classroom community that facilitates such development by: 1) creating opportunities for children to develop informational literacy knowledge about informational texts through a variety of book reading activities; 2) embedding informational literacy in daily classroom activities; 3) designing center activities involving informational literacy; and 4) understanding the role of talk in children’s learning. The preschool classroom chosen for this study is an exemplary model of this type of emergent-literacy program. Thus, the study concerns an almost ideal educational situation. However, it should be noted that although the children in the study were mainly middle-class, they included children not only from the community-at-large, but also the children of university students from many parts of the world. As a result, the participants represented a broad racial and cultural mix. This combination of factors allowed the researcher to investigate what a variety of children from a broad range of racial and cultural backgrounds know about informational texts and how such knowledge is supported and extended in a model emergent-literacy classroom.

The study is limited in the same way that all descriptive classroom studies are limited, in that it reports on the experience of 18 specific children and their teachers in a particular classroom. As such it attempts to provide a sufficiently “thick description” of this one preschool classroom case in order to enable the reader to determine whatever.
generalizability it has for other children, other preschool classrooms, and other teachers (Sipe, 1996). The trustworthiness of the study is discussed fully in Chapter 3.

**Significance of the Study**

Although young children's developing understandings of the concept of story have been thoroughly researched, children's informational literacy development has gone largely unexamined. This study is significant in that it attempts to describe what young children, in the emergent stages of literacy, know about informational texts and the role of adults in supporting and extending that knowledge. The study describes and analyzes the talk of three-, four-, and five-year-old children and their teachers as they engage in meaning-making activities designed around informational texts.

The study seeks to expand and broaden our view of young children's developing literacy by focusing on informational literacy development. It builds on previous research by describing young children's earliest interactions with informational texts and the role of expert other in supporting and extending children's knowledge. Although there is a small body of research which has explored young children's ability to understand informational texts (Moss, 1995; Pappas, 1991), generally, research has focused on gaps in elementary students' understanding of informational texts (Alverman & Boothby, 1983; Applebee, Langer, Mullis, Latham & Gentile, 1994; Littlefair, 1993). This study will expand and build on the research by focusing specifically on young children's understandings of informational texts and how such understandings progress in the social context of an emergent-literacy classroom. The practical significance of the study lies in its implications for pedagogical practice, which are discussed in Chapter 6.
Summary

This descriptive study, situated in a sociocognitive constructivist paradigm, uses qualitative methods to describe and analyze the comments, questions and responses of the teachers and children in a preschool class as they engaged in a variety of activities involving informational texts. The study was designed to capture a rich and substantial body of children’s and teachers’ responses and to analyze the patterns in these responses. The study was also designed to capture the ways in which a “more expert other,” involved in activities with informational texts, scaffolded the children’s developing understandings of these texts. It was expected that the study would add to the body of knowledge about children’s developing literacy through its focus on these children’s informational literacy development. It was also anticipated that findings from the study would assist teachers in their instructional decisions about how to effectively support and extend young children’s understandings of informational texts. Further, it was hoped that the study would produce a grounded theory of children’s informational literacy development.

Overview of Other Chapters

Chapter 2 of this thesis offers a review of theoretical perspectives and research findings from a variety of academic disciplines, subject matters, and research traditions that are relevant to this study. In particular, the chapter focuses on the transactional nature of learning and development, particularly as it pertains to literacy learning; the role of language in children’s cognition and literacy development; and the role of genre in literacy development.
Chapter 3 discusses the research methodology adopted for the present study. The researcher argues that the nature of this research topic determines that qualitative research is appropriate for the study. Thus, a variety of qualitative data collection methods such as participant observations, video-tapings, and a teacher interview are employed for the study. The chapter then discusses the process of data analysis undertaken for this study and finishes with an examination of the trustworthiness of the study.

Chapter 4 describes the context within which this group of preschool children’s understandings of informational texts developed. It begins by considering the teacher’s philosophy of instruction, the philosophy of the preschool, and the emergence of the focus-integrated theme. The chapter continues with a description of the physical arrangement of the classroom and also the routines and activities of the classroom that support or encourage the use of informational texts.

Chapter 5 presents the findings of the study in terms of the two research questions, the first of which was:

What is the nature of children’s verbal interactions as they share informational texts, participate in informational text readalouds, and engage in activities incorporating informational texts? What does this talk reveal about the children’s emerging understandings of informational texts?

First, the codes and categories that emerged during the data analysis are presented. Next, I focus on what each category reveals about how the children engaged with informational texts and the nature of that engagement. This section also includes a presentation of findings that reveal individual styles of engagement with informational texts. The chapter continues with the findings for the second research question:
How does a teacher in an early childhood education classroom scaffold the children's developing understandings of informational texts during informational text readalouds and activities incorporating informational texts?

This section documents the patterns of talk between the teacher and the children and traces the ways in which the teacher functioned in the scaffolding process. Evidence is provided to demonstrate the ways in which children's understandings of informational texts was enabled.

Chapter 6 consists of four sections. The first section focuses on the findings and significance of the study and discusses the findings within the context of current research relating to children's literacy development. In the second section the findings are utilized to suggest a theory of young children's informational literacy development. The third section discusses the findings in terms of their implications for pedagogical practice, in particular, readaloud teaching practices, the role of informational texts, and the role of the teacher in supporting young children's informational literacy development. Finally, implications for further research are presented.
CHAPTER 2: A REVIEW OF THE LITERATURE

The present chapter offers a review of theoretical perspectives and research findings from a variety of academic disciplines, subject matters, and research traditions that are relevant to this study. The intent of this review is to acquaint the reader with the major studies and theoretical works relevant to this area, as well as furnish background for the conceptual framework within which this study operated. It has been argued that while much is known about children's developing concept of story, little is known about children's developing knowledge of informational texts; that the little research on young children's understandings of informational texts that does exist offers few insights into how such knowledge might be supported and extended within the social community of the early childhood education classroom; and that there is lack of research on the reading aloud of information books to young children. Taken together, these limits on current knowledge and research suggest that a study is needed which:

1. Describes and analyzes young children's engagement with informational texts during a) informational book readalouds and b) classroom activities incorporating informational texts.

2. Describes and analyzes how social interactions with more expert others during a) informational book readalouds and b) classroom activities incorporating informational texts supports and extends young children's knowledge of informational texts; and

This chapter is organized into five major sections. The first section “A sociocognitive constructivist perspective on learning and development” focuses on the transactional nature of learning and development, particularly as it pertains to literacy learning. Since this study rests on a theoretical foundation provided by the paradigm of sociocognitive constructivist theory, it is the intention of this first section to bring into focus those aspects of the work of Vygotsky and Piaget upon which the sociocognitive constructivist paradigm is built.

The second section “Zone of proximal development and the scaffolding of children’s learning” focuses more narrowly on Vygotsky’s (1978) theory about the relationship between learning and development and reviews definitions and descriptors of the term scaffolding. The intention of this section is to focus more intently on the social environment, or support system that allows children to move forward in their learning and development, particularly in the area of literacy development.

The third section “The role of talk in children’s learning” will consider the nature of talk as an essential component of children’s learning. The review will focus, in particular, on the role of language in children’s cognition and literacy development.

The fourth section “Genres and literacy development” will continue with a discussion of theory and research which focuses on the importance of children developing mastery over the forms, functions and social purposes of a broad range of genres and the importance of such mastery to literacy development.
A Sociocognitive Constructivist Perspective on Learning and Development

The sociocognitive constructivist perspective on learning and development has its roots in the work of Vygotsky (sociocultural perspective) and Piaget (cognitive constructivist perspective). Both Vygotsky and Piaget believed that by using the physical (taste, touch, sound, sight and smell) and mental tools they are born with, children interact with their environment to make sense of it and in doing so they create their own knowledge. Thus, children are active participants in their acquisition of knowledge. However, although in his later writings Piaget (1969) acknowledged the role of social transmission in the child’s development, he believed that the influence of social transmission was limited to the content of knowledge. Vygotsky, on the other hand, believed that social transmission influenced not only the content of what children learned but also the very nature of the thinking process (Bodrova & Leong, 1996).

Piaget (1969) proposed that cognitive development occurs within each individual child as the child interacts with the physical environment. In Piaget’s view, the child is an “independent discoverer” who learns about the world on her own and, thus, the role of other individuals in a child’s learning is limited to planning the child’s physical environment (Bodrova & Leong, 1996). Piaget further believed that cognitive development was universal in nature and independent of the child’s cultural and social context. Thus, all children would pass through the following universal stages of development:

- sensorimotor stage (Birth to age 2);
- preoperational stage (Age 2 – 7);
• concrete-operational stage (Age 7 – 11); and
• formal-operational stage (Age 11+).

In contrast, Vygotsky (1962, 1978) believed that the social and cultural contexts determine the type of cognitive processes that will emerge. For example, a culture that does not make particular use of formal reasoning will not foster formal operations in their children (Bodrova & Leong, 1996). Thus, for Vygotsky, the social context influences learning far beyond simply reinforcing knowledge, attitudes and beliefs; it profoundly affects both how and what we think. Berk and Winsler (1995) write:

A basic premise of Vygotsky’s theory is that all uniquely human, higher forms of mental activity are derived from social and cultural contexts and are shared by members of those contexts because these mental processes are adaptive. They lead to knowledge and skills that are essential for success within a particular culture. (p. 12)

The social context, within which the child’s learning takes place, means the entire social milieu of the child’s environment including:

1. The immediate interactive level, that is, the individual(s) the child is interacting with at the moment
2. The structural level, which includes the social structures that influence the child such as the family and school
3. The general cultural or social level, which includes features of society at large such as language, numerical systems and the use of technology. (Bodrova & Leong, 1996, p. 9)
All of these social contexts will influence the way we think, the way we view the world, and how we construct reality (Bodrova & Leong, 1996; Chapman, 1997; Sipe, 1996). In short, one of the unique qualities of Vygotsky’s sociocultural theory is that “thinking is not bounded by the individual brain or mind” (Berk & Winsler, 1995, p. 12); rather, the individual mind is “inseparably joined with other minds” (Berk & Winsler, p. 12). According to Vygotsky’s theory, therefore, cognition is social in nature.

It is important to note that for Vygotsky both physical manipulation and social interaction are necessary components for learning and development. Although it is through social interaction that the child learns which characteristics are most important and what to notice and act upon, it is through hands-on experiences that the child is able to construct her own understandings. Vygotsky’s theory holds that a child first develops new learnings during interactions with adults or more competent peers. These learnings are then internalized to become part of the child’s psychological world. Vygotsky (1978) wrote:

> Every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first between people (interpsychological), and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relations between human individuals. (p. 57, emphasis in the original)

Vygotsky proposed, therefore, that all mental processes exist first in a shared environment, and then move to an individual plane. Thus, the social context is ‘part and
Vygotsky (1962, 1978) believed that, although learning and development are related to each other, they are two very different processes. Unlike Piaget (1969), who suggested that before learning can take place the child must have attained the necessary developmental landmark (e.g., the child must attain the developmental stage of concrete operations before the child can think logically), Vygotsky believed that learning could impact development. Although Vygotsky did not question the existence of developmental landmarks that can limit a child’s ability to learn new concepts or skills, he did suggest that the child must accumulate learning before development or qualitative change can occur. Vygotsky (1978) wrote, “Learning is not development; however, properly organized learning results in mental development and sets in motion a variety of developmental processes that would be impossible apart from learning” (p. 90).

According to Vygotsky, therefore, “learning proceeds and influences development” (Chapman, 1997, p. 44). Piaget believed, on the other hand, “that a child’s current developmental status determines his ability to learn and cannot be changed by the learning itself” (Bodrova & Leong, 1996, p. 29).

Both Vygotsky and Piaget, however, believed that children are active constructors of knowledge. This raises the question: How do people actually acquire and construct knowledge? An important idea that has its roots in both Piaget’s and Vygotsky’s theories is that learning occurs as children acquire new concepts or schemas (McGee & Richgels, 1996). Schema theory has been a major contribution of cognitive psychology to understanding psycholinguistic processes in literacy (Harste, Woodward & Burke, 1984).
Harste, et al. (1984) write that there is no definitive statement of what schema theory is but broadly speaking a concept or schema is “a mental structure in which we store all the information we know about people, places, objects, or activities” (McGee & Richgels, 1996, p. 5). Rumelhart (1984) writes that:

A schema theory is basically a theory about knowledge – a theory about how knowledge is represented and about how that representation facilitates the use of the knowledge in particular ways. According to schema theories all knowledge is packaged into units. These units are the schemata. Embedded in these packets of knowledge, in addition to the knowledge itself, is information about how this knowledge is to be used. (p. 2)

Harste et al. (1984) suggest that a theory of schema “posits the mind as a highly complex set of cognitive structures which govern not only perception but also comprehension” (p. 90). From a reading perspective, schemata (the plural of schema) reflect all of a person’s prior knowledge, experiences, conceptual understandings, attitudes, values, skills, and procedures that they bring to the reading process. Thus, what the reader brings to the process will determine what they get from the reading experience (Harste et al.). From a cognitive perspective, schema theorists share much with Piagetian thought which views comprehension as a process of making sense through assimilation and accommodation, that is, “learning is seen as the binding, building, and reorganization of cognitive structures” (Harste et al., p. 90). Piaget, however, saw growth and development as predominantly biologically and genetically based, while the schema theorists see experience and accumulated prior knowledge as central to development. While agreeing with aspects of schema theory, Harste et al. suggest that from their
perspective schema is a sociocognitive phenomenon since learning is first and foremost a social event and, thus, specific both to culture and context. Thus, a sociocognitive constructivist perspective that acknowledges the “interplay between cognitive and social constructivist perspectives” (Chapman, 1997, p. 44) has its roots in Piagetian and Vygotskian theories of learning and development. Chapman (1997) suggests this perspective (sociocognitive constructivist) can also be called the transactional approach since it views learning as “constructed through transactions between the individual and the community, between the personal and the social” (p. 44). The sociocognitive constructivist or transactional approach, therefore, acknowledges both the social and individual dimensions of learning.

The sociocognitive constructivist perspective recognizes that an effective literacy program balances children learning “naturally” by being immersed in rich literacy experiences, with appropriate instruction. Bainbridge and Malicky (2000) write:

Sometimes children learn inductively, whereas at other times they need deductive instruction. Sometimes incidental instruction is sufficient, whereas at other times direct, systematic instruction is critical to learning. And, to become good at any activity (including reading, talking, or writing), children need to spend time doing or practicing it. (p. 25)

In a sociocognitive constructivist classroom teachers balance the level of difficulty of tasks by adjusting and varying the amount of teacher and peer support necessary to help children learn new strategies and develop mastery over those strategies (Bainbridge & Malicky, 2000).
Zone of Proximal Development (ZPD) and Scaffolding Children’s Learning

The zone of proximal development (ZPD) is a way of conceptualizing the relationship between learning and development (Berk & Winsler, 1995; Bodrova & Leong, 1996; Chapman, 1997). Bodrova and Leong write:

Vygotsky chose the word zone because he conceived development not as a point on a scale, but as a continuum of behaviors or degrees of maturation. By describing the zone as proximal (next to, close to), he meant that the zone is limited by those behaviors that will develop in the near future. Proximal refers not to all possible behaviors that will eventually emerge, but to those closest to emergence at any given time. (p. 35, emphasis in the original)

Vygotsky (1978) writes that the ZPD “is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 86).

Two levels of development form the boundaries of the ZPD. The lower boundary is the child’s independent performance or, to put it another way, the child’s attained development. Chapman (1997) refers to this as the child’s “can-do zone” (p. 38). The upper boundary of the ZPD is the maximum learning the child can achieve with help and is called the assisted performance. Chapman (1997) calls the upper boundary the “learning zone” (p. 38). Vygotsky (1978) writes that the upper boundary of the ZPD “defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state” (p. 86).
Thus, the skills and behaviours represented in the ZPD are ever shifting and changing. Vygotsky (1978) writes “What is in the zone of proximal development today will be the actual developmental level tomorrow – that is, what a child can do with assistance today she will be able to do by herself tomorrow” (p. 87).

It is important to note that Vygotsky’s theory of the zone of proximal development and Piaget’s notions of developmental stages are not mutually exclusive (Chapman, 1997). Chapman writes that viewing the two theories (ZPD and developmental stages) in tandem has important implications for teachers and teaching, that is, effective teachers provide children with two kinds of experiences at two levels. First, teachers should encourage children to work independently, ensuring that what she is asking children to do independently falls within the child’s actual developmental level or “can do zone” (Piaget). Second, an effective teacher must challenge children to go beyond what they can do and move them into the “learning zone” (Vygotsky).

Chapman (1997) writes that to help the child meet with success in the “learning zone,” the teacher must provide the necessary support or scaffolding. This begs the question, “What is the most effective support or scaffolding?” Several researchers and theorists have taken the idea of the ZPD and what happens in the “learning zone” and tried to describe more specifically what occurs between the participants that results in learning. The best-known metaphor that has emerged in the literature to describe what occurs between participants in the ZPD is that of scaffolding. Wood, Bruner and Ross (1976) introduced the term in the mid-1970s as a metaphor for the complex interaction that can occur between adult and child and which can successfully foster learning and development (Addison Stone, 1993). Specifically, Wood, Bruner and Ross addressed the
interactive, instructional relationship that exists during tutoring events, to determine its effect on developing preschool children in terms of their skill acquisition and problem solving ability. Thirty pre-school (three-, four- and five-year-olds) children were tutored in constructing a pyramid from blocks. Results indicated that children were successful when the tutor or expert provided support in terms of the following:

- recruiting the novice’s interest in the task as it is defined by the expert;
- reducing the number of steps required to solve a problem by simplifying the task, so that the learner can manage components of the process and recognize when a fit with task requirements is achieved;
- maintaining the pursuit of the goal, through motivation of the child and direction of the activity;
- marking critical features of discrepancies between what a child has produced and the ideal solution;
- controlling frustration and risk in problem solving; and
- demonstrating an idealized version of the act to be performed.

The authors describe these interactive, instructional tutoring practices as scaffolding, that is, in an effective tutoring relationship, the tutor or expert provides a scaffold, bridging and supporting gaps in the learner’s or novice’s processes.

Wood and his colleagues (1976) write that although the above scaffolding steps may be effective in the short term, the novice must be “able to recognize a solution ... before he is able to produce the steps leading to it without assistance” (p. 90). This ability, “to recognize a solution” is essential if scaffolding is to lead to independent performance and self-regulated learning. In short, the learner must have grasped three
levels of understanding: 1) the process, 2) the purpose, and 3) the outcome, if true independent learning is to occur (Calder, 2000).

Rogoff (1990) offers the following thoughts on the role of the adult or expert in the ZPD: “Adults may give children “metacognitive” support by structuring tasks in ways that are beyond children’s skills: determining the problem to be solved, the goal, and the way the goal can be broken down into manageable subgoals” (p. 94). Rogoff is clear, however, that effective structuring of a problem does not imply the breaking of a task into small ordered steps to be mastered in a lockstep manner:

Rather, effective structuring … maintains children’s involvement with the purpose of the activity, integrating varying aspects of the task in a manageable chunk. Involvement in the overall process and purpose of the activity, in a manageable and supported form, gives children a chance to see how the steps fit together and to participate in aspects of the activity that reflect the overall goals, gaining both skill and vision of how and why the activity works. (pp. 94-95)

Rogoff (1990) further suggests that the role of the expert in the ZPD is to:

1. structure the problem to the child’s skill level;
2. manage the subgoals as well as making sure the overall goal is met; and
3. recognize the child’s need for assistance or the child’s need to work with greater independence. (pp. 94-95)

Parallels can be drawn between the functions of the expert listed by Rogoff and those listed by Wood et al. (1976). Rogoff’s notion of “structuring” relates to Wood et al’s notion of “simplifying the task” and “motivating “ the child. Rogoff’s notion of “managing” the subgoals relates to Wood et al’s notion of “maintaining the pursuit of the
goal” and the notion of the expert “marking critical features of discrepancies between what a child has produced and the ideal solution.” Finally, Rogoff’s notion of “recognizing the child’s needs” relates to Wood et al.’s notion of “controlling frustration and risk in problem solving.”

Although Rogoff (1990), like Wood et al. (1976), provides a thorough description of the expert’s role in the ZPD, she also takes our understanding a step further by providing a different metaphor to describe the interactions taking place in the ZPD. The metaphor is that of apprenticeship. Rogoff (1990) writes:

Shared problem solving – with an active learner participating in culturally organized activity with a more skilled partner – is central to the process of learning in apprenticeship. So are other features of guided participation that I emphasize: the importance of routine activities, tacit as well as explicit communication, supportive structuring of novices’ efforts, and transfer of responsibility for handling skills to novices. (p. 39)

The apprenticeship metaphor explored by Rogoff (1990) focuses attention both on the interactive nature of the ZPD and on the active role of children (novices) attempting to advance their skills and understandings through participation with more skilled partners.

Likewise, Newman, Griffith and Cole (1989) refer to the ZPD as a construction zone (p. 153), another label or metaphor that suggests the interactive nature of the ZPD. In their redefinition of the ZPD, Newman and his colleagues write:

The teacher’s actions in these supportive interactions have often been called “scaffolding,” suggesting a temporary support that is removed when no longer necessary. While the scaffolding metaphor implies a unilateral action supporting
a preplanned architecture rather than the reciprocal appropriation we consider more characteristic of the construction zone, the notion of a social distribution of the task follows from the ZPD. There is a sequence involved in the ZPD, but it is a sequence of different divisions of labor. The task – in the sense of the whole task as negotiated between the teacher and child – remains the same. (p. 153)

In other words, the ZPD is “an interactive system within which people work on a problem which at least one of them could not, alone, work on effectively” (Newman et al., p. 61).

Newman and his colleagues (1989) identify two important aspects of the interaction between participants in the ZPD: a) dialogue between the participants; and b) action by both the expert (teacher) and the novice (child). The description provided by Newman and his colleagues, like that of Rogoff (1990), is in keeping with socioconstructivist principles which stress the collaborative nature of learning and the internalization of learning; that is, learning appears first in the public/social arena (knowledge is co-constructed between participants) before becoming internalized on a personal level.

Tharp and Gallimore (1988) offer a four-stage description of the ZPD. The most distinctive aspect of this description is its focus on the concept of performance in the ZPD as a circular, recursive process rather than as a linear process. The four-stages of the ZPD identified by Tharp and Gallimore (1988) are:

**Stage 1:** Performance is assisted by more capable others. During this stage a more capable other structures the event; however, gradually the responsibility for the task is transferred to the child/novice.
Stage 2: Performance is assisted by self. [R]esponsibilities formerly divided between the adult and child … have now been taken over completely by the child. The definitions of situation and the patterns of activity which formerly allowed the child to participate in the problem-solving effort on the interpsychological plane now allow him/her to carry out the task on the intrapsychological plane. (Tharpe & Gallimore, 1988, p. 36) However, this does not mean that the performance is fully developed or automatized. At this stage the child/novice issues self-instructions and controls behaviour through self-directed speech. Thus, the self-directed speech takes on the role of the adult/expert monitoring and assisting performance.

Stage 3: Performance is developed, automatized, and “fossilized.” At this stage all evidence of self-regulation has disappeared and “the child has emerged from the ZPD into the developmental stage for that task” (Tharp & Gallimore, 1988, p. 38).

Stage 4: De-automatization of performance leads to recursion back through the ZPD. Tharp and Gallimore (1988) suggest that often what one has learned may, because of time, stress, major upheavals or physical trauma, be forgotten (de-automatization). The researchers write, “After de-automatization, for whatever reason, if capacity is to be restored, then the developmental process must become recursive” (p. 39).

In short, Tharp and Gallimore (1988) suggest that, even when performance has become automatized, the child/novice may have to return to assisted performance under certain circumstances.
Although theorists and researchers have attempted to delineate more specifically what occurs in the ZPD by providing a variety of descriptions and metaphors, it is the metaphor of *scaffolding* provided by Wood, Bruner and Ross (1976) that is most commonly used to describe interactions that occur in the ZPD. It is important to note, however, that the term *scaffolding* has now moved beyond the definition provided by Wood, et al. Recent definitions of *scaffolding* incorporate many of the criteria laid out by Wood and his colleagues; however, they also include the socioconstructivist principles of collaboration and internalization (e.g. Newman et al., 1989; Rogoff, 1990; Tharp & Gallimore, 1988). For example, Berk and Winsler (1995) summarize the components of instructional scaffolding according to five components, that is, joint problem solving, intersubjectivity, warmth and responsiveness, keeping the child in the ZPD and promoting self-regulation. These components stress not only the role of the expert in *scaffolding* (i.e., keeping the child in the ZPD by “structuring the task and the surrounding environment” and through “adult intervention”), but also the collaborative nature of interactions in the ZPD (i.e., joint problem solving, intersubjectivity and warmth and responsiveness) and the importance of the learner internalizing learning (i.e., promoting self-regulation). Berk and Winsler write:

> In sum, scaffolding connotes a warm pleasant collaboration between a teacher and a learner while the two are engaged in a joint problem-solving activity. During this collaboration the adult supports the child’s autonomy by providing sensitive and contingent assistance, facilitating children’s representational and strategic thinking, and promoting children to take over more responsibility for the task as their skill increases. (pp. 31-32)
As the above discussion indicates, although there have been numerous iterations of the scaffolding metaphor since Wood, Bruner and Ross first coined it in 1976, each of them has the following in common:

1. scaffolding interactions are dynamic in nature;
2. scaffolding is a complex communicative process of assumption and inference; and
3. scaffolding has important implications for education.

Conceptions of scaffolding behaviours informed by Vygotsky's ZPD, the transactional (sociocognitive constructivist) perspective of learning as socially embedded and Wood et al.'s (1976) scaffolding functions have impacted ideas about learning and how to support learning. In particular, transactional perspectives and scaffolding have influenced teaching practice. Rather than viewing the teacher as an "instructor who provides a program determined by curricula, textbooks and/or basal series" (Chapman, 1997, p. 42, emphasis in the original), a transactional perspective views the teacher as a "mediator of learning who employs both personal and social aspects of learning to promote growth" (Chapman, 1997, p. 42, emphasis in original). As discussed above, a sociocognitive constructivist view regards learning as a shared responsibility, that is, students work independently at their own levels and are provided with support and scaffolding from the teacher to work in their ZPD (Bainbridge & Malicky, 2000). In short, learning "is mediated through direct and indirect instruction" (Chapman, 1997, p. 42).
The Role of Talk in Children’s Learning

As discussed above, Vygotsky believed that the development of cognition resulted from collaborative participation with others in goal-directed activity. During the course of such activity the learner encounters problems. With the aid of intellectual tools inherited from the learner’s culture and with the assistance of more skillful others from the immediate community (working within the zone of proximal development), the learner is able to understand and resolve such problems (Wells, 1992).

Vygotsky (1978, 1994) identifies speech as the most important intellectual tool that a culture makes available to the child. He underscored that the central purpose of speech is communication. Thus, speech is primarily a tool for social contact (only later does speech become internalized). Through the use of speech, therefore, the child is able to engage in collaborative problem solving activities with more expert others (in the ZPD). Together, the participants discuss, direct, reflect and collaborate on problem(s). Vygotsky (1978) proposes that external, social speech (shared between participants in the ZPD) later becomes internalized by the child to become a resource used by the child for individual thinking and problem solving (Wells, 1992). Vygotsky (1978) writes that language “arises initially as a means of communication between the child and people in his environment. Only subsequently, upon conversion to internal speech, does it come to organize the child’s thought, that is become an internal mental function” (p. 89).

It follows that in the Vygotskyian paradigm speech has two different functions: public speech or “speech for others” which is language directed at others and which continues the communication and social functions and private speech or “speech for the self” which is self-directed speech not intended for others and which is used by the child
to assist in thinking. In fact, according to Vygotsky, the primary goal of private speech is “not communication with others but communication with the self for the purpose of self-regulation, or guiding one’s own thought processes and actions” (Berk & Winsler, 1995, p. 37, emphasis in the original).

In describing the role of speech in facilitating children’s problem solving, Vygotsky and Luria (1994) write:

1. A child’s speech is an inalienable and internally necessary part of the operation [of problem solving], its role being as important as that of action in the attaining of a goal. The experimenter’s impression is that the child not only speaks about what he is doing, but that for him speech and action are in this case one and the same complex psychological function directed toward the solution of the given problem.

2. The more complex the action demanded by the situation and the less directed its solution, the greater the importance played by speech in the operation as a whole. Sometimes speech becomes of such vital importance that without it the child proves to be positively unable to accomplish the given task. (p. 109, emphasis in the original)

In short, when faced with a challenging task the child’s ability to complete the task may depend upon her ability to talk herself through it or, to put it another way, by “thinking aloud.” Private speech, therefore, can guide the child’s thought processes and actions. Vygotsky and Luria (1992) write, “The child solves a practical task with the help of not only eyes and hands, but also speech” (p. 109, emphasis in the original).
Berk and Winsler (1995) write that private speech is the primary means by which children transfer the regulatory role from others to self, that is, initially during social interactions adult speech serves to regulate children’s actions; however, gradually children’s speech to themselves -- private speech -- begins to affect their own behavior; “… in other words, with private speech, children do for themselves what caregivers did for them during joint problem solving” (p. 37). As discussed earlier, this idea is reiterated by Tharp and Gallimore (1989) who propose that during stage 2 of the ZPD, responsibilities formerly divided between the adult and child are now taken over by the child. The child issues self-instructions and controls behavior through self-directed speech. The child’s self-directed speech, therefore, takes on the role of the adult monitoring and assisting performance. Gradually, private speech, which is spoken aloud and self-regulatory in nature, becomes internalized to become inner speech or verbal thinking. Thus, language moves gradually from the social realm through the self-regulatory realm of private speech into the individual, cognitive realm of inner speech.

Research findings confirm Vygotsky’s belief that children’s private speech grows out of social interactions with more expert others in problem-solving activities (Berk, 1985; Berk & Spuhl, 1995; Berk & Winsler, 1995; Winsler, Diaz & Montero, 1997). For example, Winsler, et al., identified that children were more likely to use private speech after participating with an adult in a problem-solving activity (scaffolding event), and that children were more successful after scaffolding if they used relevant private speech (introduced by the adult/expert during collaborative activity in the ZPD). Winsler et al. write:

These findings suggest that the movement from interpersonal collaboration
to independent problem-solving involves children's active participation in taking over the regulating role of the adult collaborator. The suggestion here is that, in the development of cognitive functions, children use private speech to collaborate with themselves in much the same way that adults collaborate with children during joint problem solving. The fact that children were more likely to be successful after scaffolding if they used speech suggests that the path to individual task competence requires not only adult sensitive and contingent regulation, but also children's active participation, effort, and verbal self-regulation. (p. 75)

Thus, children's intellectual development appears to be directly related to social interactions with others in specific problem-solving activities that are mediated most prominently by speech. During such interactions children internalize and transform the help they receive from others and eventually use these same means of guidance to direct their subsequent problem-solving behaviors (Moll, 1992). From an educational perspective, therefore, we should consider the ZPD "as a characteristic not solely of the child or of the teaching but of the child engaged in collaborative activity within specific social environments" (Moll, 1992, p. 11). The focus of the ZPD, then, is as a social system mutually and actively created by both child and teacher and which is mediated by speech.

Wells and Chang-Wells (1992) identify the type of speech or talk that occurs between teacher and child and which, "enables one or more of the participants [in a problem-solving activity] to achieve a goal as effectively as possible" (p. 58) as collaborative talk. Wells and Chang-Wells suggest that the benefits of collaborative talk
go far beyond simply facilitating the achievement of a single goal. In an ideal situation, as the learner engages in collaborative talk she begins to acquire some procedure, skill or knowledge that can be transferred and made use of in other situations. The authors write, “In these cases, the collaborative talk not only facilitates the task, it also empowers the learner” (p. 58). In short, the collaborative talk that “accompanies, directs, and reflects on activities enables children to construct meaning by connecting the immediate experience to the symbolic realm (words) and abstract thought” (British Columbia Ministry of Education, 2000, p. 47).

Speech and talk are also particularly crucial to those activities like reading that are essentially mental abilities (Chapman, 1997; Wells & Chang Wells, 1992). Previous research by Wells (1986) identified that children who are academically successful are those children who have had extensive experiences with listening to stories and who, at the same time, have engaged in extensive talk about the texts being read. Clearly, through shared reading children become familiar with the structures and vocabulary that are characteristic of written language and become more able to handle the layout and conventions of the printed page. However, it is important to note that it is through talk (during joint literacy events) that literate behavior is made overt. It is preeminently in such verbally-mediated assisted performance (in talk about text) that literacy is learned and taught (Wells & Chang-Wells). In short, social interaction is an essential component of learning to read (Braunger & Lewis, 1998). Thus, it can be argued that children’s learning occurs most powerfully in situations that are highly interactive and social. Further, children learn most effectively as they engage with each other and with the
teacher in authentic, meaningful literacy activities that encourage collaborative problem solving through talk.

It should be noted, however, that not all children in a classroom speak English as their first language. The British Columbia Ministry of Education (2000) suggests that teachers must acknowledge the role of language and culture in learning and the particular learning needs of ESL students. The authors of the document write:

Today most classrooms have students whose second, rather than first, language is English (ESL) or who speak English as a second dialect (ESD) or as an additional language (EAL). This situation varies from one or two students in a class to schools that are made up almost entirely of ESL or non-mainstream speakers of English. Research indicates that these children will learn interpersonal language skills in English mostly by interacting with English-speaking peers. (p. 89)

One of the strategies suggested by the British Columbia Ministry Education (2000) as “critically important for ESL learners” (p. 86) is collaboration and cooperative learning, which helps ESL learners acquire vital communication skills. Communication skills in this context imply language in its broadest sense, that is, oral, written, and visual modes of communication. Thus, although ESL students may not be proficient in English, if they are to learn the critical skills of reading and writing in English they must interact with English-speakers in order to acquire the necessary communication skills. Like first language English speakers, therefore, ESL children learn through engagement with their peers and with the teacher in authentic, meaningful activities that encourage collaborative problem solving through talk.
Genre and Literacy Development

Genres are categories of oral or written discourse (Chapman, 2000). Often, however, the term genre has been used to reflect the traditional view of genres which were seen to be “(a) primarily literary, (b) entirely defined by textual regularities in form and content, (c) fixed and immutable, and (d) classified into neat and mutually exclusive categories and subcategories” (Freedman & Medway, 1994, p. 1). More recently, however, theorists have gone beyond this notion of genre as a set of formally defined text features. Theorists now posit that genres are a frame for social action in which regularities in texts come from recurring social situations (Chapman, 1999; Freedman & Medway, 1994; Shine & Roser, 1999). Kimberelis and Bovino (1999), for example, write that genres:

[A]re open-ended cultural frames that embody relatively stable constellations of sentence- and text-level features. These constellations encode the practices and ideologies of particular discourse communities and are used to enact relatively specific communicative purposes within typical rhetorical situations. (p. 138)

The recurring text regularities that characterize genres, therefore, are now considered to be a response or secondary to the action engaged in by participants in recurring social contexts (Freedman, 1993).

Bahktin (1986) focused on the role of language in human activity and, specifically, how language is used to achieve particular goals. Bahktin proposed that the forms of language are as “diverse as the areas of human activity” (p. 60). Bahktin writes:

Language is realized in the form of individual concrete utterances (oral and
written) by participants in the various areas of human activity. The utterances reflect the specific conditions and goals of each such area not only through their content (thematic) and linguistic style, that is, the selection of the lexical, phraseological, and grammatical resources of the language, but above all through their compositional structure – are inseparably linked to the whole utterance and are equally determined by the specific nature of the particular sphere of communication. Each separate utterance is individual, of course, but each sphere in which language is used develops its relatively stable types of these utterances. These we may call speech genres. (p. 60)

The argument here is that genres grow out of particular social interactions and are predictable and specific to that particular social interaction. Further, given that there are boundless possibilities of human activity the number of specific genres is inexhaustible, “because each sphere of activity contains an entire repertoire of speech genres that differentiate and grow as the particular sphere develops and becomes more complex” (Bahktin, 1986, p. 60).

In short, “Genres provide a set of signals that enable a speaker/writer and listener/reader to interpret the particulars of a specific communication interaction” (Chapman, 1999, p. 471). Or, to put it another way genres are the tools that enable humans “to act, understand, and be understood” (Pappas, 1997). However, although genres are stable, which means they have fixed elements or patterns (e.g., the language and organization of narrative is different than the language and organization of exposition), they are flexible (Chapman, 1999; Miller, 1984; Pappas, 1997). Pappas writes that genres change because each communicative act is unique, although it falls
within the broad characteristics of a particular social interaction. In order to meet the particular needs of this unique communication, “We put together various available options from different genres in a different way or borrow elements or features from different genres in new novel ways…” (p. 286). In this way we can meet the demands or goals of unique or evolving social situations. Thus, genres are both evolved and evolving systems.

Knowledge of the characteristics of particular genres and the social practices associated with them is an important aspect of communicative competence. Bahktin (1986) writes that even “people who have an excellent command of a language often feel quite helpless in certain spheres of communication precisely because they do not have a practical command of the generic forms used in the given spheres” (p. 86). For example, individuals who may have an excellent command of the speech used in a particular situation (e.g., reading of reports or engaging in scientific debate) may feel helpless and inadequate when attempting to engage in social conversation. Bahktin (1986) suggests this is because the individual lacks a sufficient grasp of the composition and style of this type of interaction or genre. Thus, genre-specific communicative competence is necessary for conducting the myriad of activities that make up our everyday life. Further, if children are to become academically successful, they need genre-specific communicative competence (Heath, 1983; Kimberelis, 1999; Pappas, 1991; 1997, 1998). This means that children must gain mastery over the forms, functions, social purposes and appropriateness of a broad spectrum of genres.

Genres and the associated discourses “with which one is and is not fluent affect the way one is viewed by others, one’s ability to function in different social contexts, and,
ultimately, the opportunities available in one’s communities, schooling and work” (Duke, 2000, p. 203). To have a grasp of those genres and associated discourses that are valued in a particular social setting amounts to something of real value that can be termed "semiotic capital." Having the ability to read and write informational texts is one form of semiotic capital, since such writing is valued in advanced schooling, the workplace and community (Duke, 2000).

Neuman (2001) argues that informational texts serve a further role in children’s literacy development. Neuman writes: “To write, think, or solve problems, young learners must have something to write about, something to think about, or some problems to solve. In short, important learning processes require content knowledge” (p. 471). Neuman suggests that such content knowledge can develop from young children having informational texts read to them by caregivers and teachers since exposure to informational texts can provide young children with topic specific knowledge and its related vocabulary.

Responding to recent consensus reports which suggest that “the richness of knowledge about a topic or about the concepts embedded in activities has much to do with children’s achievement” (Neuman, 2001, p. 469), Neuman argues that informational texts can provide children with a central source for developing such expertise. However, she cautions that it would be a grave error to stress content learning while ignoring important learning processes (e.g., problem-solving or thinking skills) since “content cannot be learned without learning processes being engaged” (p. 473).

Different genres, like storybooks and informational texts, have different purposes. Storybooks entertain and promote aesthetic responses. Informational books, on the other hand, though affording aesthetic experiences, primarily seek to inform. Thus, it makes sense that informational books, and the conversational moves that support them, might serve as essential vehicles for increasing children's content knowledge. With talented teachers, children may confront new challenges or contradictions to their existing knowledge base and, in doing so, increase the breadth and depth of their understanding. (p. 471)

Richgels, McGee and Slaton (1989) write that because the purpose of informational texts is to explain, describe, or inform, children must be able to detect how ideas are organized and related in what they read. The text structure refers to the way in which the author has organized and developed her ideas. Gunning (2000) suggests that the key to understanding informational texts lies in the child's ability to comprehend these text structures. In other words, understanding text structure is one of the most important variables in the comprehension of expository text.

Students who are able to identify main and supporting ideas in expository texts generally recall significantly more information than those who do not. In other words, if we focus our efforts on helping students to identify and use structural cues when reading their texts, they will comprehend more of the information they encounter in these texts. (Slater & Graves, 1989, pp. 163-164)

Richgels et al. (1989) identified the five most common text structures as follows:

- description (i.e., a grouping of ideas by association);
- collection (i.e., elements are ordered or sequenced);
causation (i.e., includes causal links between elements);

problem/solution (i.e., in this structure the causal link is part of either the problem or the solution); and

comparison/contrast (i.e., the text structure may have any number of organizational components, depending on how many differences and similarities the author includes). (p. 168)

Writers often indicate which text structure organization they are using by providing clue words. These clue words provide information about the relationships between ideas. For example, clue words signaling the collection text structure include first, second, and next. Clue words indicating the causation text structure include therefore, as a result, and because. Clue words signaling comparison/contrast text structures include like, different from, and however. Finally, clue words signaling problem/solution text structures include problem, solution and solve (Richgels et al., 1989, p. 172).

Research has shown that elementary school children are beginning to develop awareness of informational text structures (Richgels, McGee, Lomax & Sheard, 1987) and with instruction, can improve their text structure awareness (Piccolo, 1987). Slater and Graves (1989) reported that research findings identified that students from fourth grade through college increasingly develop their ability to use informational text structures to facilitate comprehension and recall. Conversely, research shows that when students' fail to use text structures, it has a negative impact on recall and comprehension when the topic of the material is unfamiliar (Slater & Graves, 1989).

Thus, exposure to informational texts appears to provide children with opportunities to:
a) further their understandings of discourse patterns (genres) (Chapman, 1999; Duke, 2000; Pappas, 1997);
b) integrate knowledge and problem-solving strategies (Pappas, 1997; Neuman, 2001);
c) develop topic specific vocabulary (Neuman, 2001);
d) enhance what they know about a topic (Neuman, 2001); and
e) develop awareness of the particular text structures of informational texts (Piccola, 1987; Richgels, McGee, Lomax & Sheard, 1987; Slater & Graves, 1989).

Yet, although the importance of genre-specific communicative competence to children’s academic success is now recognized, research shows that children in the intermediate and secondary grades are still unable to read and write informational texts critically and well (Alverman & Boothy, 1982; Applebee, Langer, Mullis, Latham & Gentile, 1994; Dreher & Sammons, 1994; Duke, 2000). Further, research has not as yet focused on young children’s understandings of informational texts and how such understandings progress in the early childhood education classroom.

Summary

This chapter has presented a review of the theory and research that is relevant to the ways in which we may understand children’s learning and development particularly as it relates to children’s literacy learning. The review began by outlining the sociocognitive constructivist or transactional paradigm which views learning as “constructed through transactions between the individual and the community, between the personal and the social” (Chapman, 1997, p. 44). Vygotsky’s (1978) theory describes
the active involvement in and construction of knowledge as dependent upon social engagement in the zone of proximal development. Theories and definitions of the type of social engagement (scaffolding) that occurs in the zone of proximal development and which leads to learning and development were discussed. It was argued that the most valuable definition of scaffolding recognizes the interactive nature of the ZPD.

The review then looked at theory and research that pertains to the role of talk in children's learning and development. Vygotsky's (1978) theory describes children's construction of meaning and active involvement in learning in the ZPD as dependent upon the use of oral language in a social setting. The application of these principles to talk in the classroom, particularly with regard to the type of talk engaged in by teachers, was discussed. Further, it was argued that speech and talk are particularly crucial to literacy activities like reading which are essentially mental activities. It was also stressed that like first language English speakers, ESL children learn through engagement with their peers and with teachers in authentic, meaningful activities that encourage collaborative problem solving through talk.

Finally, the review turned to theory and research regarding the need for children to gain mastery over the forms, functions, social purposes and appropriateness of different genres if they are to become academically successful. The review moved to a focus on the importance of children being able to read and write informational texts if they are to be academically successful. It was noted that there was little research addressing what young children know about informational texts or how they are to be assisted in becoming competent independent users of informational texts.
In reviewing the relevant literature, therefore, it was shown that there is a need for studies that focus on young children's informational literacy development, and how more "expert others" scaffold children's developing knowledge of informational texts. Further, studies are needed which extend and broaden the theoretical construct of literacy development, particularly as it pertains to children's emergent understanding of informational texts. The study that this dissertation reports has these goals.
CHAPTER 3: METHODOLOGY

The present chapter is divided into six sections. The first section provides a brief overview of the methodology of the study. The second section discusses qualitative research and the constructivist paradigm, both of which framed the study and guided the research design. In the third section, a rationale is provided for the choice of the research site and a detailed site description is provided. Section four describes the data collection, including the role of the researcher, the phases of data collection, the types of data collected, and the procedures followed in data collection, ending with the decisions surrounding the transcription system that was employed. The fifth section describes the procedures followed for data analysis, including preliminary coding procedures and the emerging categories, the choice of selected transcripts for in-depth analysis, the stages involved in arriving at the final coding categories and the search for patterns and relationships. The sixth section discusses issues in critically analyzing qualitative research.

Overview of the Methodology

This qualitative, naturalistic and descriptive study (Bogdan & Biklen, 1998) investigated the ways in which young children engage with informational texts and how social interactions with more expert others supported and extended young children’s understandings of informational texts. The study took place over three months in a mixed-age preschool classroom (three-, four-, and five-year-olds). The school’s population was middle-class with a broad racial and cultural mix. The teachers used trade books in a variety of ways to support the children’s literacy development, for example, daily full-group readalouds of trade books and, upon request, readings of trade
books to small groups of children or an individual child. The teachers used both fiction and information trade books during these readaloud sessions. In addition, information trade books were often displayed and used during both full group and small group activities. The focus of this study was the associated talk around full group and small group informational book readalouds, the associated talk between children sharing informational books, and the associated talk around full group and small group activities that included informational books.

The role of the researcher ranged on the continuum from that of "observer" to "observer as participant" (Glesne & Peshkin, 1992). The readaloud sessions (8 full group events, 6 small group events), children sharing information books (4 events) and activities using information texts (10 full group and 10 small group events) were videotaped and transcribed by the researcher; other data sources included field notes (including observations of an additional 7 readalouds and activities incorporating informational texts) and an audio taped interview with the focus teacher. Two full group readalouds, 6 small group readalouds, 3 events of child-to-child sharing of information texts, 7 full group activities using information texts and 5 small group activities using information texts were chosen for in-depth analysis; the other data were used in a supplementary way. Data were analyzed through the constant comparative method (Strauss & Corbin, 1998). The research questions for the study were:

1. What is the nature of children’s verbal interactions as they share informational texts, participate in informational text readalouds and engage in activities incorporating informational texts? What does this talk reveal about the children’s emerging understandings of informational texts?
2. How do teachers in an early childhood education classroom scaffold the children’s developing understandings of informational texts during informational text readalouds and activities incorporating informational texts?

Qualitative Research and the Constructivist Paradigm

Although qualitative research has its roots in early sociology and anthropology in the United States, it has become an increasingly important mode of inquiry in education (Bogdan & Biklen, 1998; Marshall & Rossman, 1999). The intent of qualitative research is to understand the process by which people construct meaning and to describe what those meanings are (Bogdan & Biklen, 1998). Cresswell (1994) writes that qualitative research is largely an investigative process whereby the researcher gradually makes sense of some aspect of the social world. This entails the researcher becoming immersed in the everyday life of the setting chosen for the study. Denzin and Lincoln (1994) suggest that the very word *qualitative* implies an emphasis on the processes and meanings of the phenomenon under investigation.

Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry. Such researchers emphasize the value-laden nature of inquiry. They seek answers to questions that stress how social experience is created and given meaning. (p. 4)

It is important to note that the term *qualitative* refers to a number of approaches to inquiry that “represent a lively and flourishing community of traditions” (Rossman & Rallis, 1998, p. 66). Denzin and Lincoln (1994) explain that:

A complex, interconnected family of terms, concepts and assumptions surround
the term *qualitative research*. These include the traditions associated with positivism and post structuralism, and the many qualitative research perspectives or methods, connected to cultural and interpretive studies. (p. 1)

The following is a synthesis of commonly articulated assumptions regarding the characteristics of qualitative research.

1. Qualitative research occurs in natural settings where behaviour is studied as it occurs naturally (Bogdan & Biklen, 1998; Cresswell, 1994; Denzin & Lincoln, 1994; McMillan, 2000; Patton, 1990; Rossman & Rallis, 1998).

2. The investigator is the primary instrument in data collection (Cresswell, 1994; McMillan, 2000; Patton, 1990; Rossman & Rallis, 1998).

3. Since the qualitative researcher has close, direct contact with the people and phenomenon under investigation, the researcher's personal biography is an important part of the inquiry and critical to understanding the phenomenon (MacMillan, 2000; Patton, 1990; Rosswell & Rallis, 1998).

4. The data that emerge from a qualitative study are detailed, rich descriptions that provide in-depth understanding of contexts and behaviours (Bogdan & Biklen, 1998; Cresswell, 1994; McMillan, 2000; Patton, 1990; Rossman & Rallis, 1998).

5. Qualitative research focuses on the process that is occurring in addition to the outcomes or product, that is, qualitative researchers are interested in how and why events and behaviours occur (Cresswell, 1994; McMillan, 2000; Patton, 1990; Rossman & Rallis, 1998).
6. The research design, for qualitative studies, is emergent rather than tightly prefigured (Rossman & Rallis, 1998). McMillan (2000) writes that the qualitative study researcher enters the investigation as if she is a stranger who knows very little about the people and places she is visiting. As a result, the investigator does not know enough to begin the study with a precise research design. Thus, the qualitative researcher begins “the study with some idea about what data will be collected and the procedures that will be employed, but a full account of the methods is given retrospectively, after all the data have been collected” (p. 255, emphasis in the original).

7. Qualitative researchers use inductive analysis, that is, important categories, dimensions, and interrelationships emerge from the data gathered (Cresswell, 1994; McMillan, 2000; Patton, 1990). Therefore, no formal hypothesis is cast prior to the study.

Although qualitative inquiry shares these common characteristics, it is important to remember that it has grown out of a wide range of intellectual and disciplinary traditions and, as a result, it does not represent a unified set of techniques or philosophies (Mason, 1996). These different traditions operate with distinctive views about what constitutes the social world and what is important in the social world. These are ontological and epistemological questions to which there is no one answer. Given the range of views, it is vital that the researcher makes clear their ontological and epistemological assumptions (Denzin & Lincoln, 1994; Mason, 1996; Sipe, 1996).

This study is framed within a constructivist/interpretivist research paradigm (Denzin & Lincoln, 1994; Greene, 1994; Guba, 1990; Schwandt, 1994). Denzin and
Lincoln (1994) write that a paradigm is a set of basic beliefs that represents a “worldview that defines, for its holder, the nature of the world” (p. 107, emphasis in the original).

Guba (1990) builds on this definition by stating that the term paradigm is “a basic set of beliefs that guide action” (p. 17). The researcher, therefore, has an obligation to make clear their ontological and epistemological assumptions since this position will “have important consequences for the practical conduct of inquiry, as well as for the interpretation of findings” (Denzin & Lincoln, 1994, p. 112). The constructivist/interpretivist research paradigm, with its emphasis on socially constructed meaning, bears many resemblances to the sociocognitive constructivist theory of learning and development reviewed at length in Chapter 2. The constructivist/interpretivist paradigm may be seen as the application of similar principles (as sociocognitive constructivist theory) to research. Thus, there is a match between the underlying paradigmatic assumptions regarding children’s literacy learning and development (the subject of this study) and the underlying paradigmatic assumptions regarding the way in which this subject was investigated (the method of the study).

As discussed in Chapter 2, the sociocognitive constructivist theory holds as its central tenets that: a) people are the products of their social and cultural communities; b) development and learning are context-specific rather than general processes; and c) learning is constructed through transactions between the individual and the community, between the personal and the social (Chapman, 1997, p. 44). Thus, learning can be seen as socially mediated and actively constructed.

As the name would imply, constructivism (like sociocognitive constructivism) is about contextualized meaning (Greene, 1994). In constructivism (like sociocognitive
Constructivism), social reality is seen as socially constructed, which is based upon "a constant process of interpretation and reinterpretation of the intentional, meaningful behavior of people" (Greene, p. 234). Thus, reality is derived from human interactions aimed at meaning making. Greene writes that reality only exists "by social agreement or consensus among participants in a given context and thus is multiplistic as well as ever changing" (p. 234). Greene continues:

[I]nterpretivist knowledge comprises the reconstruction of intersubjective meanings, the interpretive understanding of the meanings humans construct in a given context and how these meaning interrelate to form a whole. Any given interpretative reconstruction is idiographic, time- and place-bound; multiple reconstructions are pluralistic, divergent, even conflictual. Hence interpretivist knowledge resembles more context-specific working hypotheses than generalizable propositions. (p. 235)

In constructivism, therefore, the goal is not to predict, but to describe and interpret. However, because the conduit for interpreting and describing is the researcher, the researcher's own predispositions, values, prejudices and theoretical assumptions "colour" the interpretation she constructs. Sipe (1996) writes: "Inquiry is not value free because values are part of the lens through which researchers look at life" (p. 102). Since the "voice" of the researcher cannot be erased, it is appropriate (even critical) for research accounts based on the constructivist paradigm to include the first-person narration. In this way the inquirer acknowledges the permeation of values throughout the inquiry process and results (Greene, 1994).
Methodologically, the constructivist proceeds "in ways that aim to identify the variety of constructions that exist and bring them into as much consensus as possible" (Guba, 1990, p. 26). Guba (1990) writes that this process has two aspects, hermeneutics and dialectics:

The hermeneutic aspect consists in depicting individual constructions as accurately as possible, while the dialectic aspect consists of comparing and contrasting these existing individual (including the inquirer's) constructions so that each respondent must confront the constructions of others and come to terms with them. The hermeneutic/dialectic methodology aims to produce as informed and sophisticated a construction (or, more likely, constructions) as possible. (Guba, 1990, p. 26)

Sipe (1996) asks: "If, as the constructivist paradigm asserts all knowledge is subjective what prevents the paradigm from falling into relativism and solipsism?" (p. 103). Sipe (1996) argues that, although this is a question with which constructivists struggle, the qualitative research community of which constructivists are a part, have set rigorous standards for the trustworthiness of its own research (p. 103). The criteria for judging the quality of qualitative research and the ways in which this study meets these criteria will be discussed in the last section of this chapter.

**The Research Site**

The research site for this study was the multi-age preschool classroom of Ms. Gina Rowlands and Ms. Veronica Hughes\(^1\) in the Child Development Preschool\(^2\).

---

\(^1\) The names of participants in the study are pseudonyms
\(^2\) The name of the research site is a pseudonym.
The Child Development Preschool is located on a university campus, in a metropolitan area of a large Canadian city. This section contains a discussion of the considerations surrounding the choice of the research site, the issues of access and entry, and a description of the site.

**The Choice of Research Site**

Merriam (1998) writes that once a problem has been identified the next task that the researcher must tackle is to select the unit of analysis, the sample. Non-probability sampling is generally the method of choice for qualitative research. Merriam (1998) writes that non-probability sampling methods

[A]re logical as long as the field worker expects mainly to use his data not to answer questions like ‘how much’ and ‘how often’ but to solve qualitative problems, such as discovering what occurs, the implications of what occurs, and the relationships linking occurrences. (p. 61)

The most common form of non-probability sampling is *purposive* or *purposive* sampling (Patton, 1990). Patton (1990) argues that:

The logic and power of purposeful sampling lies in selecting *information-rich* cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term *purposeful* sampling. (p. 169)

Patton (1990) identifies several strategies for purposefully selecting information-rich cases. For the purposes of this study, it was decided to use a strategy of *intensity sampling*. Patton (1990) writes that: “An intensity sample consists of information-rich cases that manifest the phenomenon of interest intensely (but not extremely)” (p. 171).
However, before intensity sampling can begin the researcher must first determine what selection criteria are essential in choosing the site to be studied (Merriam, 1998). The criteria established for intensity sampling must reflect the purpose of the investigation and guide in the identification of ‘information-rich cases.’ Since the purpose of this study was to investigate: a) the nature of young children’s engagement with information books and b) how more expert others support and extend young children’s knowledge of information books, it was essential that the classroom within which the study would take place have the following attributes:

1. informational texts should be available and valued in the classroom;
2. the teachers should display an interest in assisting children to use and understand informational texts;
3. informational texts should be shared with children on a regular basis;
4. since talk was the focus of the study, the teacher should value and encourage children’s talk during informational book sharing.

Guided by the above criteria and the principle of intensity sampling, a search was begun for an appropriate site. For two years (1995 to 1997) I had worked as an instructor in the Early Childhood Education Department of a local community college. Part of my duties had been to supervise student practica in local early childhood education programs. During these two years I had the opportunity to observe preschools across the city and to build working relationships with the teachers and directors of many of the preschools. Additionally, from 1998 to 2000 I collected data in a longitudinal mathematics study designed to investigate the types of mathematical activities children engage in prior to school. As part of this, I was required to keep observational field notes
of children’s engagement in mathematical activities at their preschools. Altogether I was required to observe for approximately two-and-a-half hours (one session) every 2 months for a period of 2 years in 6 preschool classrooms. Although the focus of my observations was the mathematical activities of the classroom, I had ample opportunity to observe the ‘life’ of the classroom.

My experiences between 1995 and 2000 (both as a practicum supervisor and as a research assistant) had provided me with the opportunity to ‘get to know’ many of the city’s preschools. As my own study began to take form, I became aware of the classrooms where published materials of all kinds (storybooks, information books, guides, maps etc.) were available; the teachers appeared excited and knowledgeable about children’s literature (both fiction and nonfiction); the teachers read a variety of books (including storybooks and informational books) to children; children’s talk and ideas were both valued and encouraged by the teachers; and informational texts appeared to be valued as a resource in the classroom. Two preschools in particular seemed to hold promise as ideal sites for my study.

One of these preschools was a mixed-age class of three- and four-year-old children. The two teachers included two scheduled readaloud sessions with the children each day. During these readaloud sessions, children were encouraged to participate by answering and asking questions. The classroom had a well-stocked library in a quiet book corner and children were encouraged to select books to browse. When requested, teachers would generally read to a child on a one-to-one basis. In addition, the teachers seemed receptive to my presence and we had developed a warm professional relationship. However, although in many respects this preschool seemed to be an ideal site, I had two
major concerns. Firstly, because the preschool was situated in one of the most affluent areas of the city, the socio-economic situation of the children was particularly high. Secondly, there was no ethnic diversity; all the children in the program were Caucasians and spoke English as their first language. The city in which the study took place has a particularly diverse and multicultural population and homogenous classrooms like the one described are rare. I thought, therefore, that although the site offered an information-rich case, there was a danger that this particular grouping was so unusual as to distort the phenomenon under investigation.

The second preschool, which seemed to hold promise, was the Child Development Preschool. I knew the teachers at the preschool. During the years from 1984 until 1997 I had worked as a preschool teacher at a university laboratory preschool. In 1997 I left this preschool to begin doctoral studies. In the June of that year, the laboratory preschool was closed and several of the preschool teachers banded together and opened the Child Development Preschool. The Child Development Preschool is situated on a university campus, in a church basement, and serves the needs of both the university community and the affluent surrounding residential area. As a result the preschool population, although predominantly middle class, has a broad racial and cultural mix that reflects the society-at-large. My observations in the classrooms (both as a practicum supervisor and as research assistant) confirmed what I already knew: that all the teachers were knowledgeable about children’s literature and used books for both reading to children and to support classroom activities. These qualities made it a likely prospect as the site for my study.
I contacted Gina Rowlands (in whose class I had been observing for the mathematics study) and set up an appointment to talk to her about my study. Gina Rowlands and Veronica Hughes taught a mixed-age three-, four-, and five-year-old class and, although Gina was receptive to my request to use the preschool as my research site, she indicated that she would have to talk with her partner Veronica Hughes before a firm decision could be made. I received word from Gina Rowlands that I would be welcome to use their classroom for my research and, after several conversations with the teachers, it was clear that both teachers welcomed the idea of a research study. Accordingly, it was decided to seek the various formal approvals from The Child Development Preschool Parent Board, The Child Development Preschool Research Committee, and The University Human Subjects Review Committee. This was done in the winter of the 2000-2001 school year, the year in which the study was conducted.

In summary, the process of choosing a site had been theoretically and pragmatically driven (Sipe, 1996). The theory of *purposeful sampling* for an *information-rich case* and the pragmatic aspects of accessibility informed the search.

**Issues of Access**

Gaining access to the research site can be a complex and time-consuming process (Creswell, 1998). Not only does the researcher have to establish initial contact with the research site but she must also work on maintaining access to the site (Bogdan & Biklen, 1994; Creswell, 1998; Rossman & Rallis, 1998). Intrinsic to the issue of access is the researcher’s relationships with the participants (Jorgensen, 1989). Powdermaker (1966) writes that collecting data in the field is both an intensely human as well as a scientific endeavor. This is because the ability to collect data in the field (the scientific endeavor)
is dependent upon the network of social relationships that exist between the researcher and the research participants. Developing and sustaining these relationships is crucial to the ongoing accessibility of the research site (Jorgensen, 1989). Establishing and maintaining solid field relationships with participants should, therefore, be a major goal of the researcher.

Jorgensen (1989) suggests that trust and cooperation characterize the best field relationships. This implies two things: that the researcher endeavor to gain the trust and cooperation of the research participants, and that the researcher endeavors to be completely trustworthy and cooperative herself. Thus, the principle of trust and cooperation in a field relationship not only serves to support an ethical research relationship but also guarantees smooth ongoing access to the research site. The many contacts I had had with the Child Development Preschool (as a research assistant collecting data in their classrooms, as a Practicum supervisor and as a fellow preschool teacher) had provided me with opportunities to develop the depth of rapport necessary for building a trusting and cooperative relationship with the teachers (Jorgensen, 1989). Additionally, because of our similar philosophies around the teaching of young children, the role of literature in children's emergent literacy, and the image of the child as strong and competent, Gina Rowlands, Veronica Hughes and I found that 'sharing the classroom' was relatively stress free. Gina and Veronica had been involved in a number of research projects in the past, and valued their role in those research projects. Consequently, I was welcomed into the classroom by the teachers and treated with warmth and respect.
In order to build the necessary rapport with the children, I began my study with a formal set of visits to the classroom. During these visits I familiarized myself with the routines of the classroom and began to participate in some aspects of classroom ‘life.’ For example, I responded to children’s questions (e.g., explanations of how my camera worked and what I was videotaping etc.), and requests (e.g., to admire a painting or write the child’s name on a painting etc.). In this way I gradually built a comfortable and trusting relationship with the children.

Part of the entry negotiations involves obtaining permission from all the participants. Sipe (1996) writes that ethical aspects of access cluster around gaining permission or informed consent (p. 110). Thus, participants in a research study must be given complete information about the design and structure of that study so that they can make a rational decision about whether or not to participate. Informed consent is also a critical component of building a trusting relationship with participants. A formal, detailed research proposal, therefore, was submitted to Gina Rowlands and Veronica Hughes (the President of the Parent Advisory Board and the Research Committee), and a letter explaining the study was sent home to the parents of the children in Gina and Veronica’s class. A copy of the research proposal was also made available at the Child Development Preschool for parents to read if they wished. Gina and I also presented an overview of the study at a scheduled monthly meeting of the Parent Advisory Board and answered parents’ questions with regard to the study. The written consent of a parent or guardian was received for all the children in the classroom where the study took place. Since the study was an observational case study, the disruption to the children’s routines and activity choices were to be kept to a minimum. In order to minimize the impact
videotaping might have on the children, it was decided that Gina would introduce me to
the children in her class with an explanation of what I would be doing.

**Description of the Research Site**

The Child Development Preschool is located on a university campus in a church
basement. The University has a population of approximately 40,000. The student body
of the University, which is drawn from around the world, reflects a broad racial, ethnic
and cultural mix. The preschool, which has an enrollment of approximately 60 children
ranging in age from two-years to five-years, serves both the university population and the
population of the affluent surrounding residential area. Although generally middle-class,
the children attending the Child Development Preschool reflect the multi-cultural mix of
the population the preschool serves. The children speak a variety of languages (e.g.,
Portuguese, Mandarin, Cantonese, Korean, Japanese etc.). Approximately 20% of the
preschool population speaks English as a second language.

The Child Development Preschool consists of 2 classes of two-year-old children
who attend the preschool once a week and 2 multi-age classes of three- and four-year-old
children who attend four days a week for two-and-a-half hours a day (10 hours a week).
It should be noted that these age groupings are based on the children’s ages at the
beginning of September (the school year runs from September to June of the following
year). Thus, many of the children in the two-year-old program turn three during the
course of the academic year and several children enrolled in the three- and four-year-old
programs turn five during the academic year. However, although at the time I conducted
my study some children were five-years-old I will refer to the class as a multi-age class of
three- and four-year-olds, which is what the preschool refers to it as. The preschool’s
decision to group children in multi-age classes is based on the philosophy of informal instruction that values the help children can give one another in natural situations. Additionally, the teaching staff felt that multi-age groupings of children reflect the more natural setting of the family.

Gina Rowlands reported that the staff of the Child Development Preschool is involved in and committed to the support of early childhood education at every level. For example, the preschool participates in the training of future preschool teachers by mentoring student teachers; two staff members teach early childhood education courses at local colleges; and, the preschool encourages undergraduate students, graduate students and faculty from the University to use the preschool as a site for their research.

The classroom in which this study was conducted is a bright, large, self-contained room. At the time of the study it was organized into a variety of centers: dramatic play, block, sand table, water table, art, writing, science, and reading centre. Generally, children were free to choose where they wished to play in the classroom and to select from a variety of activities provided by the teachers. In addition to the centres, there was a carpeted area with well-stocked bookshelves, a couch and cushions. Each day the teachers met with the full class on this carpeted area for a book readaloud. The full-group meetings lasted approximately twenty to thirty minutes and consisted of an introduction to the book to be shared (e.g., discussion of other books by the author, picture walk, etc.), the reading of the book, and a follow-up discussion of some aspect of the book (e.g., content, connections to the children’s own experiences, illustrations etc.). Songs were shared during this time and often there was some kind of structured activity.
linked to the topic or unit being investigated by the students (e.g., for the Dinosaur unit there were activities around movement, measuring, and developing vocabulary, etc.).

The following was the schedule for the classroom in which the study took place:

1:00 – 2:00 p.m. Free-play
2:00 – 2:15 p.m. Clean-up and quiet reading
2:15 – 2:45 p.m. Full-group meeting
2:45 – 3:00 p.m. Snack
3:00 – 3:30 p.m. Outside play (Large motor activity)

The Participants

The participants in the study were the students in a mixed-age preschool classroom and their teachers. At the time of the study 18 children were enrolled in the class. All 18 students had begun the program in September of 2000; therefore, the class was stable during the study. The class was made up of 7 boys and 11 girls. Of the 18 children, 13 were of European-Canadian ethnicity and 5 were of Asian-Canadian ethnicity. Five of the children spoke a language other than English at home (Tina, Esther, Natalie, Agnes and Nate). When the study began on March 1st, 2001 the ages of the children were:

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Name</th>
<th>Age</th>
<th>Name</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esther</td>
<td>3 years 3 months</td>
<td>Robert</td>
<td>4 years 4 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amy</td>
<td>3 years 3 months</td>
<td>Ellie</td>
<td>4 years 6 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norman</td>
<td>3 years 5 months</td>
<td>Derek</td>
<td>4 years 7 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larry</td>
<td>3 years 7 months</td>
<td>Agnes</td>
<td>4 years 7 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woody</td>
<td>3 years 10 months</td>
<td>Leon</td>
<td>4 years 8 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mac</td>
<td>3 years 10 months</td>
<td>Dawn</td>
<td>4 years 10 months</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Thus, at the beginning of the study 7 of the children were three-years-old, 9 of the children were four-years-old and, 2 of the children were five-years of age. All of the students’ parents gave permission for their children to be involved in the study.

During the school year 2000 – 2001 Gina Rowlands was in the twelfth year of her teaching career, Veronica Hughes was in her eighth year, and Carla Rose was in her first year of assisting in the classroom. Before the study begun, I already knew that the teachers were knowledgeable about children’s literature and were keenly interested in collaborating with a researcher on some aspect of children’s emergent literacy.

During phase II of data collection (see Table 1) two issues came to light that resulted in my choosing Gina Rowlands as the focus teacher. First, it was becoming increasingly clear that Gina Rowlands was the only teacher to participate in all the contexts being observed that included a teacher (i.e., full and small group readalouds and full and small group activities incorporating informational texts). Although Veronica and Carla were involved in full and small group activities and full group readalouds, Gina was the only teacher to be involved in small group readalouds using informational texts. Second, Veronica Hughes indicated that she found being closely observed and videotaped uncomfortable. Gina, on the other hand, indicated that she was unperturbed by both the videotaping and the observations. Thus, I decided to make Gina Rowlands the focus teacher. Chapter 4 contains a more detailed description of Gina Rowlands.
Data Collection

This section contains a discussion of the role of the researcher, the phases of the data collection, and the types of data collected.

The Researcher's Role

Mason (1996) writes that when the researcher enters the site to carry out some form of observation, the researcher must prepare not just for the technique of observance, but also for social interactions (p. 63). It is essential, therefore, that the researcher begins to identify a role on the continuum between complete observer and complete participant. Spradley (1980) identifies five levels of participation:

1. *Nonparticipation*: This is the lowest level of participation and is usually accomplished by the researcher watching a video of the situation;
2. *Passive participation*: The researcher is present but does not interact with the participants;
3. *Moderate participation*: The researcher attempts to balance the insider and outsider roles by observing and by participating in some but not all of the activities;
4. *Active participation*: The researcher does what the others do, generally, but does not try to blend in completely.

However, in general, researchers do not have one static role, but several (Sipe, 1996). My role as a researcher fell on the continuum from passive to moderate participation. This role was dictated, in part, by the needs of the study and, in part, by the
practicalities of working in an early childhood education classroom. For example, while observing, making field notes or videotaping the teachers’ reading aloud to children, I was a *passive participant* (the needs of the study). On the other hand, while answering children’s questions or requests for help (e.g., to tie an apron, find art paper, admire a drawing etc.) I was a *moderate participant* (the practicalities of a working classroom).

As an early childhood educator it was clear to me that it is neither practical nor desirable to remain aloof from all contact with the young participants in an early childhood education classroom. My participation in some aspects of the classroom, therefore, was a consequence of being present in a classroom of lively and curious young children. Thus, although on occasion my role was that of a moderate participant, I attempted to maintain the role of being a passive participant.

**Phases of Data Collection**

The study took place between March 1\textsuperscript{st}, 2001 and May 30\textsuperscript{th}, 2001. The study was organized in three phases (see Table 1). Although I had visited the classroom several times to begin discussions with the teachers about my study and to make casual observations of the classroom during January and February of 2001, a more formal set of visits did not begin until March. During the initial phase of the study, the objectives were to reacquaint myself with the teachers and the routines of the classroom, begin building a rapport with the children and begin a more focused observation of the teachers reading aloud to children. During this phase I observed the class on 3 different occasions from 1:00 p.m. until 3:00 p.m. (for a total of 6 hours). Each time I observed I remained in the classroom for the free-play period, the clean-up and quiet reading, the full group meeting, and snack. I did not remain for the outside playtime. Thus, the decision to stay for 2
hours was based on the time the children were active in the classroom. It was during this phase that I became aware that the teachers often used books to support learning in both the full group and small group activities. I decided, therefore, to observe and videotape full group and small group activities, which included informational texts in addition to full group and small group readalouds of informational texts and child-to-child sharing of informational texts. During this phase, I discussed with the teachers what thematic unit would be guiding the work of the classroom (this is discussed in detail in Chapter 4). It was my intention to follow the thematic unit from its beginning to its completion.

The next phase of the study consisted of 2 sub-stages:

1. (March 5th – 16th) During this stage I attended the preschool each day it was in session (Monday through Thursday) for 2 hours per day for a total of 16 hours. I began to videotape the full-group meetings during which the teachers led full group activities using informational texts and/or conducted full group readaloud sessions using informational texts. The point of this phase was to identify the best position for the video camera and to familiarize the children with the presence of the video camera. The teachers also began to collect books in readiness for a thematic unit on dinosaurs that would begin after Spring Break (March 19th – 23rd, 2001).

2. (March 26th – May 3rd, 2001) During this stage I attended the preschool each day it was in session (Monday through Thursday) for 2 hours per day (one statutory holiday fell within this period of time). In all during this stage I observed for a total of 46 hours. This was the most intensive stage of data collection. During this phase, whole group and small group readalouds of
informational texts (including the talk before during and after the readaloud) and shared readings between children were videotaped. In addition, full group and small group activities, which were supported by informational texts, were videotaped.

The final phase of the study (May 8th – 11th, 2001) included exiting procedures. During this phase I was present in the class for a total of 6 hours. Intensive videotaping discontinued. There was a return to general classroom observations. As part of the arrangements to celebrate the end of the research I took part in a whole group meeting and thanked the teachers and children for allowing me to observe their classroom and activities. As well, I met with the teachers to discuss my preliminary findings with them and to discuss what contribution I might make to the classroom. The teachers indicated that they would like to have a pocket-sized tape-recorder to help in their documenting tasks (documentation is discussed at length in Chapter 4).

In all, I was present and observing in the preschool classroom for a total of 74 hours.
<table>
<thead>
<tr>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHASE I</strong></td>
<td></td>
<td><strong>PHASE II</strong></td>
<td><strong>PHASE III</strong></td>
</tr>
<tr>
<td>II. a</td>
<td>II. b</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

== observe in classroom ==

== observe readalouds ==

== observe activities ==

==== videotape/observe full & small group readalouds ====

==== videotape/observe full & small group activities ====

===== videotape/observe children book sharing =====

* Focus Teacher Identified

* Teacher Interview

| Spring and Growing Theme | Dinosaur Theme |
Types of Data Collected

The types of data collected were as follows:

- observational field notes;
- focus teacher interview (audio tape);
- videotapes of whole group and small group informational book readalouds and children reading books together as well as videotapes of whole group and small group activities supported by informational texts; and,
- researcher log noting the various types of data collected, in chronological order.

Observational Field Notes

Observational field notes were kept in a spiral notebook. The focus of the field notes fell into two parts: descriptive notes which were intended to capture “a word-picture of the setting, people, actions and conversations as observed” (Bogdan & Biklen, 1988, p. 84), and reflective notes which emphasized, “speculation, feelings, problems, ideas, hunches, impressions, prejudices” (Bogdan & Biklen, 1988, p. 86).

The descriptive field notes for this study (as suggested by Bogdan & Biklen, 1988) were as follows:

- descriptions of the physical setting including a sketch of the classroom and its set-up;
- sketches and verbal descriptions of materials used and created by the teachers and the children;
• detailed accounts of book sharing events including reconstructions of the
dialogue between participants (reconstructions were a close approximation of
what was said and included gestures);
• descriptive portraits of the participants with particular emphasis on personality
and language ability; and,
• an annotated bibliography of all the information books shared and used.

The **reflective field notes** (suggested by Bogdan & Biklen, 1988) for the study
were:

• reflections on analysis including preliminary observations about emerging
themes, hypotheses and ideas; and
• notes on the procedures and strategies employed in the study including any
problems encountered in the study and ideas on how to deal with them.

The two types of field notes (observational and reflective) were interspersed. At the end
of each day I would read through that day’s observational notes and then write any
reflective notes.

**Focus Teacher Interview**

Formal and informal conversations took place between the teachers and myself
on a regular basis (informal conversations took place on a daily basis and formal
meetings were held on Wednesdays). Toward the end of the study, it was decided to set
up a specific time to meet with the focus teacher for a formal interview. The purpose of
this interview was to document the focus teacher’s philosophy of teaching and learning
her criteria for choosing and using informational texts, and her self-reflections and
perspective on the research. Additionally, the audiotaped interview allowed for a more formalized "member check" (Mertens, 1998).

Bogdan and Biklen (1998) write that qualitative interviews vary in the degree to which they are structured (i.e., structured/unstructured continuum). At the structured end of the continuum, the danger is that the interviewer controls the content or interview too tightly, and the participant cannot freely express her story in her own words. At the unstructured end of the continuum, on the other hand, the danger is that the "open-ended" interview produces "an ever-expanding realm of possibility in which the generative power of language is unleashed to potentially chaotic effect" (McCracken, 1988, p. 24). Qualitative researchers tend to use "semistructured or unstructured individual interview formats" (Mertens, 1998, p. 322). Such a format is generally guided by some general questions but still offers "the interviewer considerable latitude to pursue a range of topics and offers the subject a chance to shape the content of the interview" (Bogdan & Biklen, 1998, p. 94). For the purposes of this study, I decided the semistructured interview format would be most appropriate, that is, although "open-ended," the interview would be guided by some general questions. The interview was conducted immediately after school. The interview lasted approximately 45 minutes and was audiotaped and transcribed by myself. The questions that guided the interview are listed in Appendix A.

**Full Group Readaloud Sessions of Informational Texts**

The children were read to on a daily basis. The readaloud session was part of the full group activity time scheduled between approximately 2:15 p.m. to 2:45 p.m. After helping with clean up, the children would take a book from the classroom library bookshelves and sit on the carpeted reading area. This reading area was separated from
the rest of the classroom by storage shelves. The children would continue to explore books until the teacher who would be conducting the day's circle arrived. Both teachers (Gina and Veronica) and the classroom assistant (Carla) conducted circle during the course of this study. However, no matter which teacher conducted the circle, the routine remained the same. The circle always began with the teacher choosing a child to sing the names of each of the children present. As a child's name was sung he or she would return his or her book to the bookshelves. Once the children were settled the teacher would begin the full group circle. Generally, the circle involved songs and activities around the theme of dinosaurs. Both the songs and the activities were highly interactive. The circle ended with the readaloud. The teacher sat on a chair and held the book so that the children could see the illustrations. In all, 8 full group readalouds were observed and videotaped. Gina read to the full group 3 times, Veronica read to the full group 3 times and Carla read to the full group twice.

Gina Rowlands' approach to reading aloud to the full group was somewhat different than either Veronica's or Carla's approach. Rather than pre-selecting an informational text to read, she inquired of the children what they would like her to focus on. She would ask the children the question, "What shall we try to find out about?" She would then identify topics covered in the book by reading the Table of Contents aloud to the children. The children would then choose the topic they wished to have read to them. Gina encouraged participation and talk during the reading of these books. She would wonder aloud about questions raised by the text, focus children's attention to points of interest in illustrations, and explore what children knew about the topic.
During full group readaloud sessions I would stand behind the children working the video camera. I also kept a notebook and pen on the storage shelves beside me so that I could make any notes on the session that might be missed in the videotape. For example, one of the books read aloud had been brought in by one of the children. As a result this child participated more than usual in discussions, a point that would have been missed had it not been noted in my observational field notes.

Although full group readalouds occurred every day, only those 8 full group readalouds, which included informational texts, were observed and videotaped. Of these 8 readalouds Gina Rowlands led 3 and 2 of these (there were audio problems with 1 readaloud session) were transcribed in their entirety. The other 5 (led by either Veronica or Carla) were selectively transcribed, that is, I watched the videotapes and transcribed sections I thought to be particularly relevant. There were, therefore, selective transcriptions and observational notes for 5 full group readalouds, and full transcriptions and observational notes for 2 full group readalouds.

**Full Group Activities Using Informational Texts**

The teachers at the Child Development Centre use themes to promote learning. Thematic units (in this case dinosaurs) integrate the curricular areas rather than treating them as distinct, separate subjects (Salinger, 1996). Salinger writes that thematic units consist of activities clustered around a central topic. Learning within areas such as social studies and science is supported by thematic activities. During full group activity time the teachers at the Child Development Centre involved the children in a number of activities designed to help them understand the world of dinosaurs, make connections among facts and ideas, and help them organize their knowledge. Many of these activities
involved the use of informational texts both as a source of information about dinosaurs and as objects to be understood in and of themselves (e.g., particular information can be found in an informational text by using the Table of Contents).

Altogether 10 full group activities using informational texts were observed and videotaped. Gina led 7 of these full group activities, Veronica led 2, and Carla led 1. Seven videotapes of full group activity sessions (those led by Gina) were transcribed in their entirety; the other 3 videotapes were selectively transcribed. Like the full group readaloud sessions, the full group activities occurred during the daily scheduled full group activity time between approximately 2:15 and 2:45 p.m. As with the full group readaloud sessions, the children were encouraged to share their knowledge, thoughts and ideas. As a result the full group activities were lively and interactive.

**Small Group Readaloud Sessions of Informational Texts**

Small group readaloud sessions, unlike the full group readaloud sessions, arose spontaneously. Generally, during free play, children would approach the teacher and ask her to read a book to them, although on one occasion Gina instigated the small group readaloud. The book to be read (with the exception of the occasion when Gina instigated the small group readaloud) was identified by a child. Altogether 6 small group readalouds were observed and videotaped. Gina led all 6 small group readalouds. All of the small group readalouds observed and videotaped during this study focused on informational texts. All 6 videotapes of the small group readalouds were transcribed in their entirety.

The number of children participating in small group readalouds fluctuated. For example, a small group readaloud on April 4th, 2001 included just two children who
remained for the entire readaloud session. On April 10th, 2001, on the other hand, the small group readaloud session began with three children (Tina, Esther and Norman). One of these children (Tina) left for a short period to finish an art project (she returned to hear the end of the book). During the course of the readaloud session, four more children (Derek, Nate, Larry and Woody) joined the group and one of these children (Woody) left after a few minutes. In all, seven children participated in the small group readaloud; however, only two of these children (Esther and Norman) remained for the entire readaloud session.

Small Group Activities Using Informational Texts

The teachers at the Child Development Preschool believe that one of their roles as preschool teachers is to arrange spaces and to select materials that will engage children's active exploration of their environment through construction and play. The teachers believe that such an environment naturally encourages language and literacy development as children talk and play together and that books and writing materials are an important part of these activities.

As discussed previously, like many play-based programs the Child Development Preschool has many traditional centres, each of these centres provides many opportunities for children to interact with print. As with all play-based programs children are free to pick and choose among the many activities available to them. As a result (as with the small group readaloud sessions) the children participating in a small group activity might fluctuate and change. For example, the small group activity observed and videotaped on April 18th, 2001 included five children (Robert, Tina, Anna, Nate and Leon) and was led by Gina. All five children remained for the duration of the activity (using informational
texts to research what dinosaurs ate). On May 1\textsuperscript{st}, 2001, however, the small group activity led by Gina (categorizing the books made by the children into the class library by story book or fact book) began with three children (Rachel, Natalie and Amy). Anna arrived and sorted books for a few minutes and then she and Natalie left. Angela arrived and she, Rachel and Amy stayed together sorting books for some time. Woody arrived and within a short period of time Angela left and Esther arrived. Finally, Leon and Nate arrived to participate in the sorting of books and Esther and Woody left. This activity lasted for most of the free-play time on that afternoon (approximately an hour).

During the course of this study 10 small group activities that incorporated the use of informational texts were observed and videotaped. Three videotapes of the small group activities were transcribed in their entirety (those activities led by Gina) and 7 videotapes were selectively transcribed.

\textbf{Child-to-Child Sharing of Informational Texts}

Altogether 4 sessions of a child sharing a book with another child were observed and videotaped. The audio portion of one videotaped session of a child-to-child sharing of an informational text was inaudible. Therefore, 3 sessions of child-to-child sharing of an informational text were transcribed in their entirety. These were spontaneous episodes of book sharing. All of the episodes of children sharing books took place in the reading centre during free-play.

It should be noted that the goal of observing and videotaping in five social contexts (i.e., full and small group activities incorporating informational texts, full and small group readalouds using informational texts, and child-to-child sharing of informational texts) was two-fold. First, the goal was to enable children who might not
normally feel comfortable speaking in a large, formal setting, to express themselves, so that their responses could also inform the construction of a view of the ways in which young children engage with informational texts. I thought, therefore, that the small group activities, the small group readalouds and the child-to-child setting might enable children whose voices might be lost in the full group setting to respond.

The second goal was to gather data in as many related social contexts as possible so as to provide as detailed and complete a description of these children’s engagements with informational texts as possible. (Information texts used for full and small group readalouds, full and small group activities, and child-to-child book sharing are listed in Appendix B).

Transcriptions

The decision was made to transcribe the videotaped data myself. The reasons that informed the decision were as follows:

- there was an extensive collection of videotaped data and I needed to re-familiarize myself with these data;
- transcribing would provide me with the opportunity to begin making interpretive observations;
- doing my own transcribing would afford me the opportunity to interweave observational field notes with the transcription of the pertinent videotape data; and
- I would be able to develop a system of transcription that met the needs of this particular study.
In fact, the transcription system utilized in this study uses elements from the conventions devised by Wells (1992), Sipe (1996) and some original elements. A chart of the complete transcription system appears in Appendix C and a sample transcript appears in Appendix D.

**Data Analysis**

Marshall and Rossman (1995) write that data analysis is “the process of bringing order, structure, and meaning to the mass of collected data” (p. 111). Bodgen and Biklen (1998) note that the analytic task of interpreting and making sense of the mountain of collected data can be intimidating to the novice researcher. However, each phase of “data analysis entails *data reduction* as the reams of collected data are brought into manageable chunks, and *interpretation* as the researcher brings meaning and insight to the words and acts of the participants in the study” (Marshall & Rossman, 1995, p. 113, emphasis in the original).

Much of this study consisted of descriptive data in the form of observational notes. The purpose of these data was to provide a thorough description of the social context within which young children’s engagement with and emerging knowledge of informational texts took place, and to aid in the process of triangulation, that is, checking information “that has been collected from different sources or methods for consistency of evidence across sources of data” (Mertens, 1998, p. 183). The bulk of the data analyzed for this study, however, was in the form of transcripts of videotaped informational book readalouds, videotaped activities supported by informational books, and videotaped child-to-child sharing of informational books. The decision to videotape flowed from the research questions that focused on the study of the associated talk surrounding
informational book readalouds and activities supported by informational books, and the ways in which the teacher talk scaffolded the children’s developing understandings of informational texts. Sipe (1996) notes that transcription is a form of data reduction in that it “reduces the speech of the participants to the flat and uninflected form of silent written language” (p. 130). In addition, transcription of the visual aspects of interaction is also reduced to the flat and still forms “of silent written language.” Thus, transcription reduces the lively, dynamic conversational turn taking to a “basically linear, line by line format” (Sipe, 1996, p. 130). Although partial in the terms discussed above, the transcripts for this study did capture and retain young children’s and the focus teacher’s ideas, concepts and understandings of informational texts and the ways in which young children engage with informational texts (the focus of this study).

Transcripts Chosen for In-depth Analysis

The rationale for choosing transcripts for in-depth analysis was as follows:

• data from each of the contexts needed to be included;

• only readalouds and activities led by the focus teacher, Gina Rowlands, would be included; and

• data must be included from the beginning, middle, and end of the study

• On the basis of this rationale, transcripts of 2 full group readalouds, 5 full group activities incorporating informational texts, 6 small group readalouds, 3 small group activities incorporating informational texts and 3 child-to-child sharing of informational texts were chosen for in-depth analysis (see Appendix E).
Transcripts Used as Supplementary Data

Transcripts that did not meet the above criteria (i.e., data collected from readalouds and activities involving teachers other than Gina) were used in a supplementary way. That is, they were used to ensure that emerging codes and categories also applied to data collected from contexts involving the other two teachers as well as the focal teacher (i.e., that emerging codes and categories were consistent over all contexts regardless of the teacher). Conversely, I coded this supplementary data to determine if there were other categories of talk that needed to be accounted for.

Open Coding

Since the focus of this study was the talk of a class of preschool children and their teacher it made sense that the unit of analysis would be the conversational turn (i.e., the conversational turn that occurred before someone else spoke). When a conversational turn involved two clear and specific units of meaning the turn was coded twice.

A decision was made early in the data analysis to code the teacher talk and the children's talk separately. The decision was reached because it became apparent that the role of the teacher during information book readalouds and activities incorporating informational texts was in essence different from that of the children. That is, although she participated with the children in discussions around informational texts, many of the teacher's conversational turns reflected her role as expert and facilitator of learning. In fact, the questions guiding this research reflected that difference. The first question sought to understand the nature of young children's verbal interactions during informational book readalouds and activities incorporating informational books. The
second question addressed how teachers scaffold children’s understandings of informational texts.

The goal of the analysis, therefore, was to describe what was happening in each conversational turn and to give that particular conversational event a conceptual label. For example, on April 17, 2001 during a child-to-child informational book sharing of *The X-ray Picture Book of Dinosaurs and Other Prehistoric Creatures* (1995) the following conversational turn occurred:

Robert: [taking a book from the bookshelf] I’ll see about dinosaurs here. I’ll see about dinosaurs in this one.

I noted that the crux of Robert’s statement revealed two things: his knowledge that information texts contain particular topic information (i.e., “I’ll see about *dinosaurs* here”), and his unquestioning belief that the content of this particular information book on dinosaurs will provide him with information on dinosaurs (i.e., “I’ll see about dinosaurs in this one”). The essence of this statement seemed to be an understanding of the aim of informational texts (i.e., to provide facts and information). Thus, this conversational turn appeared to be an example of informational book knowledge (understanding of the aim of informational books). As I continued reading through the transcripts, I found other instances where the children’s statements could be considered examples of informational book knowledge. These were duly labeled as statements of informational book knowledge. Strauss and Corbin (1998) refer to this process as *comparative analysis*, that is:

[I]f we come across another object, event, act, or happening that we identify through *comparative analysis* as sharing some common characteristics with an object or a happening, then we give it the same name, that is, place it into the
In this way a preliminary concept began to emerge from the open coding. As I continued to explore the concept of informational book knowledge I noticed that informational book knowledge was sometimes expressed through a child’s utterance with regard to how information was represented. For example, on April 17, 2001 during an episode of child-to-child book sharing the following conversational turn occurred:

Robert: [sharing an informational text with Nate points to an illustration]
   Look! Look! You were right! They do eat stones.

In this excerpt Robert’s comments indicated his understanding that information can be represented in the illustrations. In addition, Robert’s comments indicate his complete trust in the accuracy of the information represented in the illustration. At this point, I began to form the idea of a general category (informational book knowledge) that included sub-categories beneath it. When I identified conversational turns that seemed to indicate knowledge of the discourse patterns of informational texts I found I could broaden the category to include a wider definition of informational book knowledge.

In short, open coding began by identifying and labeling categories, splitting categories into sub-categories and redefining the concept that the category embraced (Sipe, 1996). This was accomplished through the constant comparative method, that is, classifying like with like and separating out that which was perceived as dissimilar (Strauss & Corbin, 1998, p. 105). Thus, open coding resulted in data being broken down into discrete parts that were then closely examined and compared for similarities and differences. Having broken down the data into categories during open coding, the next phase (axial coding) was to begin the process of reassembling the data by discovering the ways in which the categories related to each other (Strauss & Corbin, 1998).
Axial Coding

Strauss and Corbin (1998) identify the second step of the analysis as axial coding. Axial coding is the part of the analytic process when the researcher begins to reassemble the parts of the data identified and separated during open coding. This is done by “relating categories and sub-categories along the lines of their properties and dimensions” (Strauss & Corbin, 1998, p. 124). Coding at this level looks at the ways in which categories “crosscut and link” (Strauss & Corbin, p. 124). Mertens (1998) writes that during this phase although the researcher continues to ask questions of the data, these questions now focus on relationships between the categories. The researcher begins “to formulate possible relationships “ and “to search the data for verification or negation of the hypothesized relationships” (Mertens, 1998, p. 352).

The result of the axial coding was the development of six broad categories that were descriptive of the children’s engagement with informational texts, and seven broad categories that were descriptive of the adults’ role in scaffolding children’s engagement with informational texts. These conceptual categories are discussed in detail in Chapter 5.

Selective Coding

To recap, during open coding, the focus is on generating categories and their properties and on determining how categories vary dimensionally (Strauss & Corbin, 1998). During the next phase of analysis (axial coding) categories are carefully developed and linked with subcategories (Strauss & Corbin, 1998). It is at this point that selective coding can begin. Strauss and Corbin (1998) write, “Selective coding is the process of integrating and refining categories” (p. 143), and is the most difficult part of
the analytic process. It requires the researcher to identify the threads, relationships, and patterns that exist between the broad categories. According to Strauss and Corbin (1998) this process will lead to the identification of a central category (sometimes called the core category). In fact, the central category or core category represents the main theme of the research. Strauss and Corbin (1998) offer the following criteria for choosing a central category:

1. It must be central; that is, all other major categories can be related to it.

2. It must appear frequently in the data. This means that within all or almost all cases, there are indicators pointing to that concept.

3. The explanation that evolves by relating the categories is logical and consistent. There is no forcing of data.

4. The name or phrase used to describe the central category should be sufficiently abstract that it can be used to do research in other substantive areas, leading to the development of a more general theory.

5. As the concept is refined analytically through integration with other concepts, the theory grows in depth and explanatory power.

6. The concept is able to explain variation as well as the main point made by the data; that is, when conditions vary, the explanation still holds, although the way in which a phenomenon is expressed might look somewhat different. One also should be able to explain contradictory or alternative cases in terms of that central idea.

In this study, the central category was young children's informational literacy development.
Issues in Critically Analyzing Qualitative Research

Criteria for judging the quality of qualitative research has been outlined by a number of writers (Guba & Lincoln, 1989; Mertens, 1998). Guba and Lincoln (1989), in particular, have developed a list of criteria that ensure qualitative research meets the need for validity and reliability. Sipe (1996) suggests that if these criteria (developed by Guba & Lincoln, 1989) are met, “readers of the research have assurance that the research has been conducted properly, according to the standards set by the field” (p. 138). In this section, each criterion is explained along with the ways in which this particular study met each of the criteria.

Credibility

Credibility as a criterion in qualitative research parallels internal validity in quantitative research (i.e., the independent variable caused the observed change in the dependent variable). Mertens (1998) writes that the credibility test establishes “a correspondence between the way the respondents actually perceive social constructs and the way the researcher portrays their viewpoints” (p. 181). Research suggests five basic strategies that will enhance internal validity. They are as follows:

- long-term observation;
- peer examination;
- member checks;
- triangulation; and,
- awareness of researcher’s biases (Guba & Lincoln, 1989; Merriam, 1998; Mertens, 1998).
Long-term observation. This study lasted three months. Initial visits began in February. The initial observation period ensured that the researcher had a complete understanding of the classroom context within which the study took place. From March 5th, 2001 until May 11th, 2001 the researcher followed the planning and implementation of an integrated curricula theme (i.e., Dinosaurs). During this period the researcher was in the classroom every day that the class was in session (i.e., Monday to Thursday from 1:00 p.m. until 2:45). The accumulated data resulted in a total of 38 videotape transcripts. In addition there were observational field notes on 1 small group readaloud, 2 full group activities using informational texts and 4 small group activities using informational texts. There were, therefore, notes or transcripts and notes on 45 sessions of children engaged with informational texts. Data also included an audio taped interview with the focus teacher at the end of the study and approximately seventy-five pages of field notes and observational notes. These factors are evidence that the researcher’s engagement was prolonged and substantial.

Peer examination. Merriam (1998) suggests that the researcher must seek colleagues’ comments on the findings as they emerge in order to confirm the credibility and reliability of the findings. Interrater reliability was established for this study in the following ways:

1. I engaged in rigorous discussions with my research supervisor and a fellow doctoral student around the coding of utterances and the descriptive terms for the categories. While there were disagreements in the coding, the issues were discussed until consensus could be reached. For example, I originally identified category 1 as World Knowledge. In discussions with my research
supervisor; however, I came to realize that this category was in fact two quite separate categories with different though related features, that is, one feature was concerned with the text while the other feature was concerned with the reader (i.e., one feature was concerned with metalinguistics while the other feature was concerned with metacognition). Thus, category 1 became Informational Text Knowledge (metalinguistic knowledge) and category 2 became World Knowledge (metacognition).

2. In addition, reliability was established by using the supplementary data to ensure that the emerging codes and categories were consistent and held across all contexts.

Member checks. This requires the researcher to take data and interpretations back to the people from whom they were collected to check whether the results seem plausible (Merriam, 1998, p. 204). Mertens (1998) suggests that this is the most important element in establishing credibility. In this study, there were both informal meetings, which occurred on a daily basis, and formal meetings, which occurred on a weekly basis. The teachers’ ideas, observations and concerns were added to the observational notes and serve as documentation of these member checks. In addition, the focus teacher was formally interviewed at the end of the study. The aim of this interview was to document the teacher’s self-reflections and perspective on the research.

Triangulation. Mertens (1998) writes: “Triangulation involves checking information that has been collected from different sources or methods for consistency of evidence across sources of data” (p. 183). Additionally, these multiple sources can
provide richer and more detailed description (Sipe, 1996). The variety of sources of data for this study is listed earlier in this chapter.

Researcher’s biases. Mertens (1998) suggests that the researcher both monitors and documents her developing constructions and process of change from the beginning of the study until the end (something this study has sought to do throughout this report by providing “thick description” of every aspect of the research). In addition, the study used regular member and peer checks. As discussed earlier, member checks enabled me to discuss initial results with the teachers to ensure the plausibility of my findings and detect any possible emerging biases. Again, as discussed earlier my initial findings were also discussed with my research supervisor and a fellow doctoral student (peer examination) and my assumptions and findings were debated rigorously until consensus could be reached.

Transferability

Transferability as a criterion in qualitative research parallels external validity in quantitative research. External validity refers to the extent to which results can be generalized to other situations. In qualitative research the onus or burden of transferability is on the reader to decide the extent to which a study’s findings apply to other situations. This is termed reader or user generalizability by Merriam (1998). The researcher’s responsibility is to provide enough detail to allow the reader to make such a judgement (Mertens, 1998). The researcher accomplishes this by providing thorough and extensive description known as “thick description” of every aspect of the research (e.g., site, participants, context etc.). This study has made every effort to provide such “thick description.”
Dependability

Dependability in qualitative research parallels reliability in quantitative research. In the postpositivist paradigm reliability means stability over time; however, in the constructivist paradigm change is expected (Mertens, 1998). Merriam (1998) writes that the term reliability is something of a misfit when applied to qualitative research. Instead of reliability, Merriam (1998) suggests thinking about the “dependability or consistency of the results obtained from the data. The question then is not whether findings will be found again but whether the results are consistent with the data collected” (p. 206). Merriam (1998) suggests 3 techniques for ensuring results are dependable:

- Triangulation
- Investigator’s position
- Audit trail.

**Triangulation.** Triangulation (using multiple methods of data collection and analysis) strengthens dependability as well as credibility.

**Investigator’s position.** This criterion requires the researcher to explain the assumptions and theory behind the study, her basis for selecting participants, a description of the participants and the context within which the data were collected (Merriam, 1998). For this study, the theoretical perspective of sociocognitive constructivism was described fully in Chapter 2; the basis for selecting participants and a description of the participants is provided earlier in this chapter; and the context within which the data were collected are fully described in Chapter 4.

**Audit trail.** “A dependability audit can be conducted to attest to the quality and appropriateness of the inquiry process” (Mertens, 1998, p. 184). In order for the audit to
take place the researcher details every step in the research process: the findings of the study can then be authenticated by following the trail of the researcher (Merriam, 1998). In this study, the researcher described in detail how data were collected, how categories were derived, and descriptions of the decision making process appear throughout this report.

**Confirmability**

Confirmability in qualitative research parallels objectivity in quantitative research. Confirmability requires that qualitative data be tracked to their source, and that the logic used to interpret the data be made explicit (Mertens, 1998). Mertens (1998) recommends a confirmability audit “to attest to the fact that the data can be traced to original sources and that the process of synthesizing data to reach conclusions can be confirmed” (p. 184). In this study, field notes, transcriptions of videotapes, transcription of the teacher interview and the researcher log were opened to peer examination to determine if the conclusions were supported by the data.

**Summary**

This chapter has presented: an overview of the methodology of the study; the theoretical assumptions that framed the study and which guided the research design; a description of the research site and the rationale for its choice; a detailed description of the data collection including the role of the researcher, the phases of data collection, the types of data collected and the procedures followed in data collection; procedures for data analysis including preliminary coding procedures, emerging categories, the stages involved in arriving at the final coding categories and the search for patterns and relationships were described. Finally, issues in critically analyzing qualitative research
were discussed and the ways in which this study met the criteria for trustworthiness were presented.
CHAPTER 4: CONTEXTUALIZATION: THE CLASSROOM ENVIRONMENT

The present chapter describes the context within which these preschool children's understandings of informational texts developed. It begins by considering the teacher’s philosophy of instruction, the philosophy of the preschool and the emergence of the integrated dinosaur theme. The chapter continues with a description of the physical arrangement of the classroom and the routines and activities of the classroom, particularly those supported by or encouraging the use of informational texts.

Preschool and Teacher Philosophy

The Child Development Preschool has produced a parent manual, which includes the following philosophy of early childhood education. It reads:

The foundations established in the early childhood years are critical to children’s social, emotional, cognitive, physical and artistic development.

Guiding principles and practices that foster development in these areas include:

1. valuing the child as an individual within the context of his/her family and community;

2. recognizing play as the primary avenue for all aspects of development and learning for the preschool child;

3. honoring the unifying characteristics of children’s play as it influences learning in curriculum areas such as language, literacy, math, science, creative and expressive arts;

4. acknowledging and supporting children’s individual learning styles;

5. valuing the arts as attributes through which children make meaning and make sense of themselves and their world;
6. providing opportunities for discovery through self-selected activities and encouraging the development of children's abilities to observe, perceive, explore, investigate, imagine and problem solve;

7. recognizing the need for children to practice skills and fortify their learning by providing opportunities for repetition of experiences and extension of their ideas;

8. designing and implementing an enriched environment that stimulates the imagination, promotes creativity and enhances aesthetic development throughout the preschool day;

9. recognizing the need for children to make their own decisions and choices by entrusting them to take responsibility for the functioning of parts of the day's routines as well as fostering them to take care of their environment and materials;

10. supporting parents in their role as primary care givers and sharing information of benefit to the development of their child;

11. promoting a positive relationship between staff, parents and children; and

12. valuing and supporting staff in their work with children and families and in their own professional development.

Our philosophy and principles reflect the understanding of the need to encourage children's independence, self-reliance, self-confidence, desire to contribute as well as the ability to work cooperatively with peers and adults in small or large group experiences within a climate free of cultural, racial or gender bias (pp. 7-8).
According to Gina Rowlands, all the teaching staff at the Child Development Preschool shared in developing this philosophy, which stresses a play-based, child-centered approach to early childhood education.

Additionally, the teachers of the Child Development Preschool have been greatly influenced by the Reggio Emilia approach to early childhood education. From 1998 to 1999 the preschool agreed to become involved with one of the local colleges in implementing a Reggio Emilia approach in their program.

Gina, the focus teacher of this study, stated:

My philosophy of teaching has developed over a period of the 10 years since I've been teaching and its changing. The more I learn the more I read. Currently my philosophy goes quite hand in hand with what I've learned about the Reggio approach (Teacher Interview May 11, 2001).

The Reggio Emilia approach takes its name from a small town in north-central Italy, with an extensive city-run early childhood education program. Berk and Winsler (1995) write:

Capitalizing on the energy of motivated parents who began to build their own preschool using materials left over from the rubble of World War II, founder Loris Malaguzzi created a city-funded system for early childhood education that by 1993, included 22 preschools for 3- to 6-year-olds and 13 infant/toddler centers for 4- to 36-month-olds. (p. 142)

A central focus of the Reggio Emilia approach is that knowledge is socially constructed (Berk & Winsler, 1995; Fraser, 2000; Malaguzzi, 1993). Reggio Emilia education has, as a cornerstone, a view of the child as a competent and complex being who is “motivated by and learns from social interaction and relationships with others” (Berk & Winsler, p. 142). The central role of the teacher, therefore, is to establish and maintain
relationships, that is, teachers work with one another, with parents and caregivers, and with children to create a strong community of learners (Fraser, 2000).

Gina confirmed this aspect of the Reggio Emilia approach in her teaching philosophy:

I like to look at the child as being a capable and competent human being not a person whose knowledge has to be poured into them but a child whose knowledge and information can be drawn out of them when the teacher collaborates with the child (Teacher Interview, May 11, 2001).

We encourage collaboration between children. We have a multi-age classroom. We encourage children to help each other rather than coming to the teacher all the time. A child may want their shoe tied and we’ll say, “Well go to Tina she can do that” (Teacher Interview, May 11, 2001).

We encourage collaboration between children and teachers as well and I think most important in getting this concept of the philosophy of Reggio off the ground is collaboration between teachers and that’s sometimes a challenge. We’re working at that day after day – communication and collaboration amongst the teachers (Teacher Interview, May 11, 2001).

Approaching the child with utter respect and their parents with utter respect (Teacher Interview May 11, 2001).

Teachers view themselves as partners with children in co-constructing knowledge (Berk & Winsler, 1995; Fraser, 2000). Thus, the teacher in Reggio Emilia is “not viewed as the expert or the sole dispenser of information; rather, the role of the teacher becomes one that is shared equally among members of the group” (Fraser, 2000, p. 39).

Children in the Reggio Emilia programs stay with the same group (teachers and classmates) for a period of 3 years. The teachers at the Child Development Preschool work at keeping the children together for 3 years. They manage this by keeping those children enrolled in a 2-year-old program together as a group when they move to the 3- and four-year-old program. This allows the child the extended period of time necessary to build deep relationships with the classroom community.
A central component of the Reggio Emilia program is implemented by a member of the staff called the *atelierista*. Berk and Winsler (1995) write:

The atelierista is a full-time specialist, and artist, who works with teachers and children to create, store, and document the activities, projects, and progress of children and the school. Making visual or symbolic representations of their own activities in a variety of media is a central part of children's day. With the atelierista, children and teachers use the artistic materials, and then the atelierista records, organizes, and stores the products. (p. 144)

Gina noted how the Reggio Emilia philosophy around the atelierista has influenced her teaching practice:

We've changed an area of the classroom, we call it "Creation Station" and this is to allow children free access to as many good quality materials as possible. This includes paints, glue, pens, felts, glue sticks, a range of natural materials, cork, bark, stones, buttons, you name it. And we encourage the children to access this area and use it freely. It took a while to get this going because originally the children were not used to having this freedom and didn’t know quite how to use the area. They would just go in and dump a lot of the stuff and just take everything they could and cut everything they could, but with the guidance and collaboration of the teacher the children approach the centre in a different way (Teacher Interview May 11, 2001).

We encouraged the children to approach the centre in a different way. Firstly with a plan, either “Which materials intrigue me?” or “What would I like to make or build?” Making it a thoughtful process rather than just using a jumble of materials and that’s really paid off. We’ve seen some great creations and some children who could not typically produce products in a typical way either didn’t have the fine motor or whatever are building fabulous creations (Teacher Interview May 11, 2001).

As mentioned above, one of the central roles of the atelierista is documenting the children’s growing ideas, skills and knowledge. Fraser (2000) writes that:

Documentation is the visible trace of the process that children and teachers engage in during their investigations together. It provides a record of the
learning experiences in the classroom, it reveals connections between events, and it provides children, parents, and teachers with an opportunity to review and plan future experiences. (p. 77)

There are many forms of documentation. For example, it could be a series of photographs of a field trip with written observations recording the children's experiences as they unfold. Depending on the topic, documentation can be as simple as a photograph with an example of a child's work and his or her own words or it can be as complex as a series of panels that document an entire project. It can include paintings, drawings, clay, photographs, audio- or videotapes, music and transcriptions of conversations (Berk & Winsler, 1995).

Documentation acts as a memory device, enabling children to revisit previous experiences and make connections to past, present, and future events and experiences. Additionally, it enables children to use "higher mental functions, such as focused attention, deliberate memory, and symbolic thought" (Fraser, 2000, p. 99).

Documentation plays a large role in the classroom at the Child Development Preschool. Gina reported three ways in which documentation is used in her classroom:

1. Documenting the children's thoughts and ideas so that the teaching group can:
   [R]evew what the children have said and done. This gives the teachers a better understanding of their world (Teacher Interview, May 11, 2001).

2. The documentation panels can be used immediately with the children to revisit their thoughts and ideas.
   If we've had a brain-storming session or created a web of knowledge of a certain topic we can bring it back to the children the next day and it can act as a memory for the children of what they have said. Maybe a field trip they've gone on, perhaps if a child has created a 3-dimensional structure, we may take a picture of it, we may have the child then draw their structure and bring this
3. It opens up a window for the parents into the classroom.

Instead of just seeing a child’s picture or painting hanging on the wall, there may be a photograph of the child doing the painting, some of the child’s ideas and thoughts about the painting” (Teacher Interview May 11, 2001).

An additional feature of the Reggio Emilia curriculum is the use of long-term projects or themes (Berk & Winsler, 1995; Fraser, 2000). Reggio Emilia educators hold that the curriculum should emerge from the ideas and interests of the children. However, they also believe that there should be a negotiation between all those involved in the development of the curriculum (children, teachers, the atelierista and parents). Thus, the Reggio Emilia approach fosters a negotiated curriculum. The selection of a theme or project, therefore, must be based on the following characteristics:

- it must allow for both individual child contributions and collective purposes;
- it must have some external structure, in terms of general goals, while allowing children to decide on their own subgoals and rules;
- it should provoke much dialogue and discussion among participants; and
- it should lend itself to a variety of modes of representation (Berk & Winsler, 1995, p. 145).

The teachers at the Child Development Preschool use this negotiated approach to curriculum. Gina stated:

Before we can engage in any kind of study that the children might be interested in, we first listen to the children to find out what they’re interested in. We don’t plonk a theme down on them out of the blue. We talk to the children we listen to the children and then the very first thing we do is meet as a group with the children, either in a large group or smaller groups, to gather information about what the children already know about the topic (Teacher Interview May 11, 2001).
An example of how the teachers at the Child Development Preschool use a negotiated approach to curriculum occurred at the start of this study. During my initial visits to the preschool I had initiated discussions around what integrated theme the teachers and children might be pursuing during the course of my study. The teachers had suggested that perhaps the class might be interested in some aspect of community workers (firemen, police, letter carriers etc.). However, the events on one warm afternoon in early March changed these plans. Gina reported that during the scheduled outside playtime, one of the four-year-old children approached her with an object he had found. The object was a small stick, which he described as a dinosaur toe. The object intrigued several of the children and a hunt for dinosaur bones began. The “dinosaur bones” were collected and placed in a basket in the classroom. The next day, during the full group meeting, the children had a long discussion about dinosaur bones and fossils and following the meeting the children placed the bones on the light table to create skeletons of dinosaurs. Over the next few days the children made individual plans of dinosaur skeletons and then, using the collected “dinosaur bones” (sticks), created 3-dimensional models of dinosaurs. The children’s interest in dinosaurs was so intense that Gina and Veronica decided to pursue the topic in-depth with them. A letter went home to the children’s parents advising them that the children and teachers would be pursuing the topic of dinosaurs during the next few weeks and asking them for any support that they could give (e.g., expertise, books, artifacts etc.). Thus, the theme of dinosaurs grew out of the children's, teachers' and parents' interest in the topic. This was the theme, which I followed during the course of my study.
As Berk and Winsler (1995) note, the Reggio Emilia approach to early childhood education echoes central Vygotskian themes. In particular, the Reggio Emilia approach recognizes that children actively construct knowledge and that learning cannot be separated from its social context:

Joint teacher-child decision making, adult and peer scaffolding of children’s learning through cooperative projects with integrative themes, and richly equipped settings that foster small-group play are consonant with Vygotsky’s ideas about experiences that promote self regulation. Finally, the Reggio Emilia approach explicitly recognizes that a larger sociocultural level of assistance – supportive relationships of teachers and children with members of the educational system and community – must be present to create ideal conditions for children’s development. (Berk & Winsler, p. 146)

Although the Child Development Preschool has embraced the above aspects of the Reggio Emilia approach to early childhood education, the teachers also discovered that there was much in their own past achievements to celebrate, especially in the way the preschool had promoted learning through play and its strong early literacy program. Gina stated:

I think the teacher should set up the classroom in a thoughtful intentional manner so that there’s an enriched atmosphere. Loading the classroom with literature, math activities, science activities all integrated into the children’s interest area. And I think [the concepts] the children learn about the concepts through play in a thoughtful classroom environment (Teacher Interview, May 11, 2001).

In addition, Gina stated that promoting literacy development is a central focus of her program:

Every area of interest in the classroom whether we’re talking about dinosaurs or
trains or whatever, children are always offered opportunities to develop their literacy skills.

Some children are writing simple words and trying out simple sentences and beginning to read and we try to be there for them as much as is possible.

Literacy is all around the classroom and we just try to flood the classroom with books and make it a print-rich environment (Teacher Interview May 11, 2001).

Gina stated that literacy begins with children experiencing “good literature” (Teacher Interview May 11, 2001). She also stated that children “need to experience a variety of books” and suggested that it is important to discuss the differences between genres.

For instance, in stories where the animals are anthropomorphic whether, for instance, we were reading a book called Olivia about a little pig who wore a bikini [and the children had a great sense of humour and were laughing about it] and we talked about “Do you really think pigs wear red bikinis?” They said: “No!” So having them identify between a fiction and a non-fiction book.

Also we talk to the children when they’re making their own books. This goes along with the planning that we encourage in the classroom too. Whether they’re planning to make a story book or whether they’re planning to make a fact book. (Teacher Interview, May 11, 2001).

Generally, Gina felt that literature should provide children with “clear illustrations,” and “simple, age-appropriate text.” Additionally, information texts should have a “simple index and table of contents.” She felt that children’s experiences with a variety of text types enable them to understand that “we read books for different purposes.” For example, “If a child is expressing an interest in dinosaur eggs we can look it up with the children and find information on that.” On the other hand, “A book like Olivia tells a story.” Gina stated that “pointing out the different parts of a book… talking about the format of an information book… providing opportunities for children to interact with books… share books… represent their ideas in book form” allows the children to “begin
to understand that books are written for a specific purpose” (Teacher Interview, May 11, 2001).

In summary, the philosophy of the Child Development Preschool highlighted active learning in meaningful situations, learning through cooperative projects with integrative themes, communicating knowledge through reading, writing, speaking and visual representation, and the importance of a literacy-rich environment to children’s literacy development.

**The Classroom**

The focal classroom resided in a spacious church basement. Although it was situated in a basement, one wall of the classroom had a row of large windows that let in plenty of light and sunshine. The classroom was L-shaped. At one end of the L-shape was the busy area for blocks and dramatic play. The angle of the L-shape contained the reading centre and tables for children to do puzzles and mathematics activities. A kitchen, water and sand table centre and the art area were contained at the other end of the L-shape. There was plenty of bulletin board space for displaying both the documentation panels and examples of children’s work. The classroom was generously stocked with a wide variety of materials. The storage cabinets in the block center contained several types of building blocks, for example, large wooden blocks of various shapes, small coloured blocks, and blocks specifically designed for building castles. In addition, there were cones, road signs, wooden trucks and cars, large wooden boats, and a variety of animal and human figurines. Another storage cabinet in this area contained two large toy garages, a large bin of cars, a fire-truck, school bus (with figurines), trucks, wooden building materials for creating a railroad, a wooden barn, bins with farm animals,
and human figurines. The *pretend centre* contained a cupboard filled with clothing for
dress-up, including bags, capes, hats, shoes, dresses. It also had kitchen items, such as a
child-sized toy refrigerator, sink and stove with imitation eggs, milk bottles, fruit,
vegetables, plastic cups, plates, knives, forks, spoons and pots and pans, a table and
chairs (including a baby’s high chair), a small bed with pillows and blankets and an array
of dolls (including dolls’ clothing) and stuffed animals. The storage cabinets in the *sand
and water table centre* included containers for measuring and pouring, shovels, buckets
and trucks. The *mathematics center* included many manipulatives for sorting, classifying
and counting as well as jigsaw puzzles, games, scales for weighing objects and measuring
tapes and sticks. The area also held a large round table with 4 child-sized chairs.

The *art centre* shelves were stocked with a variety of paints (e.g. tempera, water
paints etc.), brushes, printing materials and paper. This area of the room was also
equipped with painting smocks, an easel, a long art table (with 6 child-sized chairs) and a
light table. In addition, there was a storage cupboard in a room adjoining the classroom
that contained rolls of coloured paper for art projects, large equipment which was brought
into the classroom on an occasional basis (e.g., a puppet theatre, tent, plastic tube/tunnel,
dolls’ house etc.) and toys used exclusively in the 2-year-old program.

As mentioned above the *creation station* was extensively and well stocked with a
variety of materials stored on shelves in baskets and containers. The children had
unlimited access to these materials during free-play. The area contained a round table
with 5 child-sized chairs and served as the *writing centre* as well as the well stocked
*creation station*. 
The classroom was flooded with print material. Books were stored on shelves in the *book centre*. Special books on the topic under investigation were displayed on a low bookshelf in the *book centre* and on the table in the *writing centre*. The bookshelves contained approximately 50 books, including informational books and story picture books. The Child Development Preschool has a permanent library (stored in the room adjoining the classroom) that contains approximately 500 books, including informational books, story picture books, parenting books, and professional books for the teachers. The preschool had recently been provided with an annual budget for building the library collection. The teachers, parents and children could borrow these library books. Gina Rowlands and the teachers also made extensive use of the public library, borrowing books to supplement the preschool collection. Other print material included labels identifying areas of the room; a schedule for feeding the classroom’s goldfish; posters; large charts recording children’s knowledge and questions; children’s drawings, maps, diagrams and writing; and extensive documentation panels.

Holdaway (1979) writes that the ideal literacy classroom is a “total environment alive with print, displaying all its functions from things as simple as signs and labels right through to literature” (p. 71). Gina Rowland’s classroom fits this description and thus could be described as the ideal emergent literacy classroom. In addition, the physical arrangement of the classroom encouraged both active learning in collaboration with other children and independent exploration and inquiry.

**Classroom Routines and the Integration of Literature**

One of the central roles of the preschool teacher in a child-centered, play-based program is to arrange and select materials that will encourage children’s active
exploration of the environment through play, either individually or in collaboration with others. The schedule of the Child Development Preschool, therefore, provided large blocks of time for children to engage in activities in the teacher designed and prepared centres. As discussed earlier, activities in the centres were designed around integrated themes or projects. For example, during this study activities and learning were designed around the theme of dinosaurs. Activities included creating a dinosaur world in the water table; a research project about what dinosaurs ate; writing both fact books and story books about dinosaurs; measuring how long the Lambeosaurus dinosaurs were; creating a “Dinosaur World Diorama,” and so on. Blocks of time were also provided for full-group meetings and readalouds.

The preschool day began with an hour of free-play. During this time children were free to choose where and with whom they played. Thus, children could be seen playing either individually or in small groups. In general, the teachers circulated helping and occasionally directing children to certain activities (e.g., finishing a project that had already been started or supporting and scaffolding children’s efforts). For example, Gina had organized an art activity using papier-mâché to build a “Dinosaur World Diorama.” Because Gina was aware that several of the children had never experienced working with papier-mâché before, she remained at the art centre, during free-play, modeling and discussing this technique.

Print was included in every centre. For example, during the building of the “Dinosaur World Diorama,” books about dinosaurs were arranged on the art table so that the children could explore the physical world of the dinosaurs before beginning work on the diorama. Dinosaur books were displayed in the mathematics centre so that children
could explore the size (both length and weight) of particular dinosaurs and so on. Books were displayed on the table in the writing centre and children used the books as models to scaffold their own writing in various ways. For example, Natalie wrote a book titled *Dinosaur Day* modeled on the book *Dinosaur's Day* (Thomson, 2000). Natalie’s book included a title page with the author’s name and 5 pages of labeled illustrations of dinosaurs. Each page was numbered and the information book ended with the label “The end.” Tina also wrote a book modeled on an information book. Tina’s book titled “Dinosaurs” contained 7 pages of labeled illustrations of plant eating dinosaurs. Each page was numbered. Angela dictated the following information for an illustration in her book *Dinosaurs* “The baby was born. The mother dinosaur protects her baby from the other dinosaurs. The eggs are hatching and the mom was getting another egg to put in her nest.”

The children often modeled their artwork on particular features of books. For example, the children planned and created dinosaur skeletons using sticks, because of illustrations they had observed in the books *Albertosaurus: Death of a Predator* (Keiran, 1999) and *Outside and Inside Dinosaurs* (Markle, 2000). After reading *The X-ray Picture book of Dinosaurs and Other Prehistoric Creatures* (Senior, 1995), Robert drew a series of pictures illustrating the insides of dinosaurs.

During free play, there were often unplanned, spontaneous book readalouds. A child or children would select a book and approach Gina to read the book to them. These readalouds were very informal. Gina was willing to follow the children’s lead during these readaloud events, and pursue whatever topics of conversation they introduced. She also encouraged the children to make connections between information in the book and
their own lives. For example, Gina and Derek had the following discussion around the importan
t of dinosaurs belonging to herds during a small group readaloud of *An Alphabet of Dinosaurs* (Dodson, 1995):

Teacher: Leaf eaters. Here they are. Now those went in herds didn’t they? Remember? They said some dinosaurs travel in a herd. We learned that yesterday. Remember what a herd is?

Derek: The leaf eaters.

Teacher: Yes! The leaf eaters did travel in herds. You’re right. That meant that they didn’t travel all by themselves. Because if they traveled all by themselves the meat eaters would get them and eat them. So they would travel in a herd. It means together. Like when we walk to the playground. All of us together we stay together ‘cos it’s safer. We don’t let you all run over to the playground on your own. We go together to be safe.

Derek: But when I’m being like a big Power Ranger I can go to the playground by my own. Right?

Teacher: Until then you have to hold your mommy’s and daddy’s hand.

Derek: Yea! When they’re little Power Ranger kids.

Teacher: [reading] *Hypsilophodon* (Dodson, 1995). It’s called a Hypsilophodon.

Derek: They’re altogether!

Teacher: Yep! [reading] *It was a speedy dinosaur. It grazed in herds because this was safer than roaming alone* (Dodson, 1995 p. 24). Which was what we were talking about (Transcript of small group readaloud, April 5, 2001).

Gina often took time during these spontaneous small group readalouds to explore the organization of informational texts.

Teacher: Okay! So we have to decide what we want to read about. This is *Contents [traces the word with her finger]*. We can read about *Terrible Teeth, Mighty Meat Eaters*, we could read about the *Biggest on Earth* or *Armored Tanks*. Do you think that sounds good! [Derek shakes his Head]. No it doesn’t! *Leaf Eaters*. We could read about *Duckbilled Dinosaurs* [Teacher runs her finger down the Table of Contents as she reads the chapter titles].

120
Nate: Yes!

Teacher: That sounds good. Or, Bone Heads and Horns, or Dinosaur Nursery. I think that might be about babies.

Derek: I like the one with [points to an illustration] sharp teeth!

Teacher: This one here? [Derek nods] That would probably be a Mighty Meat Eater [Teacher points to the Table of Contents]. Do you want to learn about meat eaters?

Nate: Yes!

Teacher: Okay! Page 16 [Teacher counts toward page 16 pointing each time to the number at the bottom of the page] 13, 14 ...

Derek: Oh that's the picture. I have this dinosaur picture ... my sister has it hanging on the wall [points to an illustration].

Teacher: This is the chapter about Terrible Teeth. But we want page 16 right here [Teacher points to the page number at the bottom of the page.] (Transcript of small group readaloud, April 5, 2001).

This example also shows how Gina focused children’s attention on the format by running her finger down the Table of Contents and pointing out the page numbers.

Free-play was followed by a scheduled clean up time. All of the children were expected to help put away toys and materials, tidy the classroom, clean any table and counter surfaces, and if needed, sweep and mop the floors. After clean up, there was a meeting with the full group, which generally concluded with a readaloud session. The scheduled full group meetings were routinized to the point that, as children finished cleaning up, they would automatically choose a book and begin to read. The children knew that quiet talking and sharing of books was permissible during this time. During any full group meeting, most of the children (and, on occasion, all of the children) chose
books related to the thematic unit being studied even though the bookshelves contained a variety of books unrelated to the current theme.

The routines of the full group meeting included the children sitting in a circle on the carpet in the book centre listening to the teacher and to each other. Two types of activities predominated during full group meetings: children sharing items brought from home or projects completed during free-play (show-and-tell) and formal, structured activities designed by the teachers. For example, three children had worked on creating and designing a box that would hold all of the books written by the children. With the help of Gina they had labeled the box Library School Books. During the full group meeting the 3 children were invited to explain how they made the library box and to explain its intended use. Later during that same full group meeting, Gina had planned an activity to explore what the children already knew about dinosaurs (background knowledge). Gina had written facts about dinosaurs on strips of paper. Some of the facts were true (e.g., Dinosaurs are extinct, etc.) and some of the facts were false (e.g., Dinosaurs ate cavemen, etc.). The strips of paper were put upside-down on the carpeted area. Each child in the class was invited to pick one of the strips of paper. Gina then read the “fact” on that strip of paper and the child was asked whether it was true or false. If there was general agreement from the rest of the class on that child’s answer, then the strip of paper with the fact was taped onto a chart under Yes for true or No for not true (false). If consensus could not be reached on whether the fact was true or false, the strip of paper with the fact was taped to the chart under Don’t Know. In this way Gina was able to identify areas for the children to research (i.e., those facts categorized under Don’t Know).
The routine of readaloud sessions remained fixed throughout this study. The teacher, sometimes with the help of the children, chose the book ahead of time. The children were expected to remain seated on the carpet, in a circle, as they were for all full group meetings. The teacher sat on a chair and held the book so that the children could see the illustrations. Before beginning to read, Gina would set a listening task. For example, when reading *Dinosaur’s Day* (Thomson, 2000) Gina began by saying, “I’ve got a book here. Let’s read this and think about the things we don’t know. Think about the things we’re not sure about” (Transcript of full group readaloud, April 12, 2001).

Gina always began by reading the title of the book, the name of the author and illustrator and pointing out any special features of the book. For example, before beginning to read *Dinosaur’s Day* (Thomson, 2000), Gina pointed out a pictorial glossary at the back of the book called *The Picture Word List*.

Gina read in a clear, expressive and interesting style. She accepted children’s comments and questions and was willing to pursue children’s ideas and knowledge. For example, the following exchange took place during the full group readaloud of *Dinosaur’s Day* (Thomson, 2000):

**Tina:** What does herd mean?

**Teacher:** Who can tell Tina what a herd is? Nate!

**Nate:** It’s a group of dinosaurs.

**Teacher:** It’s a group of dinosaurs. And why did they stay in a group. Who can tell us why they stayed in a group?

**Tina:** Cos they stay safe.

**Teacher:** They stay safe if they’re together. What were you going to say, Robert?

**Robert:** Maybe if they get lost they can just call them.
Teacher: Maybe they can and the group will hear them – the herd.

Robert: With their feet. Banging them!

Teacher: Thud! Thud!

Robert: And they might hear them (Transcript of full group readaloud, April 12, 2001).

Gina never expected children to raise their hands before speaking unless she asked a specific question or unless several children began to speak at once. She always (as in the above example) encouraged children to respond to each other’s questions and comments. At the end of the reading Gina invited questions and comments and then returned to the question set at the beginning of the reading. For example, after finishing Dinosaur’s Day (Thomson, 2000) the following conversation took place:

Teacher: Put on your thinking caps! Think about the book. Was there anything you learned in that book that we could add to our list?

Anna: Dinosaurs don’t eat each other, but other dinosaurs do.

Teacher: Some dinosaurs eat each other and some don’t. I’m going to write that down and put it on our list. Robert did you learn something in that book that you didn’t know before?

Robert: I learned about the bones.

Teacher: In this book?

Robert: I learned about the skull.

Teacher: Oh! Yes! The illustration of the skull. Dinosaurs have skulls.

Robert: And their feet.

Teacher: What did you learn about their feet?

Robert: They stamp!

Teacher: They stamp. Dinosaurs stamp! (Transcription of full group readaloud, April 12, 2001).
After discussion, the book was always placed on the display shelf. Children were then free to revisit the book.

All of the above examples illustrate that literature and, in particular, informational texts permeated this preschool classroom. Further, the teachers in this classroom provided the children with rich and numerous opportunities to learn about written language. In particular, Gina supported the children’s language and literacy learning in four ways. First, Gina always followed the children’s leads. For example, she observed children as they talked, shared books, and engaged in both representing and emergent writing activities. These observations were then used to plan subsequent activities. Second, Gina modeled reading and writing strategies in ways that would support children’s emerging reading and writing skills. For example, (as discussed above) Gina, modeled the use of the Table of Contents, thus drawing the children’s attention to the organization of this type of text. Third, Gina incorporated routines that included functional reading and writing. For example, waiting lists were generated for popular activities. If a child was interested in an activity but found there was no room, the child was expected to add her name to a waiting list. When a child had finished the activity, she would check the waiting list and inform the next child on the list that it was her turn. The new child would cross her name off the waiting list and begin the activity and so on. Finally, Gina planned activities involving reading and writing. For example, the children were encouraged to write their own dinosaur books using informational texts as models. These books were shared with the full group and catalogued into the Library School Books.
Summary

This chapter has described the context within which this group of preschool children's understandings of informational texts developed. An overview of the focus teacher's philosophy of early childhood education, the philosophy of the preschool and the emergence of the integrated dinosaur theme were provided. The chapter also provided a 'thick description' of the physical arrangement of the classroom and the routines and activities of the classroom. Emphasis was placed on those activities and routines that supported and encouraged the use of informational texts.
CHAPTER 5: THE FINDINGS OF THE STUDY

This chapter is organized to present the findings of the study in terms of the two research questions that guided it. I focus first on what the data analyses reveal about the ways in which the children engaged with informational texts. Next, I present patterns of talk between the teacher and the children during full and small group informational text readalouds and activities incorporating informational texts. Finally, I trace the ways in which the teacher functioned in the scaffolding process.

The Nature of Children’s Talk During Informational Text Readalouds and Activities Incorporating Informational Texts

In this section the nature of children’s talk specifically as it relates to informational texts is explored through a discussion of the conceptual categories which emerged from an analysis of their talk during full group and small group informational text readalouds, full group and small group activities incorporating informational texts and child-to-child informational text sharing. The emerging patterns within and across these contexts are discussed in order to build up a descriptive interpretation of how these children engaged with informational texts and to build up a portrait of individual children’s developing understandings of informational texts.

Conceptual Categories for Children’s Talk

Through qualitative analysis of the transcripts six major categories were identified into which the children’s utterances could be placed. Following a brief presentation of the six categories and examples of each of the categories from a transcript of an informational text sharing, each of the categories will be explored more fully. It should be noted that some utterances fitted into more than one category and were, thus,
categorized twice. Table 2 shows the frequencies and percentages for the six categories of children’s talk during all the full and small group readalouds, full and small group activities incorporating informational texts, and child-to-child informational text sharing.

Table 2 Frequencies and percentages of all children’s talk by type

<table>
<thead>
<tr>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
<th>Category 5</th>
<th>Category 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text Knowledge</td>
<td>Content Knowledge</td>
<td>Representing Meaning</td>
<td>Reflective Talk</td>
<td>Building Connections</td>
<td>Relational Talk</td>
</tr>
<tr>
<td>n</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>128</td>
<td>22</td>
<td>101</td>
<td>17</td>
<td>69</td>
<td>13</td>
</tr>
</tbody>
</table>

Note: n = number of conversational turns in all coded data.

Category 1: *Informational Text Knowledge* included all utterances that seemed to be dealing with the children’s knowledge of the informational text itself. Included in this category were responses that dealt with children’s knowledge of the particular discourse patterns and format features of the informational text genre. For example, the children identified that the aim of an informational text is to “tell you information that really happened” (transcript of small group activity May 1, 2001); that information can be located using the table of contents and page numbers; and that information is displayed in a variety of ways (e.g., menus, timelines, illustrations etc.).

Category 2: *World Knowledge* reflected the children’s knowledge about the content/topic of the informational text. For example, as well as labeling many types of dinosaurs, for example, Tyrannosaurus Rex, Stegosaurus and Triceratops, the children identified that dinosaurs are *extinct* and offered explanations as to why they became extinct.
Category 3: *Representing Meaning* included responses that suggested the children were using internal text structures to represent their understanding of particular aspects of informational texts. For example, the children made descriptive comments and elaborated on the focus topic, put facts or events into sequence, contrasted or made comparisons between facts or concepts and commented on how an event happens because of other factors (cause and effect). The responses in this category were thus essentially associated with representing understanding of informational text structures.

Category 4: *Reflective Talk* included responses that indicated the children were monitoring their knowledge and comprehension of the text. Verbal responses in this category included identifying gaps in knowledge, seeking specific information, talking about or playing with language, and making aesthetic judgements about some aspect of the text. Thus, the responses in this category reflect the children’s metacognitive awareness.

Category 5: *Building Connections* included responses that indicated the children’s ability to relate or link their engagement with informational texts to something either within or beyond themselves. For example, children made connections to personal experiences and the content of the informational text, invited other children to join in sharing the text, and engaged others through imaginative interactions with the text.

Category 6: *Relational Talk* included all the responses that appeared to have nothing to do with the children’s engagement with informational texts. These responses included the regulatory talk of the classroom (e.g., reminders about the classroom rules), making wants and needs known (e.g., requests to use the toilet), and linking with others.
Verbal responses in this category, therefore, reflected the general relational talk of a classroom community.

Taken together these six categories and the patterns of their interrelationships describe the nature of these children's talk as they engaged with informational texts. The children expressed their informational text knowledge and their knowledge of the content/topic of the informational texts they encountered, used internal text structures to represent their understandings of informational texts, reflected on their knowledge or comprehension of the text, built bridges to link or relate their topic knowledge to something within or beyond themselves, and participated in the day-to-day conversations of a classroom community.

Examples of the Six Categories

The following is a partial transcript (dated April 17, 2001) of one of the episodes of child-to-child informational text sharing. This transcript was chosen because it provides examples of the six categories of the children’s talk within a small number of conversational turns. The numbers of the codes are in brackets and the conversational turns are numbered beginning at line 15. Sections which are bold and bracketed include the researcher’s descriptions of the child(ren)’s actions as well as informational text information. Robert and Larry are the child participants.

[Although the boys each have a book, they begin sharing with each other.]

15 [5] Larry: I’m reading this one here. I never read this one. [Takes a book from the book shelf]

Labeled diagrams, Time line, Headings. The two boys go and sit on the couch next to each other. This one’s all about insides. [The book has illustrations of the internal organs of dinosaurs]

17 [6] Larry: This is my book.

18 [3] Robert: Look there it is! [Robert points to an illustration and the boys look together]

19 [3] Larry: Touch this! [Larry touches the cover of his book. The book has a textured surface presumably like that of a dinosaur. Robert rubs with his finger where Larry shows him]


22 [3][1] Robert: Do you know what? [Robert points to an illustration in his book. Larry closes his book and looks] Look you can see the other part of it [the illustrations reveal the internal organs of the dinosaur] [turns page] and now this is the other part of it. And then [turns page] see this one.

23 [4] Larry: Hundreds of dinosaurs! [Larry points] [both boys study the illustration] EEEW! [Larry points at the illustration]

24 [2][1] Robert: That’s triceratops! Broken!

25 [1] Larry: Yea! They broke his tummy open!

26 [3][2] Robert: Look! Look! You were right! They do eat stones!

27 [3][1] Larry: Look! Look! They broke his tummy!


30 [3] Robert: Look at this!

31 [4] Larry: Baby!

[The boys finish and put their books back on the bookshelf. Robert chooses another dinosaur book and the two boys return to the couch and continue sharing]
32 [2][4] Larry: Wow! Tryceratops Rex! [points to the illustration] Yea, and he says “Jeee” because he’s mad. That guy is mad because somebody beat him. Wow! Tyrannasaurus Rex!

33 [5] Robert: What’s that one called? [to the researcher] [shows it to Larry and then puts the book back on the shelf]

At 16, 22, 24, 25 and 27 the children are focused on aspects of the form and purpose of the informational text. At 16, Robert identifies that the book The X-ray Picture Book of Dinosaurs and Other Prehistoric Creatures (Senior, 1995) will provide him with information about dinosaurs and, in particular, information about the internal organs of the dinosaurs (the purpose of informational texts to provide topic information). At line 22, Robert shows his knowledge of how information is organized. At lines 24, 25 and 27, Robert and Larry have a conversational exchange that focuses on information contained in the illustrations (how information is represented). All of these responses are examples of Category 1, Informational Text Knowledge.

At 24, 26 and 32 Robert and Larry express their knowledge of the content of this information text (i.e., dinosaurs). Specifically, the two boys identify types of dinosaurs (i.e., Triceratops, Triceratops Rex and Tyrannosaurus Rex). At 26, Robert remembers a piece of information about dinosaurs that Larry had shared with him. An illustration in the informational text confirms the accuracy of Larry’s topic knowledge. All of these responses are examples of Category 2, World Knowledge, related to knowledge of the content or topic of the informational text.

At 24, 25 and 27 Larry and Robert made descriptive and elaborative comments based on the illustration of a dinosaur’s internal organs (e.g., “That’s triceratops! Broken”). At 22 Robert identified how the illustrations depicting the dinosaur’s internal
organs are sequenced. These responses are examples of Category 3, *Representing Meaning.*

At 15 and 34, Robert and Larry’s responses are examples of Category 4, *Reflective Talk.* At 15, Larry’s response “I’m reading this one here. I never read this one,” reveals his ability to reflect on his action (reading) and to assess what he has read (i.e., he identifies that he has not encountered this particular informational text and its contents before). At 33, Robert identifies a gap in his knowledge and seeks specific knowledge to fill that gap. All of the responses in this category fall into the area of metacognitive awareness (i.e., the awareness that allows people to observe their own intellectual processes).

At 18, 19, 20, 26, 27, 28, 29 and 30, Robert and Larry’s responses are invitations to share in each other’s informational texts. At 29, Larry says, “Want to look at my book?” And at 30 Robert replies “Look at this.” These responses are examples of Category 5, *Building Connections.*

At 17, Larry’s response is an example of Category 6, *Relational Talk.* The response, “This book is mine,” is an announcement that he has ownership rights (however brief) over the informational text he has claimed (i.e. taken from the bookshelves to read). It is understood that such rights will cease when Larry finishes with the informational text and returns it to the bookshelves. All of the responses in this category are concerned with relational interactions.

The above excerpt provides examples of each of the six categories of talk that occurred as the children shared informational books, participated in informational book readalouds and engaged in activities incorporating informational books. In the following
section each category is given in-depth consideration. In Chapter 3 and earlier in this chapter, it was identified that the categories of children’s talk were built up from a number of codes and sub-codes. The discussion of each category, therefore, will include a detailed discussion of the codes and sub-codes that constituted each of the categories.

**Category 1: Informational Text Knowledge**

Although Category 1 was generally concerned with the children’s talk around their knowledge of the informational text itself, during analysis it became apparent that the children’s comments fell into two distinct subcategories. Those subcategories were:

1.1 Discourse knowledge

1.2 Format features

In subcategory 1.1 (Discourse knowledge), the children grappled with the particular discourse patterns found in informational texts. Generally, the primary mode of discourse found in informational texts is exposition which includes the functions of telling, showing, describing or explaining. In this subcategory, the children made comments like “... fact books tell you information” (Transcript of small group activity, May 1, 2001), identified that the aim of an informational text was to provide information about a specific topic (i.e., dinosaurs) and discussed the differences between storybooks and informational texts. For example, during a small group activity on May 1, 2001 the following conversation occurred between the teacher, Leon and Nate:

**Teacher:** Leon come on I need you. Leon and Nate. Park those guys. Remember we were sorting books that were fact books and story books. We’ve got most of them done. We’ve got a couple left and I just need help. Can you remember can you guys remember why a book was called a fact book? Which ones are fact books?

**Leon:** I know why they’re called fact books because they tell you information that dinosaurs really did.
Teacher: Yes. They tell you information. Do you think that’s right, Nate?

Nate: Yes.

Teacher: And how about storybooks? What’s a storybook?

Leon: That’s just a book for fun to read.

Teacher: Nate, do you think a fact book has to be just about dinosaurs or could it be about other things?

Nate: It can be anything.

Clearly, in response to the teacher’s questions, the children expressed their understanding that the purpose of informational texts is to provide information and facts on any topic. Leon also identified that the purpose of an informational text (to “tell you information”) is different from that of a storybook which is to entertain (“fun to read”). In the following excerpt from a full group activity on April 4, 2001, Leon and Ellie also referred to an informational text as a source of facts and information.

Teacher: You know what, how have we been finding out about dinosaurs in this classroom. How did we find out stuff?

Leon: We learned about it in our books!

Teacher: We learned about it in our books. You know what here’s one of my books. It’s got a lot of information in it and I could look in this book and find out stuff.

Ellie: Let’s look at it now.

The above examples (understanding that informational texts inform) imply that the children understood that informational texts are factual. In the following, excerpted from a transcript of a full group activity on April 5, 2001, one of the children (Nate) demonstrated his understanding of the authority of informational texts.

Teacher: Alright! Put that under No most people think they weren’t purple. No
Esther come and choose one. Oh! Here’s a good one here. There’s only three left and then we’re going to have snack. Dinosaurs hatched from eggs.

Nate: Yes! Some! I’ll show you one [Nate gets a book from the bookshelves and opens it to an illustration of a dinosaur nest].

Teacher: Yea, there’s a wonderful picture in here Nate you’re right! This is the one I’ll flip through real fast. Oh! Here here’s the picture. [T. holds the book so that the children can see. T. has a copy of The Book of Dinosaurs: A complete illustrated history (1993)] Lookit! There’s the mother dinosaur. There she is looking at the nest with her eggs. [p. 36 and 37] There she is with them hatching.

[Nate goes over to the bookshelf and looks. Comes back and pulls at T.]

Nate: I know where there’s more! I know where there’s more that hatch eggs.

As mentioned earlier, the bookshelves in this classroom contained both storybooks and information books on dinosaurs. Since Nate chose an informational text to use as evidence to support his belief that dinosaurs hatch from eggs, it can be argued that he understood that informational texts are factual. An important aspect of understanding the discourse of informational texts is understanding that the information presented in such texts is factual and binding (i.e., the authority of the text). An understanding of this fact ‘colours’ all discourse around informational texts. Also included in this subcategory were occasions when the children used the particular vocabulary/language of informational texts or discussed the vocabulary/language of the informational text. The following example is from a transcript of a small group reading on April 10, 2001.

Teacher: Then there was T is for Tyrannosaurus “One of the largest of the meat-eating dinosaurs.” He was one of the largest.

Derek: Oooh! I’m scared of that one!

Teacher: I wouldn’t want to ever see that one.

Nate: But if they’re extinct then you wouldn’t.
**Teacher:** Yea! If they’re extinct we don’t have to worry about that because extinct means they’re not ...

**Tina:** Alive!

Responses were grouped in this subcategory because they focused on the particular mode of discourse found in informational texts.

In subcategory 1.2 (Format features), children displayed their awareness that informational texts contain organizational or format features. Included in this subcategory were occasions when the children commented on how information was organized and, discussed the format of informational texts. Examples of subcategory 1.2 include the following excerpt from a transcription of a full group activity on April 19, 2001.

**Teacher:** Oh here! This is one of the books we used to find out what dinosaurs eat. It was called *Dinosaur Dinners*. This was the one that had a list in it...

**Tina:** It’s on the last page.

**Teacher:** Was it on the last page? Oh! Wait a minute now. What do they eat for dinner? Wait a minute. I’m having a hard time finding their menu.

**Leon:** That book didn’t have the menu. Mine had it.

In this excerpt, the teacher and the children discussed the location of a piece of information they had discovered about the eating habits of carnivorous dinosaurs. In addition, they commented that this particular piece of information (the carnivorous dinosaurs’ diet) was graphically organized in the form of a menu. The children’s comments suggest that they understood that the information they wanted could be located in a particular area of the informational text (i.e., “... on the last page”), that the diet of the dinosaur was represented in the form of a menu, and that the menu was located in a specific informational text (i.e., “Mine had it”).
As indicated above, children’s responses that focused on a specific organizational feature of the informational text were also included in this subcategory. For example, in this excerpt (drawn from a transcript of a small group activity on April 18, 2001), the children were specifically instructed to look in their informational texts for information on the eating habits of dinosaurs. As a result of these instructions, Nate pointed out the Table of Contents. This suggested that he was aware of both the format of the Table of Contents and the function of the Table of Contents as a search tool. It is important to note here that Nate was not, as yet, able to read (although he is clearly well on his way to ‘cracking the code’). However, his actions showed that he is able to recognize the particular and unique format of a Table of Contents.

Teacher: Look for anything that seems to have something about dinosaurs eating and we’re going to ...

Nate: Teacher look. [Nate shows Teacher the table of contents]

Teacher: What is this?

Robert: They eat plants!

Teacher: Hey you know what?

Robert: They eat plants [looking at illustrations in his book and passing on what he’s learned]

Teacher: Okay! You know what Nate showed me guys when he opened his book? [Teacher holds the book up so that all the children can see]. He said “Look Teacher.” The contents. Look at that. Right away he knew… Hey you’ve got the contents too. [points to the book Leon is looking at – he’s also looking at the Table of Contents page].

The examples for this subcategory demonstrate the children’s awareness of how information is represented and the format/organization of informational texts.
In both of these subcategories of Category 1, the children engaged with informational texts and made sense of the texts themselves by identifying the aims and purposes of informational texts, attending to the particular language of informational texts, paying close attention to how information is graphically presented and attending to the format features of the texts.

**Category 2: World Knowledge**

When in Category 2, the children shifted their focus from the informational text itself to the topic content of the text. In this category the children expressed their knowledge of the topic covered in the informational text. In the following excerpts from a transcript of a small group activity on April 18, 2001 and a transcript of a full group activity on April 19, 2001, the children identified examples of carnivorous dinosaurs and discussed the eating habits of herbivore dinosaurs.

**Teacher:** I would love to write down some of the names of the meat eaters. Do you guys know some of the names?

**Leon:** Tyrannosaurus Rex.

**Teacher:** Okay! T-Rex. He was one of the meat eaters. What else was a meat eater? I'm going to put T-Rex.

**Robert:** T-Rex is Tyrannosaurs Rex!

**Teacher:** What else was a meat eater?

**Leon:** Allosaurus.

In the second excerpt, the children's comments revealed their knowledge of the eating habits of dinosaurs. In addition, the children's comments implied that they understood that dinosaurs could be categorized as plant eaters (herbivores) or meat eaters.
(carnivores) and that they understood the scientific collective terms for describing plant eaters and meat eaters (i.e., herbivores and carnivores).

**Teacher:** What kind of plants do plant eaters eat?

**Robert:** Plants.

**Teacher:** What kind of plants?

**Nate:** Flowers.

**Robert:** Flowers and leaves.

**Teacher:** Yep! Yep! We found out that. We found out leaves. You’re right. Leaves.

**Robert:** And flowers.

**Teacher:** Yes! And shrubs, berries ...

**Leon:** And some of the meat eaters are called carnivores.

**Teacher:** Carnivores. All of the meat eaters were called carnivores. Do you remember what kind of meat they ate?

**Leon:** Raw meat.

Thus, the children’s responses in category 2 reflected their background knowledge of the topic of the informational text.

**Category 3: Representing Meaning**

When functioning in Category 3, the children represented their understanding of aspects of informational texts using the types of internal text structures associated with informational texts, for example, describing or elaborating on objects or concepts; comparing or contrasting likenesses and differences among objects, facts or concepts; showing how facts or concepts happen because of other facts or concepts (i.e., cause and effect); and, putting facts, events or concepts into a sequence.
The transcripts are peppered with examples of children's descriptions of objects, events or concepts. For example, during a child-to-child sharing of *What happened to Patrick's dinosaur* (Carrick, 1986) on April 12, 2001, Robert stated, "Look you can see a dinosaur eating a dinosaur!" During a small group readaloud of *Dinosaur Pop-Up ABC* (Maguire, 1995) on April 10, 2001, Nate counted the spikes at the end of a stegosaurus's tail and shared this descriptive information with the group. Later during the same small group readaloud Nate identified a dinosaur by describing it as the one with a "spike on the head." During a small group activity on April 18, 2001, Robert was scanning *The Big Golden Book of Dinosaurs* (Jenkins, 2000) looking for information on what dinosaurs ate. He described the information he gleaned from an illustration as follows:

**Robert:** Look at that eating leaves [points to p. 12].

**Teacher:** Oh! Yea!

**Robert:** Eating leaves!

**Teacher:** Yep! Oh! Look, look what he's after.

**Robert:** He's eating a dragonfly.

The children also represented meaning through comparing and contrasting objects, events or concepts. For example, in this excerpt from a transcript of a full group readaloud on April 4, 2001, the children represented their understanding of the term *herd* by associating it with other collective terms for groups of animals (i.e., *packs, schools* of fish).

**Leon:** Um, I know what a herd is a whole ton of dinosaurs. It's over a thousand dinosaurs altogether.

**Ellie:** Some herds are like a pack!

**Teacher:** Like a pack! That's right! A pack of coyotes or a herd of dinosaurs or
a flock of birds.

**Ellie:** Or a school of fish!

**Teacher:** A school of fish! Those are groups of animals and birds.

Thus, the children were able to represent their understanding of the term *herd* as it applied to the topic at hand (dinosaurs), by associating it with other collective terms. In this excerpt from a small group readaloud on April 10, 2001, the focus topic was the protective armor of the stegosaurus. Tina was able to describe the protective plates of the stegosaurus by making associations between feathers and protective plates (in this case Tina made associations by comparing and contrasting the two objects).

**Teacher:** It’s a plated dinosaur. You’re right! But does it sort of look like a plate?

**Tina:** It’s kind of like feathers but it’s a plate and it’s really hard that’s why they call it a plate.

**Teacher:** Oh! It’s hard. Okay! So it’s not soft like feather but sort of like a feather.

**Tina:** It’s not like a feather but it looks like a feather.

**Teacher:** Yea! Okay! That’s interesting Tina because when you said it’s like a feather I thought you meant it’s soft but you meant it’s sort of shaped like a feather and comes off the body like a feather. But it’s shaped like a plate!

**Tina:** It can’t be shaped like a plate because you know it’s not round!

**Teacher:** It’s not round like a plate it’s more oval shaped isn’t it? But it’s flat!

**Tina:** So flat it’s like a feather but it’s not that stuff it’s a little hard.

**Teacher:** I think they’re quite hard ‘cos they use them for defending themselves!

Children also represented their understanding through cause and effect (i.e., showing how one event influences or happens because of another event). For example, during a full group readaloud on April 12, 2001, Amy suggested that dinosaurs stayed in
herds “because they’re scared” and Tina suggested that they stayed in a group to “stay
safe.” In other words, these animals formed herds because there is safety in numbers
(cause and effect). Responding to Leon’s suggestion that “Every dinosaur has one tool
to fight meat eaters,” (during a small group activity on April 18, 2001) Leon suggested
that the threat from big meat eaters resulted in “some little meat eaters” having “a
protection club to keep away big ones.”

During a child-to-child sharing of the informational text *The X-ray picture book of
dinosaurs and other prehistoric creatures* (Senior, 1995) on April 17, 2001, Robert
pointed to and commented on the sequencing of the information represented in the
illustrations.

Robert: Do you know what? [points to something in the book. Larry closes
his book and looks]. Look you can see the other part of it [the book has
holes in the page through which the internal organs of the dinosaur are
revealed] [turns the page] and now this is the other part of it. And then see
this one.

Thus in Category 3, the children used the types of internal text structures
associated with informational texts to represent their understandings of such texts. These
internal text structures included describing or elaborating on objects or concepts;
comparing or contrasting likenesses and differences among objects, facts or concepts;
showing how facts or concepts happen because of other facts or concepts (i.e., cause and
effect); and putting facts, events or concepts into a sequence.

**Category 4: Reflective Talk**

When the children were functioning in Category 4, they shifted their focus from
the text toward knowledge about their own learning (metacognition). Children’s talk in
Category 4 was characterized by the children’s ability to monitor their own learning (i.e.
recognize gaps in their knowledge and remedy such gaps), make aesthetic/critical judgements and talk about language. Category 4, therefore, included these three subcategories:

4.1 Monitoring learning
4.2 Aesthetic judgements
4.3 Talking about or playing with language

In subcategory 4.1 (Monitoring learning), the children were able to specifically assess their knowledge base. This subcategory is complex, representing a variety of ways in which the children reflected on their own knowledge. The following examples are intended to give a concrete sense of the category. The examples move from a simple identification of the need for information (to fill gaps in the child’s knowledge base), to a more complex understanding that learning can be intentional and planned. In the following excerpt from a transcript of a child-to-child sharing an informational text on April 17, 2001, Robert identified a gap in his knowledge by directly seeking information.

Robert: What’s that one called? [to the researcher]

On this occasion Robert wanted to know the name of a particular type of dinosaur depicted in the book he was browsing. In the following excerpt from a transcript of a full group activity on April 21, 2001, Anna identified not only that there was a gap in the children’s knowledge about dinosaurs, but also that a field trip had been planned to correct that situation.

Teacher: Do you know why we’re going to this museum?

Anna: Because we don’t know enough about dinosaurs yet.
It can be inferred from Anna’s comments that she had begun to understand that learning could be an intentional act (i.e., the object of the fieldtrip was to extend the children’s knowledge of dinosaurs).

In this excerpt from a transcript of a full group readaloud on April 12, 2001, the children identified what they learned from an informational book readaloud of *Dinosaur Day’s* (Thomson, 2000).

**Teacher:** Wait a minute think! Put on your thinking caps! Think about the book! Was there anything you learned in that book that we could add to our list?

**Robert:** I learned about toes!

**Teacher:** Anna what did you learn in that book?

**Anna:** Dinosaurs don’t eat each other but other dinosaurs do!

**Teacher:** That’s right! Good point! Some dinosaurs eat each other and some don’t. I’m going to write this down and then I’m going to put it on a little list. Okay! Robert did you learn something in that book that you didn’t know before?

**Robert:** I learned about the bones.

**Teacher:** In that book there?

**Robert:** I learned about the skull.

**Teacher:** What did you learn about them?

**Robert:** Heads! [points to his head]

**Teacher:** Yeah! Yeah! The picture of the skull. They’ve got skulls.

**Robert:** And and their feet.

**Teacher:** What did you learn about their feet.

**Robert:** They stamp!
In the above excerpt, the children’s talk indicated their ability to monitor their learning, that is, after the reading of the informational text the children were able to identify their new knowledge. Finally, in this excerpt from a transcript of a small group activity on May 1, 2001, Angela referred to her inability to read and identified the strategy she used to understand the text. This small group activity involved having the children categorize books they had made into either fact books or storybooks.

**Teacher:** That one says it’s Robert’s. Open it up and make sure. Is there anything on the cover page. Oh yes! “Once upon a time a fox. By Robert.” [Angela goes to sort it into the story section]. Let’s look inside I want to make sure. Can you read it?

**Angela:** No. I can’t read.

**Teacher:** “Once upon a time there was a fox who was lonely because he didn’t have any friends. But one day the fox met a rabbit and they turned friends…” [****] Okay fact book or storybook, Angela?

**Angela:** Storybook.

**Teacher:** How can you tell it’s a story?

**Angela:** By looking at the pictures. I can’t read to know what it is.

Angela’s comments underline her ability to recognize her own learning strengths and weaknesses and the demands of the task with which she is engaged. She is able to reflect upon the strategy that she used to participate in the activity (“looking at the pictures”) and why (“I can’t read to know what it is”). In all of the above excerpts, the children identified gaps in their knowledge, sought specific information and/or monitored their learning.

In subcategory 4.2 (Aesthetic judgements), the children displayed an interest in and critical awareness of the text as object. For example, in this excerpt from a transcript
of a small group readaloud on April 12, 2001, Tina discussed her appreciation and approval of the illustrations in the informational text *Dinosaurs* (Johnson, 2001).

**Teacher:** These are just pictures that people drew. This is what they think they looked like.

**Tina:** I like how they draw. I like how they’re drawing!

**Teacher:** I do too! They’re really good artists aren’t they?

In another excerpt from a transcript of a small group readaloud on April 5, 2001, Gina Rowlands and Derek discuss the illustrations in *An Alphabet of Dinosaurs* (Dodson, 1995).

**Teacher:** I think that might be about babies. In-scale that means which were tall and which were small.

**Derek:** I like the one with [points to an illustration of a dinosaur] sharp teeth!

**Teacher:** This one here? [Derek nods] that would probably be a Mighty Meat Eater.

In subcategory 4.3 (Talk or play with language) the children’s comments indicated their ability to talk about alphabet letters and language as objects of interest. Tina’s comments during the small group readaloud of *Dinosaur Pop-Up ABC* (Maguire, 1995) on April 10, 2001 provided an example of a child’s talk about alphabet letters.

**Tina:** [looking at the page Tt Tyrannosaurus] T for meat eaters! T for Tina! [looking at the book]

**Teacher:** That’s right! Tyrannosaurus. T for Tina the meat eater.

**Tina:** T for meat eater! T for Tina!

Tina’s talk showed that she knew what the letter T looked like and that it was one of the letters in her name; however, her comment “T for meat eater!” revealed her, as yet, limited knowledge of the sound/symbol relationship. Angela’s comments during a small
group activity on May 1, 2001, on the other hand, revealed her growing understanding of sound/symbol relationships (graphophonemic awareness) and her ability to talk about it:

Teacher: You’re right! Put it in the storybook side. Can you see the words? Put it in the story book. What letter is this?

Angela: F

Teacher: What does F say?

Angela: Fffff!

In the following excerpt from a transcript of a small group reading on April 10, 2001 Nate and Tina had been listening to Gina read *Dinosaur Pop-Up ABC* (Maguire, 1995). In particular, the children had been discussing the size (height) of dinosaurs. For example, there had been considerable discussion around the Xenotarsosaurus dinosaur:

Teacher: He was small, had two legs he was a plant eater and guess what, he was only about as tall as – stand up there Derek – he was about [counts up Derek’s body in increments of about 1 foot – reaches Derek’s chest] that tall.

Nate; Smaller than you? [to Derek]

Teacher: Smaller than you too [to Nate].

Tina: [standing up] How about me?

Teacher: Smaller! He was only about that tall [points to Tina’s chest] He was a tiny little guy.

Nate: I know what’s smaller a dinosaur only small as a mouse!

Tina: You know what? A dinosaur I think that red one is small as a mouse.

The conversation turned to a discussion of the height of the Zaphyrosaurus dinosaur (the last dinosaur described in the book).

Tina: Bigger than me?

Teacher: Yes! But instead of saying 6 feet tall we should say 2 meters tall and
he could run quickly on his two hind legs.

**Nate:** Bigger than the whole wide world?

**Tina:** Is it bigger than the sky, bigger than the whole wide world? [*laughter*]

Nate's comment "Bigger than the whole wide world?" and Tina's comment "Is it bigger than the sky, bigger than the whole wide world?" were not serious questions, rather they were a deliberate and playful use of exaggeration and likely a deliberate juxtaposition to their previous discussion of the dinosaur that had been "small as a mouse." This exchange resulted in hilarious laughter, indicating that both children appreciated the playfulness and absurdity of their comments.

**Category 5: Building Connections**

When the children were functioning in Category 5, they related or linked their engagement with informational texts to something either within or beyond themselves. In Category 5, children invited others to join in sharing the text, made connections to personal experiences and the content of the informational text and built links to the text through imaginative play. Sipe (1996) describes the impulse to relate the events of a text to personal experience as "life-to-text connections" (p. 179). In Category 5, such life-to-text connections appeared to serve three purposes:

- to help with an element of text interpretation (Sipe, 1996);
- to draw the content toward oneself (Sipe, 1996);
- to build connections with others.

The simplest of the connections were statements of 'likeness.' For example, during the small group reading of *Dino-might* (Burgan, 2000) on April 12, 2001, the teacher was reading about and commenting on the various eating habits of dinosaurs: Tina responded
“I would eat only plants.” This comment suggested that Tina was ‘likening’ herself to (associating herself with) the herbivore dinosaurs. However, the children also provided elaborate life-to-text connections. In the following excerpt of a transcript from a child-to-child sharing of an informational text on April 10, 2001, Ellie and Larry exchanged personal experiences around the loss of teeth.

Ellie: Oh! Look!

Larry: See! [points to the teeth of a dinosaur p. 18]

Ellie: Look! He had a tooth out!

Larry: Yea!

Ellie: You know what my uncle did?

Larry: What?

Ellie: Like this [Ellie puts her finger into her mouth on the upper left-hand side Larry listens and watches] He smacked his teeth. Well he didn’t like get a hold of it but it came out!

Larry: But I bumped my tooth on the table and there was blood in my mouth and I spit it out!

Ellie: You know what?

Larry: What?

Ellie: This tooth like he hit it and then he only has half this tooth [finger in her mouth pointing]

It can be speculated that the recollection of these experiences may have assisted Ellie and Larry in understanding and interpreting an aspect of the text (i.e., what sort of incident might have caused the loss of the dinosaur’s tooth). It can also be speculated that Ellie and Larry were sharing personal stories with one another in order to build their personal connection (relationship) through life-to-text connections.
Another aspect of building connections was the children's imaginative engagement with informational texts. For example, after a child-to-child sharing of the picture book *What happened to Patrick's dinosaur* (Carrick, 1986) on April 12, 2001, Robert invited Derek to join with him in an imaginative reenactment of what they had learned about dinosaurs: "Let's play dinosaurs. Let's play all of these." In a sense, this imaginative engagement was a type of text-to-life connection. Sipe (1996) suggests that in text-to-life connections the emphasis is not on making associative links (as in life-to-text) but rather on using the text as a form of experience to build personal understandings (p. 183). It can be argued that during Robert and Derek's imaginative play engagement, the children entered the action of the text and built deeper personal understandings (e.g., the difficulties of life for those who have to hunt and scavenge for food) as well as deeper understandings of the text content (e.g., how dinosaurs hunted and scavenged for food).

It is important to note that while the children were building connections with the text through life-to-text and text-to-life links, they were, simultaneously, building connections with each other. Invitations to share, therefore, were an integral part of building connections. When children invited others to share in an informational text, therefore, they were considered to be functioning in Category 5. For example, in this excerpt of a transcript of a child-to-child sharing of an informational text on April 12, 2001, Robert and Derek invited each other to share in their texts:

**Robert:** Look! Look! Look!

**Derek:** Want to look at my book?

**Robert:** Look at this.
Out of this encounter came the invitation from Robert to Derek to join him in the imaginary game of dinosaurs described earlier.

**Category 6: Relational Talk**

When the children were functioning in Category 6, their focus was on the general talk of a classroom community. The responses in Category 6, therefore, were not specifically related to informational texts (i.e., although the situation within which such utterances arise might be concerned with an informational text read aloud or activity incorporating an informational text, the focus of the comments was the day-to-day needs of young children in a functioning classroom). Included in this category were two subcategories:

6.1 Regulatory talk

6.2 Linking with others

In subcategory 6.1 (Regulatory talk) the children’s talk was characterized by references to their own wants and needs within the organizational and behavioral expectations of the classroom. For example, in this excerpt from a transcript of a full group activity on April 5, 2001, the children had been taking turns to categorize facts about dinosaurs as either true or false. Each fact (about dinosaurs) had been written on a strip of paper. A child would be invited to choose a strip of paper with a dinosaur fact written on it and, after the teacher had read the fact on the paper, the child would decide whether the fact was true or false. Since there were only a limited number of facts for the children to sort, those children who had not had a turn became anxious. Tension grew as the strips of paper with the dinosaur facts dwindled and, as the tension grew, so did the noise of children shouting for a turn. At this point, the teacher took action and told the
children that anyone shouting-out would not have a turn. When only one dinosaur fact was left, Leon, who still had not had a turn, remembered the teacher's rule about shouting-out.

**Teacher:** Now there's only one left. Who didn't have a turn yet? Ellie you didn't get a turn?

**Leon:** But she's been shouting a lot!

Clearly, Leon's comment was an attempt to protect his self-interest (within the organizational and behavioral expectations of the classroom), that is, he really should have the last turn. It can be argued that Leon's comment both criticized Ellie's behavior and offered a justification for why he should have the last turn.

The regulatory talk of subcategory 6.1 also included children's requests (i.e., making physical and psychological needs and wants known). For example, on April 12, 2001, during a full group readaloud, Mae and Anna let the teacher know they needed to visit the toilet.

**Mae:** I need to go pee.

**Teacher:** Okay then.

**Anna:** Me too.

**Teacher:** No! Just one at a time 'cos only one bathroom works. One doesn't have a light bulb in it. Anna sit down.

In subcategory 6.2 the focus of the children's comments shifted from making wants and needs known to making connections to others. For example in this excerpt from a transcript of a full group activity on April 4, 2001, during a discussion of the meaning of the word archeologist, Tina admired the teacher's singing.

**Teacher:** What Tina?
Tina: [has had her hand up for some time] You sing very good.

Teacher: Thank you. I love to sing. You sing well too, Tina.

Although Tina’s comments added nothing to the discussion (i.e., the meaning of the word archeologist), they indicated Tina’s affection and admiration for her teacher and as such they can be considered part of the ‘glue’ that built and held this classroom community together. In both of these subcategories of Category 6, the children’s comments reflected the general relational talk of a classroom community.

**Individual Children’s Engagement Styles**

The data provided evidence that at least some of the children displayed engagement styles that could be differentiated from those of other children. A choice was made to explore the engagement styles of two children. The decision as to which children would be chosen was based on the following: a) a boy and a girl should be included; b) the children chosen should be verbal in as many of the contexts as possible; and, c) the children should be approximately the same age. In addition, I decided to include one of the ESL children. The two children who, ideally, met these criteria were Tina and Leon.

In this section, the engagement styles of Tina and Leon are described and offered as examples of individual difference. The brief portraits that begin the discussion of each child’s engagement style were drawn from discussions with the teacher Gina Rowlands and from my observational field notes.

**Tina’s Engagement Style**

Tina was a five-year-old who, at the time of the study, was in her third year as preschooler at the Child Development Centre. She was of Asian-Canadian heritage and
bilingual. At home Tina spoke Cantonese with her family but had learned to speak English fluently through her experiences at the preschool. Tina was a very competent and independent child. The teachers often suggested that children go to Tina for help in tying their shoelaces or doing up buttons. Although Tina’s younger sister, Esther, was also in the focal classroom, Tina rarely interacted with her. However, Esther was still struggling to learn English and Tina would help Esther and the teachers with language difficulties (e.g., translating the teachers’ instructions into Cantonese etc.). Tina had a lively and humorous demeanor. She was outgoing and well liked by all the children in the class, although she did not appear to have one particular friend. She spent much of her time in literacy activities, creating detailed and meticulous drawings, dictating lively stories for her drawings and paintings, practicing her letters and numbers, and writing lists of words she had mastered (e.g., Tina, dad, mom etc.). Tina enjoyed being involved in projects and was one of the leaders in the group researching what dinosaurs ate.

Generally, Tina was a very outgoing, independent and affectionate child who was particularly fond of Gina Rowlands. She would often compliment Gina and liked to be close to her.

Tina rarely spoke during full group readalouds or full group activities incorporating informational texts. However, she spoke often and confidently during both small group readalouds and small group activities incorporating informational texts. Table 3 summarizes the frequencies and percentages for the 6 categories of Tina’s talk during full and small group readalouds, and full and small group activities incorporating informational texts.
Table 3 Frequencies and percentages of coding categories for all Tina’s talk in all coded data.

<table>
<thead>
<tr>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
<th>Category 5</th>
<th>Category 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text Knowledge</td>
<td>Content Knowledge</td>
<td>Representing Meaning</td>
<td>Reflective Talk</td>
<td>Building Connections</td>
<td>Relational Talk</td>
</tr>
<tr>
<td>N</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>10</td>
<td>17%</td>
<td>7</td>
<td>11%</td>
<td>7</td>
<td>11%</td>
</tr>
<tr>
<td>2</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

As can be seen in Table 3 the strongest element in Tina’s engagement style was her reflective talk (35% of all her utterances). Comments like, “I like that story,” “I like that drawing” or “That’s my favourite” pepper the transcripts and field notes. As discussed earlier, Tina was a dedicated and meticulous artist. During activities at the writing centre, Tina could often be heard critiquing, discussing and admiring her own work and the work of her classmates. This ability to reflect upon and make critical and aesthetic judgements about some aspect of the text was also apparent in her conversations about informational texts. For example, during the following excerpt taken from a transcript of a small group readaloud of the informational text Dinosaurs! (Johnson, 2001) on April 17, 2001, Tina’s comments reflect her aesthetic appreciation for the illustrations in the book.

36 Teacher: Well these are just pictures that people drew. This is what they think they looked like.

37 Tina: I like how they draw. I like how they’re drawing!

38 Teacher: I do too! They’re really good artists aren’t they? You remember what these are like ‘cos next week we’re going to draw some more and I also want you to remember Tina what plants and trees they had around here [Teacher points to the flora and fauna in the pictures].
Tina’s comments in Category 4 (reflective talk) also reveal her ability to reflect upon her learning strengths and weaknesses. In particular, Tina appeared to be able to identify gaps in her knowledge and asked questions to remedy those gaps. For example the transcripts and field notes identify her asking such questions as “What does herd mean?” (full group sharing, April 12, 2001), “Why is he eating a dinosaur? Is he a meat eater?” (small group readaloud, April 10, 2001) and, “But why if they’re extinct, why are they getting here in this book?” (small group readaloud, April 17, 2001). Tina’s comments also revealed her ability to monitor her learning. For example, during a small group project to research what dinosaurs ate, Tina identified what the group had learned, “We found out they ate plants” (small group activity, May 1, 2001). Comments Tina made during a small group reading (April 12, 2001) of the informational text, Dinosaur Pop-Up ABC (Maguire, 1995), suggested her ability to identify her thinking processes.

Teacher: Oh! Here is the Velociraptor.

Tina: I think this is a meat eater ‘cos it’s killing [points to an illustration of a dinosaur attacking another].

These comments indicated that Tina had used the illustration to deduce that this particular dinosaur was a meat eater. She offered evidence of the correctness of her deduction by pointing to evidence in the book (i.e., the illustration depicting one dinosaur attacking another).

Tina’s comments during a small group activity on April 18, 2001 indicated that she was aware that learning could be intentional and planned. Each child in a research group investigating what dinosaurs ate had chosen an informational text that focused on dinosaurs. The children were asked by Gina Rowlands to specifically look in their books
for information on the topic of dinosaur's eating habits. Tina had a book entitled *Let's look at Dinosaurs* (1992) and after carefully scanning the illustrations the following conversation occurred between Tina and Gina Rowlands.

**Tina:** I can’t find anything. I looked in the whole book.

**Teacher:** Were there any pictures of dinosaurs eating?

**Tina:** No!

Clearly, Tina understood Gina’s instructions. Her comments (i.e., “I can’t find anything”), indicated that she had specifically and intentionally focused her attention on learning about what dinosaurs ate, only to discover that her informational text had no information on that topic. In viewing the videotape of this conversation, it was clear that Tina found this situation frustrating (i.e., she threw the book down on the table and looked irritated).

Finally, in the category of reflective talk Tina showed that she was able to talk about and play with language. In particular, Tina showed her growing awareness of the alphabet. For example, during a small group readaloud of the alphabet book *Dinosaur Pop-Up ABC* (Maguire, 1995) on April 10, 2001 she discussed the pronunciation of the letter Z with Gina (i.e., the American pronunciation ‘Zee’ or the Canadian pronunciation ‘Zed’). During the same small group readaloud, Tina noticed the word Tyrannosaurus began with the same letter as her own name, Tina.

**Tina:** [looking at the page Tt Tyrannosaurus (tie-RAN-oh-SORE-us)]

T for meat eaters! T for Tina.

Clearly, as discussed above, Tina had begun to recognize letters but did not, as yet, have an understanding of the letter-sound relationship.
Another element in Tina’s engagement style was her tendency to build connections (Category 5). As discussed above, when children were functioning in Category 5, they related or linked their engagement with informational texts to something either within or beyond themselves and, simultaneously, made connections to others. In most cases, the life-to-text connections the children made related only to their own personal experiences. For example, in the following excerpt of a transcript of a small group readaloud on April 10, 2001, Tina makes the connection between what dinosaurs ate and her own and her family’s eating preferences.

Teacher: “Most dinosaurs ate only plants”

Tina: I would eat only plants. I would eat plants!

Teacher: What else do you eat?

Tina: I eat food. Sometimes rice and fruit and lots of [inaudible] I love it!

Teacher: Is that your favourite?

Tina: Yep! But I don’t like spice!

Teacher: Not too spicy! Do you ever have chicken?

Tina: Jerry eats spice! [Tina’s older brother]

Teacher: Does he?

Tina: Yea!

Teacher: Spicy boy! Do you ever have chicken and meat and fish?

Tina: I have meat at my house. But they only gave me a little bit [inaudible].

Teacher: I’m going to read some more “Most dinosaurs only ate plants” ...

Tina: I wouldn’t eat dinosaurs!
Although this excerpt was an example of a life-to-text connection (which centered on Tina's own personal experience), Tina was one of only two children in the focus classroom who engaged in conversations exploring the life-to-text connections of others. For example, during the same small group readaloud on April 10, 2001, Tina had the following conversation with Gina:

**Teacher:** [points to an illustration]. "Scientists called paleontologists study fossils. Fossils are the remains of things that lived millions of years ago."

**Tina:** If I found a fossil I'd bring it to school.

**Teacher:** Me too! I did find a fossil once.

**Tina:** I didn't see it!

**Teacher:** I know because it's not here. It's not in Vancouver. But one day I found a little piece of rock and on the rock was a picture of a leaf.

**Tina:** It was a plant one!

**Teacher:** It is a plant one! I'll bring it and show it to you!

**Tina:** Were you digging?

**Teacher:** No I was walking along the road and I saw a rock that looked interesting and I picked it up and I looked on it and I could see that there was a fossil of a leaf on it.

This excerpt illustrates Tina's willingness to engage with another in exploring that person's life-to-text connections. Tina's comments extended ("Were you digging?") and clarified ("It was a plant one!") Gina's life-to-text connections.

In summary, Tina's engagement style was characterized by a reflective and personal approach to informational texts. She demonstrated an aesthetic and critical interest in the text, a lively and playful understanding of language, an ability to reflect upon her own learning and a keen interest in the life-to-text connections of others.
engagement style was underscored by a sense of personal response both to the text and to the experiences of others.

Leon’s Engagement Style

Leon was a five-year-old who, at the time of the study, was in his third year as a preschooler at the Child Development Centre. He was of European-Canadian heritage and spoke English as his first language. Leon was a strong, confident and vocal child who could clearly articulate his ideas, thoughts and knowledge about a topic. He was well liked by the children in the class, who also appeared to admire his competence and knowledge. He spent much of his time in building activities, creating detailed and complex structures with wooden blocks. While building, Leon would engage in lively and imaginative episodes of dramatic play, which he usually led. During free-play Leon’s voice could be heard allocating roles, giving orders, providing information and dictating the action of the dramatic play. Leon enjoyed being involved in long and complex projects both of his own choosing (e.g., building complex structures) and those directed by the teacher (e.g., researching what dinosaurs ate). Generally, Leon was a boisterous, independent and competent child.

Leon did not participate in a child-to-child sharing of an informational text, rarely spoke during full group readalouds and seldom chose to participate in small group readalouds. However, he participated in and was articulate and outspoken during full and small group activities incorporating informational texts. It can be inferred from this that Leon preferred the more active, hands-on approach of the full and small group activities over the readaloud sessions. Table 4 summarizes the frequencies and

161
percentages for the 6 categories of Leon’s talk during full and small group readalouds, and full and small group activities incorporating informational texts.

Table 4 Frequencies and percentages of coding categories for Leon’s talk in all coded data.

<table>
<thead>
<tr>
<th>Category 1: Text Knowledge</th>
<th>Category 2: Content Knowledge</th>
<th>Category 3: Representing Meaning</th>
<th>Category 4: Reflective Talk</th>
<th>Category 5: Building Connections</th>
<th>Category 6: Relational Talk</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>21</td>
<td>39</td>
<td>10</td>
<td>19</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

As can be seen in Table 4 the strongest element in Leon’s engagement style was his informational text knowledge (39% of all his utterances). Comments like, “No! It was page 18” (April 18, 2001), “That book didn’t have a menu” (April 19, 2001), and “I saw those bones in a photograph” (April 18, 2001) appeared often in the transcripts and field notes. These comments revealed that Leon had a clear idea of the ways in which information can be represented in informational texts (i.e., menus and photographs), and some of the organizational features of informational texts (i.e., pagination). Leon also understood the difference between fiction and non-fiction (i.e., storybooks and informational texts) as the following excerpt from a transcript of a small group activity on May 1, 2001, illustrates.

**Teacher:** This is by Amy. It’s called *The Lion and the Dog*. Okay let’s see. *Once upon a time there was a lion and a dog. The dog was in his house. The next morning the lion got angry. Then the lion got happy and they were friends forever. The end.* Well do you think it’s a fact book then or a storybook?

**Leon:** Storybook.
Teacher: Nate can you put it on the storybook side?

Leon: Because it doesn’t make sense.

Teacher: Why doesn’t it make sense?

Leon: Because lions don’t um go with dogs and houses.

Teacher: So then you know for sure, you know that it’s just a pretend, fun storybook. Okay! We’re down to the last ones. Leon this was one that you did but didn’t finish and this is one that Tina did and it’s not finished either. Oh, let’s see. Tell me if you think it’s a storybook anyhow or a fact book. Page one, Me and my mom went to the hospital. And then we had to go inside the hospital. We had to wait a little while. And then it was my turn to go to the doctor. She hasn’t finished it. What do you think it is fact or story?

Leon: Fact. I bet it’s fact because that’s what she really did probably at the hospital.

Teacher: You think that really happened?

Leon: Yea!

Teacher: I wonder. I think maybe it did. You know we think it’s a fact book, Woody. Put it in the other side.

Leon: How about we put it in the middle so it’s half fact and half story.

Teacher: Okay! Half fact and half story in the middle.

Clearly, Leon felt that this particular book (written by Tina) did not completely fit the criteria for a fact book or the criteria for a storybook. His solution, therefore, was to create a new category into which books that were deemed partly fiction and partly informational could be filed. This excerpt illustrates both Leon’s understanding of the storybook and informational text genres and his problem solving abilities (i.e., to create a new category for those books, which do not fit neatly into either the storybook or informational text categories).
Many of Leon’s utterances were concerned with correctly identifying and categorizing information. For example, in the following excerpt from a transcript of a small group activity on April 18, 2001, in which Gina was creating a chart (i.e., an informational text) of the children’s research findings, Leon identified under what heading particular information should be categorized.

**Teacher:** Okay! Look! *Mighty Meat Eaters: Allosaurs.* Allosaurus. I’m going to write down *Allosaurus*.

**Leon:** Write under *Meat Eater*.

It was characteristic of Leon that his responses were concerned with facts and accuracy (as all the above examples indicate). As a result, Leon appeared to be viewed by the children as an ‘expert.’ It was noted in the transcripts and field notes that on several occasions both the teachers and the children sought Leon’s expertise on a subject (e.g., as discussed above, Gina’s request for Leon to help with the categorizing of books into storybooks and fact books). Leon’s expertise included both his knowledge of informational texts (i.e., 39% of all utterances) and his knowledge about dinosaurs (i.e., 19% of all utterances). It is important to note that Leon’s knowledge of dinosaurs extended beyond simply naming the varieties of dinosaurs (although he did have an extensive knowledge of the types of dinosaurs e.g., Tyrannosaurus, Allosaurus, Stegosaurus, Triceratops, Apatosaurus etc.). The following utterances illustrate Leon’s broad knowledge of facts about dinosaurs; “I know what a herd is. A whole ton of dinosaurs. It’s over a thousand dinosaurs altogether” (full group activity, April 4, 2001), “And some of the meat eaters are called carnivores” (May 1, 2001), and “some little meat eaters had a protection club to keep away big ones?” (small group activity, April 18, 2001).
Another element in Leon’s engagement style was his reflective talk (29% of all his utterances). However, it is important to note that Leon’s reflective talk almost exclusively focused on gaps in his knowledge. His concern, therefore, seemed to be in building his expertise. For example, Leon identified “I want to ask about meat eaters” (full group activity, April 19, 2001), “Why is it pointing in that direction?” (full group activity, April 4, 2001), and “Somebody else better do the pine needles. I don’t know how to do pine needles” (small group activity April 18, 2001).

In summary, knowledge of informational texts and the subject of dinosaurs characterized Leon’s engagement style. He demonstrated an understanding that the purpose of informational texts is to accurately inform; that information is categorized and organized under specific topics (e.g., types of dinosaurs, eating habits of dinosaurs etc.); and that information is represented in different ways (e.g., menus, timelines etc.). Leon also demonstrated his ability to identify gaps in his knowledge and take steps to remedy such gaps. A keen interest in facts and information about the real world appeared to underscore Leon’s engagement style.

The findings presented in this section demonstrate that although six categories of talk characterized the way in which the whole class engaged with informational texts, there were nonetheless differences in the ways in which individual children engaged with such texts. Tina, for example, engaged with informational texts in a personal and reflective way, while Leon was interested in facts and how those facts were organized. Although Tina and Leon’s engagement styles were different it should be noted that both styles were very effective. In addition, although there may be gender differences in how children engage with informational texts, it is impossible to generalize about the learning
styles of boys and girls from this tiny sample. However, it is possible that, as well as Tina and Leon, each child in the class had a unique engagement style with informational texts. It is important to reiterate that the six categories of talk identified in the data reflect the ways in which this class as a whole engaged with informational texts.

**Teacher as Scaffolder and Enabler of Children’s Understanding of Informational Texts**

The focus of this section is the findings related to the second research question for the study, that is, how does a teacher in an early childhood education classroom scaffold the children’s developing understandings of informational texts during informational text readalouds and activities incorporating informational texts? In this section, the seven conceptual categories of adult talk emerging from the analysis of the data (i.e., transcripts of full and small group readalouds and full and small group activities incorporating informational texts led by the focus teacher, Gina Rowlands) are discussed, and examples are provided for each category. Following this, the ways in which each category of teacher talk assisted in scaffolding the children’s developing understandings of informational texts are dealt with in turn.

**Conceptual Categories for Adult Talk**

There were seven broad conceptual categories for the talk that Gina Rowlands contributed during the full and small group readalouds and the full and small group activities incorporating informational texts. Table 5 summarizes the frequencies and percentages of the seven categories of the adult talk during all the coded full and small group informational text readalouds and full and small group activities incorporating informational texts.
Table 5 Frequencies and percentages of coding categories for adult talk during all coded data.

<table>
<thead>
<tr>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
<th>Category 5</th>
<th>Category 6</th>
<th>Category 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruiter</td>
<td>Director</td>
<td>Model</td>
<td>Elaborator</td>
<td>Connector</td>
<td>Provocateur</td>
<td>Conductor</td>
</tr>
<tr>
<td>n</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>60</td>
<td>8</td>
<td>67</td>
<td>9</td>
<td>171</td>
<td>22</td>
<td>245</td>
</tr>
<tr>
<td>22</td>
<td>32</td>
<td>68</td>
<td>9</td>
<td>52</td>
<td>7</td>
<td>112</td>
</tr>
</tbody>
</table>

In Category 1, the teacher functioned as a Recruiter, initiating the child’s involvement in the literacy activity with an informational text. Newmann (2000) describes this process, whereby the teacher acts as a recruiter, as “getting started” (p. 159). Behaviors that enhance this process include orienting the child to the task, giving the child a reason to attend and encouraging the child to focus on a topic of interest.

In Category 2, the teacher functioned as a Director of the text, familiarizing the children with the particular format of informational texts. She directed the children’s attention to various parts of informational texts, described the purpose of particular features of informational texts and introduced them to the organizational aspects of informational texts (e.g., “In the front it says Contents that means what kind of stuff is in the book”).

In Category 3 the teacher acted as a Model, making explicit her thinking processes as a reader (i.e., modeling the reading act). For example, she posed questions of the text, sought interpretations of what she was reading, and ‘sounded-out’ unknown and complex words.
In Category 4 the teacher responded to the children’s initiatives by acting as an *Elaborator*, providing the children with strategies for addressing a problem, encouraging discussion and turn taking on the part of the child, and providing elaborative feedback. Finally, the teacher summarized discussions in order to reach closure.

In Category 5 the teacher acted as a *Connector*, encouraging the children to relate or link their engagement with informational texts to something within or beyond themselves. Specifically, she made connections to the child’s personal experiences, elicited connections from the child (life-to-text), and made personal connections to her own experiences.

In Category 6 the teacher acted as a *Provocateur* posing questions designed to provoke the child to think more deeply, represent more complex explanations or critique explanations.

In Category 7 the teacher functioned as a *Conductor*, coordinating the various aspects of the classroom so that it operated as a successful working community. For example, the teacher maintained the routines of the classroom and relationships with and among the children etc.

**Examples of the Seven Categories**

The following excerpt from a full group read aloud of *Now I can read ... Animals* (Attmore & Stanton, 1985) provides examples of each of the seven categories for adult talk. The text of the book, which Gina Rowlands read, is in bold, italic font, Gina’s actions appear in square brackets in bold print, the numbers of the categories are in square brackets, and the conversational turns are numbered beginning with 40.

40 [7, 2] **Teacher:** Okay! First dinosaurs and we’re going to do this quite quickly because then we’re going to have snack. This is about animals [points
to title on cover] so it’s got all sorts of animals. In the front it says Contents [holds the book so that the children can see and points as she’s reading] that means what kinds of stuff is in the book. It says: Dogs Page 10. We don’t want to find out about dogs right now do we? Cats Page 32. No we’re not looking for cats. Horses and Ponies Page 54. Uh! Ha! Pets would be nice to read about and if we wanted to we could go for Page 70 but we’re not wanting to know about pets. Oh! Dinosaurs…

41 Children: //Yes.\\

42 [2, 7, 1, 3, 6] Teacher: Page 98 [opens the book and begins turning pages Oh! My glasses. Page 97, 94, 95 There it is [turns the book so that the children can see]. This is the chapter on Dinosaurs. Let’s see what kind of information is in this book and then we can decide if it’s true. There they are. Let’s see how many pages are about dinosaurs 1,2… [Turns pages] Oh! A lot. There’s a lot of pages. We’re not going to have time to read them all. Oh! Look at that! [Turns the pages identifying how many pages are given to the topic dinosaurs]. We’re not going to have time for them all I think may be we’ll read about 3 pages and then we’re going to have snack. Dinosaur means terrible lizard. They were the largest animals to have walked on the earth. Oh! Here’s some information. Listen, this is something we’ve been wondering … No-one ever saw a dinosaur. Dinosaurs died out long before there were any men or women on earth. So there it is right there! Brontosaurus stayed together in herds because they were attacked by meat-eating dinosaurs. Larry did you hear that brontosaurus stayed together in herds. Do you know what a herd is? What was it?

43 Larry: It flies!

44 [6] Teacher: Some do! Some birds fly for sure…. What do you think a herd is?

45 Leon: Um, I know what a herd is a whole ton of dinosaurs. It’s over a thousand dinosaurs altogether.

46 [4] Teacher: They stay together so they can protect each other.

47 Leon: No! And some are present altogether so other dinosaurs can get water.

48 Ellie: Some herds are like a pack!

49 [4] Teacher: Like a pack! That’s right! A pack of coyotes or a herd of dinosaurs or a flock of birds.

50 Ellie: Or a school of fish!
51 [4] Teacher: A school of fish! Those are groups. Those are groups of animals and birds.

52 Tina: Dinosaurs like if you see one you’d better be careful ‘cos they might hurt you!

53 [6] Teacher: But will you see one?

54 Tina: No!

55 [1, 2, 3, 5] Teacher: Thank goodness! [goes back to the book holding it so that the children can see the illustrations] The largest dinosaurs were the diplodocus. They were as long as three railway coaches. Think of three trains, Larry you know about trains, three great big train coaches put together that’s how big a diplodocus was. Huge! [goes back to reading] Now! I’m going to read this page [showing the children runs finger from the page number down the page to the bottom] but this page [points to next page] we’re going to save for tomorrow! Look at that fierce looking picture. Ellie look!

This excerpt was chosen because it provides examples of each of the seven categories of adult talk within a small number of conversational turns. At 42 and 55, the teacher acts as a recruiter, initiating and orienting the children’s attention to the literacy activity. At line 42 the teacher’s comment “Oh! Look at that!” draws the children’s attention to the text. Later, during the same utterance, the teacher’s comments “Oh! Here’s some information. Listen, this is something we’ve been wondering,” and “Larry, did you hear that brontosaurus stayed together in herds?” are examples of the teacher providing the children with reasons to remain involved in the readaloud activity. Finally, at line 55 the teacher’s comments “Look at that fierce looking picture. Ellie look!” served to sustain the child’s interest in the readaloud activity. These comments are examples of Category 1, the teacher as Recruiter.

At 40, the teacher focuses the children’s attention on the organizational features of an informational text. She points to the book title, then to the contents. At 42 the
teacher's comment "Let's see how many pages are about dinosaurs. One, two... Oh! A lot. There's a lot of pages," focuses the children's attention on the importance of pagination both as a tool for finding information and as a tool for identifying how much needs to be read on the topic of dinosaurs. At both 40 and 42 the teacher's actions and comments act as a directing device, drawing children's attention to the way in which the informational text is organized. These comments, therefore, are an example of Category 2, the teacher as Director.

At 40, 42 and 55 the teacher not only reads the informational text, but also models the reading process. For example, at 42 her comment "Oh! Here's some information; listen, this is something we've been wondering" makes explicit that the class is reading for a specific purpose. Thus, the teacher models one aspect of the reading process (i.e., setting a purpose for reading). The above comment, therefore, is an example of Category 3, the teacher as Model.

At 46, 49 and 51 the teacher elaborates and clarifies the children's comments. For example, in response to Ellie's comment "Some herds are like a pack" the teacher states "Like a pack! That's right! A pack of coyotes or a herd of dinosaurs or a flock of birds." Thus, the teacher confirms Ellie's statement (that some herds are like a pack) and then elaborates on the children's understanding of collective terms (i.e., pack of coyotes, herd of dinosaurs or flock of birds). At 51, the teacher again tackles the concept of a herd and attempts to clarify what exactly it is, "A school of fish! Those are groups. Those are groups of animals and birds." These comments are examples of Category 4, the teacher as Elaborator.
At 55, the teacher’s comments provide Larry with a personal connection (i.e., his knowledge about the size of “... three great big train coaches”) for understanding the size of a Diplodocus. This comment is, therefore, an example of Category 5, the teacher as Connector.

At 42 and 44, the teacher asks the children questions designed to provoke them into thinking about the concept of a herd. Although the discussion seems to linger on defining exactly what the term herd means, the teacher’s comment “They stay together so they can protect each other” implies that she had hoped to provoke the children into thinking more deeply about why animals form herds. These questions, therefore, are an example of Category 6, the teacher as Provocateur.

At 42, the teacher identifies that “We’re not going to have time for them all. I think maybe we’ll read about 3 pages and then we’re going to have snack.” This comment reflects the teacher’s concern with the smooth running of the classroom and, in particular, adherence to the routines of the day. The comment is an example of Category 7, the teacher as Conductor.

As the above illustrates, the teacher moved adroitly between all seven categories in the short space of 16 conversational turns of which 8 were her own. However, the question still remains as to how the teacher’s conversational moves scaffolded the children’s understandings of informational texts. The following analysis of the excerpt, therefore, attempts to answer that question.

Generally, whenever Gina asked a question she received a response. This suggested that Gina engaged child(ren) in “joint problem solving,” one of the essential components of scaffolding (Berk & Winsler, 1995, p. 31). For example, Gina’s questions
to Larry (one of the youngest children in the class, who was often restless and distracted during full group readalouds), “Did you hear that brontosaurus stayed together in herds? Do you know what a herd is? What was it?” was an attempt to re-focus Larry’s attention (i.e., participate in the joint problem solving). It can be argued that these questions scaffolded Larry’s performance both through engaging him in the joint problem solving activity and by maintaining the pursuit of the goal through motivation of the child (Wood et. al., 1976). However, as well as re-recruiting Larry’s interest, these questions also provoked several children to elaborate and build upon their understanding of the term 'herd. Gina used the discussion to teach the children that the term herd is one of several collective terms that describe “... groups of animals and birds.” She also extended the children’s understanding of why animals stay together in groups (i.e., “… so they can protect each other”). Thus, Gina supported the children’s performance by “providing sensitive and contingent assistance” (Berk & Winsler, 1995, p. 31). Later, in response to Tina’s comment “Dinosaurs! Like if you see one you’d better be careful ‘cos they might hurt you,” Gina asked, “But will you see one?” Gina could have indulged Tina by embarking on a ‘flight of fancy’ with her (e.g., “What would you do if you saw a dinosaur?”) but the point of this readaloud was to read the facts about dinosaurs; Gina’s question, therefore, re-established with Tina the purpose of the readaloud. Tina showed her understanding of this by answering “No!” to Gina’s question. Thus, Gina reaffirmed that the purpose of informational texts is to provide clear facts and information and that there is no room for imaginative ‘flights of fancy.’ It can be argued that Gina’s comments served to establish intersubjectivity. Berk and Winsler (1995) identify intersubjectivity as
one of the essential components of scaffolding (i.e., the participants in the ZPD are clear as to the focus of the problem-solving activity).

At 40 and 42 Gina carefully articulated her actions as she used the format features of the informational text to identify the location of the chapter on dinosaurs, for example, she first read, then dismissed each chapter title (e.g., "Cats Page 32. No we’re not looking for cats" etc.,) that did not pertain to dinosaurs. Finally, she identified both the chapter on dinosaurs and the page number for that chapter. In this way, the teacher directed the children’s attention to the various parts of the informational text and explained the process by which information can be located in an informational text. During these utterances and at 55, the teacher also served as a model for the reading act. Her comments helped make explicit what she is doing implicitly when she is reading. These comments are examples of Gina scaffolding the children’s understanding of informational texts and the reading act by “providing sensitive and contingent assistance” (Berk & Winsler, 1995, p. 31).

The above excerpt illustrates some of the ways in which Gina Rowlands functioned to scaffold children’s understandings of informational texts. The following section explores the various aspects of assistance represented by the seven types of adult talk; how, in fact, the teacher scaffolded the children’s growing understandings of informational texts.

**Scaffolding in Recruiter Role**

Approximately 8% of all Gina’s conversational turns were devoted to recruiting and sustaining children’s interest in the informational texts. Two of the six functions identified by Woods, Bruner and Ross (1976) were also identified in this study. The first
of these functions was recruiting the novice’s interest in the task. Gina Rowlands generally began the informational text readalouds or activities incorporating informational texts by orienting the children to the task and giving them a reason to attend. For example, in the following excerpt of a transcript of a full group readaloud of *Dinosaur’s Day* (Thomson, 2000) on April 12, 2001, Gina commented:

**Teacher:** I’ve got a book here! I’ve got a book let’s read this right now and think about the things we don’t know. Think about the things we’re not sure about.

This excerpt was an illustration of Gina orienting the children to the upcoming literacy activity (i.e., informational text readaloud), and giving them a reason to attend (i.e., as they listened to “… think about the things we don’t know. Think about the things we’re not sure about”). Occasionally, Gina used non-verbal strategies to recruit children to the literacy activity. For example, during a small group readaloud of *Dinosaur Pop-Up ABC* (Maguire, 1995) on April 10, 2001, Gina used the remarkable pop-up illustrations in the book to recruit the children to the informational text readaloud event.

**Teacher:** Now, look, look at this one. Let me do that again [closes the book and then opens it again to show the way the dinosaurs pop-up].

It was noted in the field notes that the above strategy (focusing on the pop-up illustrations) was very successful in gaining the children’s attention.

Another function of the expert identified by Wood et al. (1976) is maintaining the pursuit of the goal (i.e., re-recruiting the children’s interest in the activity). Gina used a variety of strategies aimed at refocusing children on the informational texts being used during literacy events. For example, during a full group readaloud on April 12, 2001, she hinted that the readaloud was building to the final (perhaps dramatic) climax. This was
particularly interesting since it implied that Gina was building on the children’s understanding of denouement to refocus them on the readaloud activity.

Teacher: Everyone ready to find out what’s going to happen in the end?

During a small group readaloud on April 10, 2001, Gina attempted to re-recruit two children by first relinquishing her role as expert (“I’ve never heard of this one before!), and then recruiting the two children to be fellow wanderers and seekers of information.

Teacher: Look at this one! I’ve never heard of this one before! Have you ever seen this one before, Norman? Have you Angela?

Finally, in this excerpt from a transcript of a small group readaloud of the Colossal Book of Dinosaurs (1984) on April 11, 2001, Gina tantalized the children by hinting at the dramatic happenings that were about to unfold.

Teacher: Oh! My Gosh! Look at her with her eggs here now. Oh! The next dangerous thing. Shall we read about what happens next to poor Rutiodon?

Thus, when Gina was functioning in her role as recruiter she fulfilled the function of orienting children to informational texts, gave them reasons to attend and used a variety of strategies to re-focus (or re-recruit) them to the text.

Scaffolding in Director Role

In all, approximately 9% of Gina’s conversational turns were devoted to familiarizing the children with the particular features and format of informational texts. When Gina was acting as a director of the informational texts she was, in effect, guiding or scaffolding the children’s experience by pointing out the particular format features and organization of the texts. For example, during a small group readaloud of An Alphabet of Dinosaurs (Dodson, 1995) on April 5, 2001, Gina oriented the children to the
informational text readaloud by asking them what they would like to read about. She 
then introduced the children to the form and function of the table of contents.

**Teacher:** Okay! So we have to first decide what we want to read about. Things 
we can choose. This is the Contents [traces with her finger what she is 
reading]. We can read about Terrible Teeth, Mighty Meat Eaters, we could 
read about the Biggest on Earth or Armored Tanks. Do you think that sounds 
good? [Derek shakes his head] No! it doesn’t. Leaf Eaters. We could read 
about Duckbilled Dinosaurs [Teacher continues to run her finger down the 
Table of Contents as she reads the chapter titles].

**Norman:** Yes!

**Teacher:** That sounds good? Or Bone Heads and Horns or Dinosaur Nursery. I 
think that might be about babies. In scale that means which were tall and 
which were small.

**Derek:** [points to an illustration] I like the one with sharp teeth.

**Teacher:** This one here? That would probably be a Mighty Meat Eater [points to 
the table of contents] Do you want to learn about meat eaters?

**Norman:** Yes!

**Teacher:** Okay! Page 16 [counts toward page 16 pointing to the page 
numbers at the bottom of each page] 13, 14...

Having modeled how to set a purpose for reading (i.e., “... we have to first decide what 
we want to read about”), Gina directed the children’s attention to two aspects of the table 
of contents. First, she identified that the table of contents can be used as a tool to help 
identify what topics are covered in the informational text, and second, she revealed its 
guiding function (i.e., identifying where in the informational text particular information 
can be found). She also directed the children’s attention to the fact that information is 
organized under headings (i.e., Terrible Teeth, Mighty Meat Eaters, Leaf Eaters, etc.). 
Indeed, when Derek suggested he liked “... the one with sharp teeth,” Gina’s response
was “... that would probably be a Mighty Meat Eater” and then pointed to this chapter heading in the table of contents. Thus, she scaffolded Derek’s understanding that information on “sharp teeth” would be organized under the heading Mighty Meat Eater and, at the same time, underlined the function of the table of contents (i.e., listing the topics covered in the informational text). Finally, using the table of contents Gina identified where in the informational text the chapter on Mighty Meat Eaters could be found. She then demonstrated finding this chapter using page numbers.

Gina also tackled the intricacies of glossaries (called a picture word list in this particular text) with the children during a full group readaloud of Dinosaur’s Day (Thomson, 2000) on April 12, 2001.

Teacher: At the back it says Picture Word List and if you want to find out about club you look for page 17. You want to find out more about toes you go to page 10. I don’t remember reading about the club. Club page 17. I’m going to go look. [Teacher begins to count through the book to page 17, holding the book so that the children can see. She points to the page numbers] 14, 15, 16. Oh! 17 here’s the club. That’s the close-up of the club.

Gina pointed out the purpose and location of the picture word list and referred back to it several times during the readaloud (i.e., looking for more information on head crests, toes and teeth).

Sipe (1996) suggests that adults often function as guides or docents during literacy events with books. He writes, “A tour guide is a knowledgeable person who organizes the experience of those who are less knowledgeable about a particular place, so that they can get the most out of their experience” (p. 243). It seems sensible to suggest (as the above excerpts illustrate), that when she was in the role of director, Gina served as

3 Club refers to the defensive tail used by Ankylosaurus for protection against meat-eating dinosaurs.
a tour guide, organizing and scaffolding the children’s experiences of the organizational
and format features of informational texts.

**Scaffolding in Model Role**

Almost one quarter of all Gina’s conversational turns (22%) were devoted to
modeling reading. Not only did the teacher “fulfill the most basic scaffolding function
fulfilled by adults when they read … to make the verbal text available to the children,
many of whom would not have been able to read it for themselves” (Sipe, 1996, p. 242),
but she also scaffolded the children’s understanding of the reading process by making
explicit what she does implicitly as a reader. For example, as discussed above, Gina
spent a considerable period of time first modeling how to set a purpose for reading (“…
we have to first decide what we want to read about”) and then helping Derek and Norman
set the purpose for their reading (to find out about *Mighty Meat Eaters*). She drew the
children’s attention to specific features of written language including the letter-sound
relationship (grapheme-phoneme correspondence). In the following example, from a
small group readaloud of *Dinosaur Pop-Up ABC* (Maguire, 1995) on April 10, 2001,
Gina’s efforts, as she grappled with the difficult pronunciation of several dinosaur names,
provided an excellent example of Gina scaffolding the children’s phonemic awareness.

**Teacher:** Oh! We haven’t read about this cute little guy. Hypsilophodon
[Teacher struggles with the pronunciation]. That’s how I pronounce that!
[tries again]. Hyp-sil-o-pho-don. It’s a hard word! Just look how long they
are [Teacher points to the word].

Later during the same readaloud Gina again struggled with pronunciation.

**Teacher:** Now this one right here. Q … Q [struggles through the
pronunciation] Quetzalcoatlus. Sometimes it’s hard for me to read too. You
guys are learning how to read and some of these big words are so big they’re
even hard for a teacher to read. Quetzalcoatlus … Oh! That’s hard.
In addition to demonstrating explicitly how words can be broken into phonemes, Gina discussed the length of words (i.e., Just look how long they are”) and modeled how readers use their knowledge of phonics to enable them to read words they have not seen before. Thus, Gina scaffolded the children’s understanding of written language by modeling the strategies she uses to successfully decode unfamiliar words in print (i.e., recognizing that it is an unfamiliar word, matching letter patterns with pronunciations and chunking big words like Hyp-sil-o-pho-don). During this same readaloud, Gina attempted to specifically scaffold Tina’s understanding of the letter-sound relationship (grapheme-phoneme correspondence).

**Tina:** T for meat eaters! T for Tina [looking at the book]

**Teacher:** That’s right! Tyrannosaurus. T for Tina the meat eater.

**Tina:** T for meat eater! T for Tina!

Clearly, this level of understanding was not yet within Tina’s zone of proximal development.

Gina’s readalouds of informational texts were peppered with comments designed to scaffold the children’s comprehension of the text. The comments appeared to support comprehension in one of two ways (i.e., by restating or clarifying information being read or by encouraging the children to reflect on their prior knowledge). For example, in the following excerpt of a small group readaloud on April 11, 2001, Gina’s comments scaffolded the children’s comprehension of a passage in *Colossal Book of Dinosaurs* (1984).

**Teacher:** Look at these eggs! Look at these eggs Amy! Look at them. You know I thought that was a crocodile

**Amy:** It is a crocodile!
Teacher: No! the book says this was called a Rutiodon. [begins reading] As the sun rose above the horizon of the valley ... soon they would be ready to hatch [p. 98]. Oh! Oh! She wants to watch out that this one isn’t coming to eat her eggs [turning the page and pointing to an illustration]. That’s a Coeurosaur wanting to come and kill the eggs [turns back to the page with the nest and circles the nest with her finger]. [Turns back to the page they had been exploring and reads]. Oh! Boy! A small Coelurosaur darted out of her path as she made her way through the ferns and horsetails. The Coelurosaur was no match for Rutiodon, who was a powerful creature. [p. 100]. [turns the page] Oh! There she goes into the river to catch some fish!

The teacher mediated the text for the children, focusing them on specific information ("Look at these eggs"), restating information ("Oh! There she goes into the river to catch some fish"), and speculating about the action ("Oh! Oh! She wants to watch out that this one isn’t coming to eat her eggs"). Thus, when Gina was functioning as a model, she fulfilled the scaffolding function by making the verbal text of the informational texts available to children, scaffolding children’s phonemic awareness and mediating children’s understanding/comprehension of the texts.

**Scaffolding in Elaborator Role**

Almost one third of all Gina’s conversational turns (32%) were concerned with elaborating on the children’s responses. When the teacher was in the role of elaborator, she often had a specific goal in mind. For example, during a full group activity on April 19, 2001, Gina’s questions pinpointed exactly what she wanted to explore with the children (i.e., what they had learned about the kinds of foods eaten by dinosaurs).

**Teacher:** What kind of plants do plant eaters eat?

**Robert:** Plants.

**Teacher:** What kind of plants?

**Nate:** Flowers.
Robert: Flowers and leaves.

Teacher: Yep! Yep! We found out that. We found out leaves. You’re right! Leaves.

Robert: And flowers.

Teacher: Yes! And shrubs, berries…

Robert: Also bears eat berries.

Teacher: Yes! And pine needles and we found out they eat no grasses.

Robert: Because there was no grass.

Teacher: And we found out they drink water from the lakes.

Leon: And some of the meat eaters are called Carnivores.

Teacher: Carnivores. All of the meat eaters were called Carnivores. Do you remember what kind of meat they eat. Can you remember what kind of meat they eat?

Leon: Raw meat!

The above excerpt illustrates how, in addition to probing into and elaborating on the children’s responses (e.g., “What kinds of plants do plant eaters eat?” “Yes and shrubs and berries”), Gina scaffolded the children’s understanding by providing key pieces of information (e.g., “And we found out they drink water from the lakes”). Thus, a form of elaborating included structuring the discussion so that the teacher could take advantage of ‘teachable’ moments. During the following excerpt from a full group activity on April 30, 2001, the teacher had introduced the activity of categorizing books into storybooks and fact books using books made by the children.

Teacher: Do you think that’s a true story or a make believe story. There are lots of things in there that are true. Aren’t there?

Robert: It’s a true story.
Teacher: We'll put it right there. [Places it in fact category and takes a new book] Dinosaurs by Esther. A green fish is swimming. Do green fish swim?

Child: No!

Teacher: Yes. Sometimes there are green fish. This stegosaurus has a big green eye. Stegosaurus might have had green eyes. This is triceratops and this is a T-Rex. You know what else she’s done? She’s numbered all the pages. This is page four. Now is this a storybook or a fact book?

Tina: A storybook.


Teacher: Yep! It’s a fact book ‘cos she’s got … There could be a green fish swimming. Stegosaurus could have green eyes. Maybe we’ll look and see if they did have green eyes. And she’s drawn Tricerotops.

Anna: Maybe they have blue eyes.

Teacher: Maybe they have different eyes like we do.

Leon: I saw Esther do that one and she was looking at the book where it had a green eye with a black part in the middle.

Teacher: Then it’s a fact book.

Thus, in addition to probing the children’s understanding of storybooks and fact books, providing elaborative feedback on why a particular book might be categorized as a storybook or a fact book, the teacher also responded to and elaborated on children’s initiatives. For example, as the above excerpt illustrated, the children struggled with the truth of whether Stegosaurus’s eyes were green or not (using this as a criterion for categorizing Esther’s book as a storybook or fact book). Anna commented that they might “… have blue eyes” suggesting that if, in fact, the dinosaur had blue eyes then Esther’s book was a storybook. Gina responded by introducing the idea that perhaps, like people, dinosaur’s eyes could have been any colour. This effectively challenged the
idea of eye colour as a criterion for establishing whether the book was fact or fiction. However, after further discussion it was established that as Esther was drawing she was looking at a book “where it (stegosaurus) had a green eye with a black part in the middle.” Gina brought closure to the discussion, by declaring the book “a fact book.”

To recap, when Gina was functioning as an elaborator, she fulfilled the scaffolding function by focusing the discussion, responding to children’s initiatives, providing elaborative feedback and summarizing the discussion in order to reach closure.

**Scaffolding in Connector Role**

Approximately 9% of all Gina’s conversational turns were devoted to encouraging the children to relate or link their engagement with informational texts to something within or beyond themselves (life-to-text). The transcripts and field notes are peppered with examples of Gina encouraging children to make such connections. Generally, the life-to-text connections that children made scaffolded their understanding of an element of text interpretation. For example, during a small group readaloud on April 5, 2001, Gina and Derek were discussing the size of the Lesothosaurus dinosaur.

**Teacher:** *Lesothosaurus was a tiny dinosaur not much bigger than a dog.*

**Derek:** Well my dog is this big! When it was a little dog it used to come upstairs. My dog.

**Teacher:** What’s your dog’s name?

**Derek:** Kira.

**Teacher:** Kira. This dinosaur wasn’t very much bigger than Kira. It looked like a lizard standing up on its back legs.
It can be argued that this life-to-text connection helped Derek understand how big the Lesothosaurus dinosaur was. In another example, Gina and a group of children were reading about flying dinosaurs (small group readaloud, April 10, 2001).

**Teacher:** *Pterosaur had wings made of skin that stretched between its arms and body.* See its arms but the wings were made of skin [points to the illustration]

**Tina:** I got skin.

**Teacher:** Yes we’ve all got skin haven’t we? Some of your skin stretches like between our fingers. [Nate, Derek and Tina examine the skin between their fingers]. So maybe the skin on his wings was sort of like that skin there.

**Tina:** Mine is stretching.

**Teacher:** Yes, sort of soft and stretchy. That’s what that is like there [points to the illustration of the pterosaur].

Gina helped this group of children understand the physiology of the pterosaur dinosaur’s wings, by pointing out the similarities between the dinosaur’s wings and the children’s hands (connection).

In short, when the teacher was functioning as a **connector,** she was “facilitating children’s representational and strategic thinking” (Berk & Winsler, 1995, p. 32). That is, she enabled children’s understanding of the content of informational texts by making life-to-text connections.

**Scaffolding in Provocateur Role**

At times Gina acted as a **provocateur** prodding the learners to move forward in their learning or in a new direction. This category of adult talk was rare, comprising only 7% of all adult utterances in the coded data. An example of Gina provoking the children to think more deeply occurred at the beginning of the Dinosaur unit and involved Gina pushing the children to think about the differences between fact and make-believe.
She began the full group activity time (April 4, 2001) with a song that originated as the signature tune for a children’s show starring Sharon, Lois and Bram (three children’s entertainers). The original words of the song were:

One elephant went out to play on a spider’s web one day,
She had such enormous fun that she called for another elephant to come.
Two elephants went out to play on a spider’s web one day,
They had such enormous fun that they called for another elephant to come.

The song continues until there are five elephants on the spider’s web. Gina altered the words of the song to “One dinosaur…” etc. To support the singing of the song, Gina had created a visual representation of it, which included a yarn spider’s web and five model dinosaurs. After singing the song the following discussion occurred:

Teacher: How many dinosaurs do you think could… How many dinosaurs go, do you think, could fit on a spider’s web?

Ellie: One… Two.

Voices: //Five//

Tina: None.

Teacher: Why do you say none, Tina?

Tina: There’s no space.

Teacher: There’s no space for what?

Tina: Because that one’s even long and it’s too long for another one … for another one to fit.

Teacher: But you said none could get on a spider web. Has anyone ever seen a spider web?

Larry: I always see spider webs.

Teacher: What are they like Larry?
Larry: One time I saw a humungus spider web and it was a trap because you couldn’t go through the wall because the spider made the web in front of my walk and then I was trapped.

Teacher: Right! You couldn’t go through without getting spider web all over your face ... but what’s the spider web like?

Tina: A spider web is round ... all round. And there ... the inside is round too. And the spider is inside too.

Teacher: And how big is the spider?

Angela: It’s small. I know because I saw a spider.

Teacher: How big?

Angela: [Shows the teacher by making a tiny shape between her finger and thumb].

Teacher: About that big and they sit on spider’s webs. Right? Now who said five dinosaurs could sit on a spider’s web? [Amy puts up her hand]. You think a dinosaur was tiny, tiny, tiny to fit on a spider web?

Amy: Yea!

Teacher: I don’t know, Amy.

Amy: It would have to be that tiny [shows with finger and thumb].

Teacher: It would have to be that tiny like a fly. What do you think Tina?

Tina: No.

Teacher: You said, “No!”

Tina: Dinosaurs can’t go because they’re too big.

Teacher: Tina says, “Dinosaurs can’t go because they’re too big!” Who agrees with that?

Voices: //I do!//

Teacher: Yes. I think I do too. So is this song about a real dinosaur? Something that dinosaurs could really do?
Voices: //No!//

Through careful questioning (i.e., asking the children for more information or explanation etc.), Gina provoked the children to think more deeply about what is factual and what is make-believe.

**Scaffolding in Conductor Role**

Approximately 14% of all Gina’s conversational turns were devoted to conducting the smooth running of the classroom. Although it may not be immediately apparent as to how this function of adult talk operated to scaffold children’s understanding of informational texts, in fact it played a key role. Berk and Winslett (1995) stress that an important aspect of instructional scaffolding is that it takes place in an atmosphere of “warmth and responsiveness” (p. 29). It can be argued that the talk Gina engaged in, in her role as conductor was integral to building the type of warm and responsive atmosphere that resulted in children’s willingness to take risks and challenge themselves. Examples of Gina’s talk when she functioned as a conductor included linking with others (e.g. during a small group readaloud on April 12, 2001, when asked if she would be playing her audio-harp, Gina replied “Yea! I think I’ll strum it a little bit shall I? Maybe I’ll strum it a little bit!”); dealing with disturbances (e.g. during a full group readaloud on April 12, 2001, some of the children were restless and pushing each other. Gina responded “This is such an exciting story and I have to stop every minute to tell people to back-up or to be quiet or to stop rolling and I don’t know what’s going to happen to Tyrannosaurus”); and establishing and maintaining the classroom routines and schedule (e.g., toileting routines). All of these functions of conducting talk, served to
create a stable, predictable, safe and comfortable environment in which children could confidently take learning risks.

Summary

The findings presented in this chapter were organized around the two research questions for the study. The first (and primary) question dealt with children’s talk specifically as it relates to informational texts. This talk represented six broad conceptual categories, each of which revealed a different aspect of young children’s engagement with informational texts. The second research question dealt with the role of adults in scaffolding and enabling young children’s engagement with informational texts. A detailed summary of all the findings presented in this chapter is included in the first section of Chapter 6.
CHAPTER 6: CONCLUSION:

YOUNG CHILDREN’S INFORMATIONAL LITERACY DEVELOPMENT

This chapter consists of four sections. In the first section, I summarize the findings of the study, discuss the significance of the study and place it within the context of current research relating to children’s literacy development. Next, I present a grounded theory of informational literacy development that arose from the data. Next, the pedagogical implications of the study are discussed and, finally, the questions for further research suggested by the study are presented.

Summary of Findings, Relation to Current Research and Significance

The findings summarized here are the result of this descriptive, naturalistic study of young children’s informational literacy development. The study was conducted in an emergent literacy, preschool classroom of children. The classroom teacher was in her twelfth year of teaching, was knowledgeable about children’s literature and committed to a hands-on, active approach to early childhood education which values children’s talk. The length of the study was three months (March to May) during the 2000-2001 school year. The children’s responses were gathered in five contexts: large and small group readalouds of informational texts, large and small group activities incorporating informational texts and child-to-child informational text sharing. Episodes in all five contexts were videotaped. Other data included observational field notes and an interview with the focus teacher. Data (observational field notes and selective transcriptions or complete transcriptions) were collected on a total of 45 episodes of children engaging with informational texts: 8 full group readalouds, 7 small group readalouds, 12 full group activities using informational texts, 14 small group activities using informational texts
and 4 episodes of child-to-child sharing of informational texts. From this data set, 19 transcripts (2 full group readalouds, 6 small group readalouds, 5 full group activities incorporating informational texts, 3 small group activities incorporating informational texts, and 3 child-to-child informational text sharing) were chosen for coding and in-depth analysis. The other data were used in a supplementary fashion.

There were two research questions for the study. This summary of findings is organized in reference to these two questions.

**Findings related to Question 1: Young Children's Informational Literacy Development**

The six broad conceptual categories that emerged from the qualitative data analysis were as follows:

- informational text knowledge;
- world knowledge;
- representing meaning;
- reflective talk;
- building connections; and
- relational talk.

These categories represented the various facets of children's engagement with informational texts and reveal the ways in which they constructed meaning about and with informational texts.
**Informational Text Knowledge**

In category 1, the children focused their attention on the informational text itself. This category was found to have two subcategories as follows:

1.1 Discourse knowledge

1.2 Format features.

In the first subcategory the children demonstrated an understanding of the particular discourse patterns of informational texts. Vacca and Vacca (1999) write that informational texts are written to inform and, thus, exposition is the primary mode of discourse found in these texts (i.e., to show, tell, describe, or explain). Gunning (2000) writes that “what really sets content area reading apart from other reading is its purpose, which is to learn and, ultimately, to be able to apply what is learned” (p. 292). The preschool children in this study clearly understood that the aim of an informational text is to provide information about a specific topic and that they could learn about a particular topic (in this case dinosaurs) from specific informational texts dedicated to that topic. The study also suggested that children were aware of the authority of informational texts (i.e., the information presented is based in fact and, thus, reliable). As well, the children understood that the purpose of information books is different from that of storybooks (i.e., informational texts inform and storybooks entertain).

This study is significant, therefore, in that it supports and extends the findings of recent studies which have identified that young children are capable of interacting with and understanding the particular discourse patterns of informational texts (Moss, 1995; Pappas 1991; Shine & Roser 1999; Tower, 2002).
In the second subcategory (format features) the children identified that information is represented and organized in a variety of ways. Gunning (2000) writes that expository informational texts assist readers "by incorporating such features as headings, subheads, diagrams, photos, glossaries, sidebars, and bibliographies" (p. 298). Vacca and Vacca (1999) write that the format features (i.e., the organizational features that are built into the text to facilitate reading) can be valuable tools for prospective users of an informational text. Although the children in this study were not yet conventional readers (McGee & Richgels, 1996) they were, nonetheless, aware of many of the format features of informational texts (e.g., pagination, table of contents, pictorial indexes etc.). McGee and Richgels (1996) suggest that novice readers (children who, though not yet conventionally reading, intentionally work to get meaning from written texts) rely on contextual dependency to link written forms with meaning. Contextual dependency "means that written forms convey meaning through the context of their use" (p. 85). For example, children attend to the unique visual features of words (e.g., stylized print, color, size etc.) to make sense of environmental print (logographic reading). It can be argued that the children in this study were novice readers who used contextual dependency to recognize and get meaning from the particular format features of informational texts. They attended to the visual characteristics of a particular format feature (e.g., the table of contents). The findings here are significant in that although there is a body of work that identifies the ways in which format features foster learning (Chall & Conard, 1991; Gunning, 2000; Moss, Leone & Dipillo, 1997; Vacca & Vacca, 1999), no previous research could be found that focused on young children' developing
understanding of the format features of informational texts and how such understanding progresses.

**World Knowledge**

In Category 2, the children shifted their focus from the informational text itself to the topic content of the text. The children’s comments in this category expressed their knowledge and understanding of the topic under investigation (i.e., dinosaurs).

Cognitive psychologists describe the knowledge that a child brings to the reading situation as schema. As discussed earlier, a schema is a unit of organized knowledge which reflects the experiences, conceptual understandings, attitudes, values, skills and strategies a reader brings to a text situation (Vacca & Vacca, 1999). Students are in a strategic position to learn whenever they activate schemata to construct meaning for new material that they are studying. In other words, schemata play a central role in reading comprehension and learning (Gunning, 2000; Harste et al, 1984; McGee & Richgels, 1996; Vacca & Vacca, 1999). Vacca and Vacca (1999) write that when there is a match between the text material and the student’s prior knowledge (schema), schema works by providing a framework for learning that allows readers to seek and select information relevant to their purposes for reading (p. 16). Clearly, when the children in this study were interacting with informational texts, the activity served to activate the children’s prior knowledge of the content of the texts (dinosaurs). The finding represented by this category, therefore, is that young children activate background knowledge of a topic when they encounter the topic in an informational text (i.e., the children’s comments indicated their prior knowledge about the eating habits of dinosaurs, their understanding of how dinosaurs could be grouped or categorized, e.g., herbivores and carnivores, and
their knowledge of the technical vocabulary attached to the particular topic of dinosaurs). The significance of this finding lies in its confirmation of research that suggests the constructive nature of learning children draw on background knowledge to construct meaning for the new text material they encounter.

**Representing Meaning**

In Category 3 the children’s comments indicated they were organizing and representing understandings of informational texts through enumeration/description, sequence, cause and effect, and comparison/contrast. In other words, these children were organizing and representing their ideas using the types of text structures they encounter in informational texts. Research shows that children’s skills in comprehending informational texts are strengthened when they have knowledge of how authors use particular internal informational text structures (Richgels, McGee & Slaton, 1989; Slater & Graves, 1989). Gunning (2000) writes that knowledge of informational text structure helps students focus on individual ideas, identify relationships among ideas, and retain information. As discussed in Chapter 1, there is evidence that students who identify and use such internal text structures remember more of what they read than do students who cannot (Slater & Graves, 1989). Research suggests that informational text structure can be taught, and that training in the use of these internal text structures can help improve reading comprehension (Slater & Graves, 1989).

The ability to capitalize on internal informational text structures as a tool for comprehension is considered to be a late developing skill (Baker & Brown, 1984). However, although there is a large body of research that focuses on students’ developing ability to use these internal text structures, this research focused primarily on the
intermediate grades, middle school, high school and college level (Slater & Graves, 1989). No research could be identified that focused specifically on young children’s (i.e., preschool or kindergarten aged children) developing understanding of internal informational text structures or how such knowledge progresses. This study is significant, therefore, in that it provides evidence that young children are beginning to organize their ideas as follows:

- describing specific features;
- identifying causes; and,
- comparing and contrasting.

Thus, these children represented their understanding of informational texts using the patterns of organization found in such texts. It can be argued, therefore, that this study suggests preconventional and emergent readers can develop understandings of how ideas and information are expressed in informational texts.

**Reflective Talk**

When the children were functioning in Category 4 talk, they shifted their focus from the text toward knowledge about their own learning (metacognition). Baker and Brown (1984) write that the term metacognition “was introduced by cognitive psychologists to refer to the knowledge and control children have over their own thinking and learning activities” (p. 22). Metacognition encompasses two related, interactive activities: self-appraisal and self-management. Self-appraisal is the awareness of one’s own cognitive processes and products and self-management refers to the active monitoring and consequent regulation and orchestration of one’s intellectual performance (Jacobs & Paris, 1987).
Metacognitive ability is related to both age and reading experience (Stewart & Tei, 1983), that is, older students are more strategic and reflective in their reading than younger students. Indeed, until recently it had been assumed that children younger than five-years were incapable of the type of intentional behaviour associated with metacognitive ability (Neuman & Roskos, 1997). However, recent research has revealed that young children are capable of activating strategies in the intentional pursuit of a goal (Dahl, 1993; Fang & Cox, 1999; Neuman & Roskos, 1997). The research of Neuman and Roskos, for example, identified that 3- and 4-year-old children adapted the tools of literacy for specific purposes and engaged in strategic behaviors in a variety of problem-solving situations. For example, the researchers found evidence of self-monitoring behaviors such as requests for help, self-correcting, or correcting others as children assumed specific literacy behaviors. The results of a study conducted by Fang and Cox indicated most of the 44 preschoolers involved in that study were developing emergent literacy-related metacognition. Specifically, the children exhibited evidence of self-management while engaged in literacy activities (i.e., while engaged in creating autonomous texts for others to read, the children strategically planned their composition/dictating process and detected and responded to problems in the text by self-correcting or prompting the scribe to correct).

It should be noted that the little research that does exist on young children’s emergent literacy-related metacognition has focused either on children’s production of fictional/story texts or on children’s literacy activity within play settings (i.e., episodes of dramatic/pretend play). This study, therefore, is particularly significant in that it
identifies, for the first time, the strategic behaviors young children bring to their engagement with informational texts (i.e., emergent literacy-related metacognition related to informational texts). Specifically, this study suggests that young children are able to self-manage while engaging in literacy events with informational texts (i.e., reflect on their learning strengths and weaknesses and understand that learning can be intentional and planned); critically appraise/judge some aspect of the text as object (e.g., illustrations, language of the text etc.); and reflect upon and talk about or play with the language of an informational text.

**Building Connections**

When children were functioning in Category 5 talk, they made personal connections to the informational texts (i.e., they related or linked their engagement with informational texts to something within or beyond themselves), connected with another child for the purpose of sharing or engaging with an informational text, and/or built connections to the text through imaginative play).

The findings of this study support Cochrane-Smith’s (1984) and Sipe’s (1996) identification of two types of personal connections: (1) life-to-text connections (the identification of some life experience in order to understand or personalize some feature of the text), and (2) text-to-life connections (the use of some aspect of the text to make sense of some aspect of one’s own life). In addition, this study supports Sipe’s (1996) finding that young children make more life-to-text connections than text-to-life connections.

There were, however, other types of connecting responses that were identified. The most common of these were children’s invitations to other children to join with them.
in connecting with and making sense/meaning of the text. Once the invitation was accepted, the host child often seized the opportunity to lead the guest children in an exploration of the text by using the informational text as a jumping-off point to share their own experiences and stories. Cochrane-Smith (1984) suggests that such imaginative connections are necessary because:

[F]or writers to include in their texts everything that readers need to understand the texts, or to explain everything there is to be explained, is impossible. Instead, readers actively and continuously participate in the creation of meanings by bringing their own life and literary experiences to bear upon text. (p. 176)

Thus, it can be argued that the children in this study connected with other children for the purpose of sharing informational texts (constructing meaning) and made personal connections to informational texts through the storying of past experiences.

Another aspect of building connections was the children’s imaginative and playful engagement with the content of the texts. During such engagements the children entered the text and manipulated and controlled aspects of the action. It can be argued that these episodes of imaginative connections to and manipulations of the text built deeper personal understandings. For example, taking on the role of a dinosaur engaged in a life-and-death struggle required the child to imagine what such an experience might be like. Thus, these children were also involved in text-to-life connections, using the text to deepen their personal understandings of the world.

The significance of these findings lies in broadening Cochran-Smith’s (1984) and Sipe’s (1996) descriptions and definitions of life-to-text and text-to-life connections to
include children's dramatic, playful engagements with informational texts and children's connections with others for the purpose of constructing meaning from such texts.

**Relational Talk**

When the children were functioning in Category 6, their focus was on the general talk of the classroom community. The responses in this category, therefore, had nothing to do with informational texts but focused instead on the day-to-day needs of a functioning classroom. This category was found to have two subcategories, as follows:

6.1 Regulatory talk

6.2 Linking with others

In the first subcategory the children's comments reflected their wants and needs within the organizational and behavioral expectations of a functioning classroom. Children's comments included references to turn-taking, protection of property, requests, and criticisms of peers. Tough (1976) suggests that the function of this type of language use is *self-maintenance*. Specifically, Tough (1976) identified five strategies of *self-maintaining*, as follows

- referring to physical and psychological needs and wants;
- protecting the self and self interests;
- justifying behavior or claims;
- criticizing others; and
- threatening others.

In this study, all of these strategies were identified within the regulatory talk of the focus classroom. The significance of this finding, therefore, lies in its confirmation of Tough's
(1976) research that identified children’s ability to use language to pursue, protect and defend their own interests (i.e., the self-maintaining or regulatory function of language).

The second subcategory (linking with others) reflected all the general social talk of the classroom community (e.g., compliments, teasing, sharing family anecdotes etc.). In this study, such interactions often began with invitations from one child to another to join in an activity or offers from one child to another to give help (e.g., to get a kleenex/paper handkerchief for a child with a ‘runny’ nose). Dyson (1987, 1992) suggests that this social or linking talk can be a catalyst for the intellectual development of young children since “children’s independent mental worlds are nurtured by their cooperative social lives” (p. 415). In this study, the children’s social talk was peppered with invitations to join in an activity, compliments and comments with regard to one another’s work (e.g., block constructions, paintings, drawings etc), and personal anecdotes. For example, during a small group activity on April 19, 2001, a group of children were at the writing table creating dinosaur books. While they worked, they chatted about a child’s absence due to sickness. The conversation turned to their personal experiences with illness and, perhaps as a result of this conversation, Tina decided to write an account of an experience she had had visiting the hospital. She began by drawing a series of pictures to illustrate the event and then dictated the following:

Me and my mom went to the hospital. And then we had to go inside the hospital. We had to wait a little while. And then it was my turn to go to the doctor (Tina, 2001).

As she drew, Tina discussed the sequence of events as they unfolded. She showed the other children at the writing centre (Esther, Woody, and Natalie) the progress
of her drawings. While listening to Tina talk about her book, Natalie remarked that her book was a “baby book” (i.e., about baby dinosaurs) and Esther announced that the book she was working on would be her “last book.” The children discussed the colours they were choosing for their illustrations and which colours were their favorites. Dyson (1987) suggests that writing activities like the one discussed here are social occasions during which children engage in joint activities and construct worlds together, interact about their separate activities, analyze the adequacy of each other’s efforts, and serve as an interested and sometimes appreciative audience.

The significance of this finding lies in its confirmation of the importance of social relationships in children’s developing literacy, that is, not only is the “social laughing, teasing, correcting, and chatting that accompany children’s academic work ... byproducts of the need to link with others and be recognized by them ... they can also be the catalysts for intellectual growth” (Dyson, 1987, p. 417).

**The Engagement Styles of Individual Children**

The findings of the study suggest that at least some of the children had specific styles of engagement with informational texts. The individual response styles of two children are reported in detail in Chapter 5.

Tina’s engagement style was characterized by a reflective and personal approach to informational texts. She demonstrated an aesthetic and critical interest in the text, a lively and playful understanding of language, an ability to reflect upon her own learning, and a keen interest in the life-to-text connections of others. Tina’s engagement style was underscored by a sense of personal response both to the text and to the experiences of others.
A broad knowledge of informational texts and the topic of dinosaurs characterized Leon’s engagement style. He demonstrated an understanding that the purpose of informational texts is to inform accurately, that information is categorized and organized under specific topics (e.g., types of dinosaurs, eating habits of dinosaurs etc.), and that information is represented in different ways (e.g., menus, timelines etc.). Leon also demonstrated his ability to identify gaps in his knowledge and take steps to fill such gaps. A keen interest in facts and information about the real world appeared to underscore Leon’s engagement style.

This is a significant finding since no previous empirical research on young children’s individual ways of engaging with informational texts could be found. It is possible that children develop a particular engagement style with informational texts very early on in their literacy development and that some types of engagement may be more appropriate for efficiently identifying and using information. On the other hand, the fact that this study only lasted three months makes it impossible to claim that these individual engagement styles are fixed and immutable. As children mature they may adopt different ways of engaging with informational texts. If this is the case, it might be part of young children’s developing understandings of informational texts, or it may prove to be a more general engagement style.

**Findings related to Question 2: Scaffolding by the Teacher**

The findings reveal seven types of teacher talk during the four contexts of informational text sharing which included the focus teacher, and that each type resulted in scaffolding of children’s understanding of informational texts in different ways. To recap, the findings show that when acting as a **Recruiter**, the teacher oriented the
children to the informational text, provided them with reasons to attend and functioned to re-refocus or re-recruit the children to the text. As the Director, she guided and scaffolded the children's experience of informational texts by directing the children's attention to the particular features and organization of these texts. When the teacher functioned as a Model, she fulfilled the scaffolding function by making the verbal text of the informational books available to the children, focusing attention on sound-letter relationships and mediating children's comprehension of the text. As the Elaborator, the teacher provided the children with strategies for addressing a problem, focused the discussion by linking children's comments, providing elaborative feedback and summarized the discussion. The scaffolding function of this type of adult talk enabled the children to elaborate and articulate their responses more fully. When the teacher functioned as the Connector, she facilitated children's understanding of the content of informational texts by making life-to-text connections. As a Provocateur, the teacher prodded the children to think more deeply about a topic, to move forward in their learning or to take their thinking and learning in a new direction. Finally, when the teacher functioned as the Conductor, she was concerned with facilitating the day-to-day routines of a classroom community and on maintaining relationships with and among the children. The scaffolding function of this type of talk was to create an atmosphere of "warmth and responsiveness" (Berk & Winsler, 1995, p. 29) in which children could confidently take learning risks.

The findings of this study, with regard to the various roles played by the teacher, are in line with the findings of Roehler and Duffy (1991). Roehler and Duffy undertook a review of available research related to the actions taken by teachers to communicate the
curriculum of literacy to students in elementary schools. The criteria for selecting which studies to include were as follows:

- those studies which emphasized cognitive models (i.e., teachers provided information and mediate student mental processing);
- studies which focused on intentional efforts to create curricular outcomes (rather than studies in which children learned independently of instruction);
- instructional studies which focused on what teachers did to create desired curricular outcomes (rather than management studies which focus on what the teacher does to ensure student attention or studies which focus on instructional materials);
- only studies focusing on teachers (rather than studies which focus on parents or peers as instructors); and
- in order to highlight the intentional and cognitive aspects of instruction, as opposed to the technical and routinized aspects of instruction, studies which emphasize “actions” rather than “behaviours” or “procedures” were chosen (Roehler & Duffy, 1991).

The authors identified four broad categories of teachers’ instructional actions. Of the four categories, three are pertinent to this study: motivating, informing and mediating. The fourth category, actions associated with planning, was outside the scope of this study. The following discussion compares the findings of the present study with that of Roehler and Duffy.

Roehler and Duffy (1991) suggest that from the teacher’s perspective, the first category, motivating, requires the teacher to initiate, sustain and direct students’
enthusiasm and perseverance for the activity. Clearly, this role is similar to the role of 

*recruiter* identified in this study.

While *informing*, the teacher focuses on explanations, modeling and talk-alouds. *Explanations* are explicit statements that include situational and procedural knowledge. In terms of this study, this sub-category (information giving) parallels the role of *director*. Roehler and Duffy (1991) identify *modeling* as another sub-category of *informing*. *Modeling* is what teachers do as “an expert carrying out a task so that students can observe and build a conceptual model of the processes that are required to accomplish the task” (Roehler & Duffy, p. 868). This sub-category parallels the role of *model* in this study. During the sub-category of *talk-alouds* the teacher’s talk goes beyond talking aloud about procedural steps by encouraging and including strategies aimed at developing reasoning (Roehler & Duffy, 1991). This sub-category compares to the role of *elaborator* identified in this study.

The final category of teacher action identified by the authors is that of *mediator*. Roehler and Duffy (1991) write:

> Students cannot be passive receivers of information. They must be involved in constructing understandings. Students interpret information presented during instruction much as they interpret information authors present in text. However, teachers, unlike authors, respond to students’ interpretations, modifying instructional information in subsequent interactions to increase the likelihood that students will construct intended understandings. (p. 870)

The authors suggest that asking questions plays a central role in mediating student understanding and that, in particular, two types of questions are crucial. The first types of
questions are those that activate the student’s background knowledge, that is, questions that “help students establish relationships between their experience, the text, and the relationship between the two” (Roehler & Duffy, p. 871). The second type of questions are those that, rather than limiting inquiry by requesting specific information (assessment questions), encourage students to construct their own understandings from their prior knowledge (regulatory questions) (e.g., “Why do you think animals stay in herds?”). The ‘mediating’ role of the teacher, therefore, is similar to the teacher roles of connector and provocateur in this study.

It can be argued that the role of teacher as conductor in this study falls within the management responsibilities of the teacher and consequently is outside the scope of Roehler and Duffy’s (1991) review. The findings of Roehler and Duffy and this study, therefore, are congruent in terms of their understanding and interpretation of the roles that teachers take in communicating the curriculum of literacy to students. The study reported here, however, is significant in that it identifies that teacher scaffolding categories can be (and were successfully) extended to very young children to support understandings of informational texts.

It is clear that the focus teacher played an active role in scaffolding and enabling the children’s developing informational literacy understanding. This study, therefore, supports conceptions of the sociocognitive constructivist or transactional paradigm that views learning as “mediated through direct and indirect instruction” (Chapman, 1997, p. 42) and which asserts the importance of sensitive and contingent explicit teacher action in students’ learning (Bainbridge & Malicky, 2000; Berk & Winsler, 1995; Chapman,
Specifically, the study reported here identified some of the ways in which teachers can be very active in supporting young children's developing understandings of informational texts, while locating themselves within a transactional paradigm of learning rather than a transmission paradigm of learning. Adult talk in this study tended to encourage what Wells and Chang Wells (1996) call collaborative talk, that is, talk that enables one or more of the participants in a learning situation to achieve a goal as effectively as possible and to then identify and pursue further avenues of inquiry.

**Toward a Grounded Theory of Young Children's Informational Literacy Development**

In this section, the findings summarized in the previous section are utilized to suggest a theory of young children's informational literacy development. It should be noted that this suggested theory is only intended to explain young children's developing knowledge of informational texts and, thus, should not be considered applicable to all ages of children or types of literature. The theory is grounded in the sense that it arises from the data for this study, making use of the six conceptual categories that emerged from the analysis of young children's responses in five contexts centered on the sharing of informational texts.

In presenting the theory, I first want to reiterate the six conceptual categories and depict the way in which the categories relate to each other in the form of a chart (Figure 6.1). This chart is based on a theoretical model developed by Sipe (1996) to explain young children's literary development (p. 304). However, although following Sipe's
(1996) format, the chart is changed to reflect the findings of this study, and summarizes the central features of each of the categories involved in young children’s developing understandings of informational texts. Following a discussion of the chart I will describe the relationship between the categories or aspects of young children’s informational literacy development. In describing this relationship I visualize the six categories as components of a dynamic, single cognitive event. Young children’s informational literacy development is then defined as the dynamic process whereby the components of this single cognitive event are activated, interact with each other, and build upon each other to create new understandings. This seamless and ongoing process is represented in visual form (figures 6.2 and 6.3). These diagrams and the processes they represent are then discussed.

**Aspects of Young Children’s Informational Literacy Development**

Figure 6.1 provides a visual overview of the six aspects of young children’s informational literacy development. The headings at the top of the chart (Stance, Interaction, and, Growth) represent the integrated actions of the child as he or she engages with informational texts (i.e., the stance or position the child takes to the text, the interaction which flows from the stance, and the potential for growth in understanding which proceeds from the interaction).
Figure 6.1. Six aspects of young children’s informational literacy development: A theoretical model.

<table>
<thead>
<tr>
<th>A. STANCE</th>
<th>B. INTERACTION</th>
<th>C. GROWTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positioning to the informational text</td>
<td>Interaction with the informational text</td>
<td>Potential for developing understandings of informational texts</td>
</tr>
</tbody>
</table>

1. **With** informational Texts | Children recognize text features | Developing the ability to use text features |

*Dealing with the format and organization of the informational text.* Children identify, use and make comments about the external texts structure and discourse patterns of informational texts.

2. **Within** informational Texts | Children activate schema | Developing knowledge about the world |

*Expressing knowledge and understanding of the informational text topic.* Children activate schema to construct meaning for new material.

3. **From** informational Texts | Children represent understandings | Developing knowledge of internal text structure |

*Organizing and representing understandings of informational texts.* Children represent their ideas using internal text structures encountered in informational texts.

4. **Across** informational Texts | Children self-appraise and self-manage | Developing as intentional learners |

*Expressing knowledge and control over learning.* Children identify cognitive processes and actively monitor learning.

5. **Through** Texts | Children connect with personal experiences | Developing as active constructors of meaning |

*Making personal connections to the content of informational texts.* Children relate or link their engagement with the content of informational texts to something within or beyond themselves.

6. **Around** informational Texts | Children participate in classroom community | Developing social relationships |

*Engaging in the general talk of the classroom community.* Children link with others and make their wants and needs known.
**Stance** refers to how children position or situate themselves to the text (Sipe, 1996, p. 305). In the first aspect of young children's informational literacy development, children are concerned *with* the text itself in order to make sense of the form and organizational features of informational texts. In the second aspect, the children position themselves *within* the text in order to engage with the topic content. In the third aspect, children take *from* the text to represent their understandings. In the fourth aspect, children reflect *across* informational texts to identify learning needs. In the fifth aspect, children connect *through* the text to personal experiences, and, in the sixth aspect, children develop social relationships *around* texts.

**Interaction** refers to the way in which the children engage with informational texts and flows from the stance that the children take toward the text. In the first aspect of young children's informational literacy development, the children may discuss the purpose or organization of an informational text, use the organizational features of an informational text to locate information, identify the ways in which information is represented or use the particular language or discourse patterns of informational texts. In the second aspect, the children appear to draw on background knowledge to construct meaning for the new content material they encounter within the informational text. In the third aspect, the children appear to organize and represent their understandings of informational text content using the internal text structures encountered in informational texts. In the fourth aspect, children appear to be strategic in identifying learning needs, critically appraising or judging some aspect of the text and talking about or playing with language. In the fifth aspect, children appear to relate their own lives to the text or to
relate the text to their own lives. Finally, in the sixth aspect, children connect with others as they participate in the day-to-day activities of a classroom community.

**Growth** refers to the potential for developmental growth that proceeds from the children’s interaction with informational texts. In the first aspect of young children’s informational literacy development, children may develop in their ability to identify and use the particular language, discourse patterns or organizational features of informational texts. In the second aspect, children may develop their world knowledge or expertise in a particular topic. In the third aspect, children may develop in their ability to understand the particular internal text structures of informational texts. In the fourth aspect, the children may develop in their ability to self-appraise and self-manage their learning. In the fifth aspect, the children may develop in their ability to make life-to-text and text-to-life connections, and, in the sixth aspect, children may develop their social relationships.

Thus, each aspect of young children’s informational literacy development can be seen as interplay between stance and interaction with the potential for growth flowing from that interplay. The following sentences, therefore, summarize each facet of young children’s informational literacy development:

1. With informational texts, children recognize text features and develop the ability to use informational text features.

2. Within informational texts, children activate schema and develop knowledge about the world.

3. From informational texts, children represent understanding and develop knowledge of internal text structures.
4. Across informational texts, children self-appraise, self-manage and develop as intentional learners.

5. Through informational texts, children connect with personal experiences and develop as active constructors of meaning.

6. Around informational texts, children participate in the classroom community and develop social relationships that support learning and development.

The Process of Young Children’s Informational Literacy Development

Although Figure 6.1 describes each aspect of young children’s informational literacy development and the interplay between stance and interaction with the potential for development which flows from that interplay, it is nonetheless a rather static representation which views each aspect of children’s informational literacy development in isolation. However, during young children’s involvement with an informational text, these six aspects are dynamically engaged and blur into a single cognitive event (i.e., an informational literacy event). Many examples of this blurring of categories have already been discussed. For example, in Chapter 5 (pp. 130-132) a transcript of a child-to-child sharing of an informational text served to illustrate the presence of the six aspects (categories) of children’s talk within a single informational book-sharing event. In fact, analyses of the utterances in each of the informational literacy events in the five contexts within which data were collected reveal that each event included the six types of talk. All six types of talk, therefore, were dynamically engaged in each of the informational literacy events observed and transcribed. Figure 6.2 provides a visual overview of this dynamic engagement with an informational text.
Figure 6.2: A theoretical model representing young children's dynamic engagement with an informational text.
It is proposed, therefore, that the six types of talk (aspects of young children’s informational literacy engagement) converge into a single, dynamic informational literacy event in which the child engages with an informational text and works to construct an understanding of that text. Further, it is argued that each engagement with an informational text can be construed as a transformational moment. Barnes (1993) writes that as children revisit the same areas of knowledge many times, on each occasion they reach a higher level of understanding. The findings of this study showed that young children returned again and again to the same issues, building new meanings and constructing and extending understandings of and with informational texts. For example, in this excerpt from a small group activity designed to research what dinosaurs ate (April 18, 2001), Gina concluded the activity by reading from an informational text created by the children (Gina had scribed for the children). The informational text was in the form of a poster and listed simple facts about the eating habits of carnivore and herbivore dinosaurs.

**Teacher:** We found out that meat eaters are called *T-Rex, Allosaurus and Carnotaurus* and they have *sharp teeth* and *claws*. And about the plant eating herbivores we found out they eat *leaves, no grass, berries, shrubs, pine needles*. And some of their names are *Apatosaurs, Styracosaurus* and *Brontosaurus*. They’ve got long necks some of them. They travel in herds and they protect themselves with long spikes, body armor and they *drink water from lakes*.

**Robert:** Hey, do you know what?

**Teacher:** What?

**Robert:** Every dinosaur has one tool to fight meat eaters.

It can be argued that Robert’s statement “Every dinosaur has one tool to fight..."
meat eaters” is evidence of a transformational moment, that is, Robert transcends the
simple facts Gina and the children have been collecting and comes to a broader
understanding of the ramifications of those facts. In this case, that a) meat eating
dinosaurs attack other dinosaurs, and b) that dinosaurs need, and in fact are equipped, to
protect themselves from other dinosaurs who eat meat.

Another example of a transformational moment occurred during a full group
activity on April 5, 2001. The children had been categorizing facts about dinosaurs as
either true or false.

**Teacher:** Oh! Here’s a good one. There’s only three [facts] left and then we’re
Going to have snack. *Dinosaurs hatched from eggs.*

**Nate:** Yes! Some! I’ll show you one [Nate goes over to the bookshelves. Looks
for a book, finds it, opens it to an illustration and shows Gina].

**Teacher:** Yea, there’s a wonderful picture in here Nate. You’re right! Oh!
here’s the picture. *[Gloria holds the book so that the children can see.
The Book of Dinosaurs: A complete illustrated history (1993)] There’s the
mother dinosaur. There she is looking at the nest with her eggs. *[p. 36 and
37] There she is with them hatching.

**Nate:** I know where there’s more! I know where there’s more that hatch eggs.
[goes over to the bookshelves and looks. Comes back and pulls Gloria to
go with him to the bookshelf].

Although previous activities had centered on gathering facts from informational texts
(e.g., the previous example where children were collecting facts around the eating habits
of dinosaurs), this was the first time a child had attempted to use an informational text as
evidence to judge the accuracy of a fact. Nate’s actions suggest he has come to a new
understanding regarding informational texts as a source of authority. This, it can be
argued, is a transformational moment.
It is proposed, therefore, that when children engage in informational literacy events around informational texts, they acquire new knowledge and build new meanings resulting in transformational moments. Bruner (1966) endorses the idea that children learn by revisiting the same area of knowledge over and over again, building higher and higher levels of understanding. He suggests that curriculum be organized on just such a basis, what he refers to as a “spiral curriculum” (p. 53). Through a spiral curriculum, Bruner argues, children can revisit the same areas of knowledge many times, building more sophisticated levels of understanding with each visit. Using this idea of spiral learning, Figure 6.3 visually represents the process of young children’s informational literacy development over time.
Figure 6.3: A theoretical model of the process of young children’s informational literacy development.
The formal theoretical definition of young children’s informational literacy development that is implied by this discussion may be stated as follows:

Young children’s informational literacy development consists of six aspects: informational text knowledge, world knowledge, representation, reflection, connections and relational talk. During an informational literacy event these six aspects dynamically engage and blur as the child works to construct meaning. Informational literacy development is the dynamic process whereby this engagement results in a transformational moment.

**Pedagogical Implications of the Study**

In Chapter 1 it was stated that “understanding children’s developing informational literacy is best studied in a classroom community that facilitates informational literacy development.” Thus, an early childhood education classroom that manifested this phenomenon intensely was chosen. In this section, the implications for classroom practice that arose from this “information-rich case” (Patton, 1990) are discussed.

**Readaloud Teaching Practice**

Wells (1985) suggests that the single most important activity for later academic success is reading aloud and sharing books with children. However, children need a grasp of a variety of genres including informational texts if they are to become academically successful (Duke, 2000; Heath, 1983; Kamberelis, 1999). Yet, storybooks continue to predominate during classroom readalouds (Duke, 2001; Neuman, 2001). This practice is based on the notion that narrative is more developmentally appropriate for young children. This study, however, focused in part on informational text readalouds (full group and small group) and identified that, in fact, young children have a broad
understanding of informational texts and have the ability to engage with informational
texts. Teachers, therefore, should reflect on their readaloud practices and balance
storybook sharing with informational text sharing.

In this study informational text readalouds took place in two contexts (i.e., full
group and small group readalouds). Although both of these contexts supported children's
informational literacy development (e.g., learning about informational texts, how to use
them, etc.) they differed in some important ways. The full group readalouds were the
only readalouds that included all the children. These readalouds were teacher-led and
scheduled on a daily basis. Without exception, the readaloud was preceded by a
discussion of some aspect of the informational text (e.g., the table of contents, predictions
of what the book might be about, a review of what the class had been discussing, etc.).
In addition, Gina usually gave the children a listening task. For example, during a
research project investigating what dinosaurs ate, Gina set the following listening task:
“See if we can find out about the things we are not sure about.” During the reading of the
informational text, the children were free to make comments. These comments were
often in response to Gina’s questions but also included the children’s thoughts and
questions. For example, during one readaloud a child noticed an illustration and asked,
“What’s he eating right here?” On another occasion, during the reading a child asked,
“What does herd mean?” Both of these questions led to a discussion. However, it should
be noted that the bulk of discussion took place after the full group readaloud and centered
on the listening task that Gina had set. For example, as a follow-up to the listening task,
“See if we can find out about the things we are not sure about” Gina asked, “Put on your
thinking caps! Think about the book! What did you find out about, in that book, that we
can add to our list?” Gina then proceeded to lead a very lively discussion about what the children had learned. In general, then, it seemed clear that the teacher carefully planned the full group readaloud with learning objectives in mind (e.g., exploring the organizational features of informational texts, researching some aspect of dinosaurs’ lives, etc.). When planning full group informational text readalouds, therefore, teachers should be sensitive to the ways in which the structuring of the readaloud situation supports progressively more complex and richer informational literacy understandings.

In contrast, small group readalouds included only those children who chose to be involved. In addition, and perhaps most importantly, rather than leading the readaloud Gina responded to and followed the children’s lead. A child chose the book to be shared and Gina acted as the ‘reader’ and ‘responder’ rather than the ‘leader.’ Consequently, the children’s comments, questions, connections and reflections were ‘front and center.’ Sipe (1996) writes that allowing children to talk freely during a readaloud gives teachers a window on the children’s understanding of the text. In turn this provides the teacher with the opportunity to scaffold the children’s meaning construction (p. 320). It seems sensible to suggest, therefore, that teachers should provide opportunities for activities like small group readalouds that are child-led and can lead to scaffolding opportunities.

In summary, the implications for classroom readaloud practice are as follows:

- readalouds should include both storybooks and informational texts;
- careful planning of full group teacher-led readalouds which support progressively more complex and richer informational literacy understandings, should be considered; and
opportunities for child-led readalouds that permit children to talk freely and engage in meaning-making conversations with more able 'others,' should be provided.

**The Role of the Informational Texts**

Bruner (1996) identifies two broad ways in which human beings organize and manage their world: *narrative* thinking and *logical-scientific* thinking. Bruner suggests that these modes of expression are universal, although different cultures privilege them differently. For example, as discussed earlier, there has been a belief in western cultures that narrative skill comes 'naturally' and, as a consequence of this, it is privileged in North American early childhood education classrooms. Bruner suggests that the importance of narrative and logical-scientific understanding lies not in the comprehension of the conventions of text type but as a way of thinking and conceptualizing about the world. Thus, Bruner is talking about two kinds of thinking. In the early childhood education classroom (given the sheer number of narrative picture books, shared reading of narrative, activities supporting narrative development, etc.) there seems to be a tacit understanding that children need narrative as "an instrument of mind on behalf of meaning making" (Bruner, p. 41). However, the dominance of narrative in the early childhood education classroom has resulted in children being provided with few opportunities to develop logical-scientific thinking through interactions with informational texts in a variety of meaningful contexts. It is possible (as has been suggested in the literature), that this lack of experience with informational texts and way of thinking about the world (logical-scientific) has resulted in many intermediate and secondary grade students being unable to read and write informational texts well.
Bruner (1996) writes: “If narrative is to be made an instrument of mind on behalf of meaning making, it requires work on our part – reading it, making it, analyzing it, understanding its craft, sensing its uses, discussing it” (p. 41). It seems sensible to suggest that if logical-scientific thinking is also to be an instrument of mind on behalf of meaning making, it also requires work on our part (reading it, making it, analyzing it, understanding its craft, sensing its uses, discussing it, etc.). In other words, children should be engaged in meaningful activities and tasks that elicit this particular type of inquiry thinking. This study has demonstrated that young children are as capable of logical-scientific thinking or inquiry as they are of narrative thinking. Thus, if children are to become literate thinkers (i.e., able to use texts – both narrative and logical-scientific/informational – as cultural tools and cognitive resources) it is important that they be given opportunities to engage in developmentally appropriate activities around informational texts in an informational literacy rich environment. In short, informational texts must be as much a part of the early childhood education curriculum as narrative texts.

The Role of the Teacher

This study provides evidence for the important role teachers play in enabling their students’ informational literacy development. The study identified seven ways in which the teacher scaffolded the children’s informational literacy development and found that the teacher played a critical role in supporting young children’s informational literacy development. It is important, therefore, that teachers reflect on their scaffolding roles, and ask in what ways their teaching practice may assist children in their informational literacy development. In this study it was noted that the teacher, Gina Rowlands, made
every effort to respond to the children's curiosity and interest in the world around them. For example, the integrated unit on dinosaurs, the related activities, and research questions all arose from the children's interest in the topic (see Chapter 4). By identifying a topic that was of genuine interest to the children, Gina was able to facilitate and respond to the children's acts of inquiry. Lindfors (1999) defines an act of inquiry as "a language act in which one attempts to elicit another's help in going beyond his or her own present understanding" (p. ix). Lindfors suggests that there are two types of inquiry acts: informational-seeking and wondering. Information-seeking utterances are deliberate, effortful, focused and move toward a specified end or goal. Wondering utterances, on the other hand, are concerned with entertaining issues, for example, speculating and hypothesizing, and are process-oriented rather than specifically goal-oriented. In general, wondering utterances deal with "the imagined, the uncertain, the ambiguous" (Lindfors, 1999, p. 40). However, it would be misleading to suggest that wondering utterances do not have any goal. Lindfors writes:

> Wondering utterances have goals no less than information-seeking utterances do. It is only that their goals are different. Trying to engage a partner in helping you play with uncertainties is no less a goal than trying to engage a partner in helping you find out something (Lindfors, 1999, pp. 41-42).

In this study, the focus of both the teacher's and the children's utterances was information-seeking and wondering as they explored both the world of the dinosaurs and informational texts. A close scrutiny of the teacher's utterances in this study reveal she went beyond identifying the purposes of informational texts and how to use them; she demonstrated how to be a member of a community of inquiry. In particular, Gina's
inquiry demonstrations can be viewed as helping this group of children or “emergent inquirers” (Lindfors, 1999, p. 110) begin to understand that inquiry utterances:

- enact the assumption that the world is comprehensible and that people try to understand it;
- include inquiry’s “typical utterances” (wh-question forms) that signal important dimensions of experience (categories, relationships), providing a helpful framework for constructing understanding;
- bring together socially shared meaning and personal feeling, as one tries to comprehend experience;
- voice inquiry’s uncertain and invitational stance toward partner and toward topic. A reaching stance. (Lindfors, 1999, p. 110)

Thus, by carefully listening to and following the lead of the children Gina enabled them to not only build their understanding of informational texts but also to develop a way of thinking about, exploring and comprehending the world they live in. In short, Gina embodied what Lindfors (1999) calls “teacher-as-inquirer” (p. 116) in that she demonstrated:

i) Inquiry arises in knowledge (i.e., recognition that one’s present knowledge offers the possibility of going beyond it, e.g., “We’ve identified what we know about dinosaurs, what else do we want to find out?”).

ii) Inquiry draws on various perspectives on experience (i.e., there is more than one way to make sense of a text, e.g., “Robert thinks that this dinosaur is hunting, what do you think?”).
iii) Inquiry involves knowledge in action (i.e., making connections between concepts, using knowledge to provide support for ideas or for generalizing or clarifying, e.g., “But if they’re extinct then you wouldn’t see dinosaurs”).

iv) Sense in inquiry involves feeling as well as thought (i.e., knowledge that is relevant comes from the heart as well as from the head, e.g., “Meat eating dinosaurs are scary!”).

v) Inquiry stands at the intersection of know/not-know (i.e., the precise moment of reaching beyond what is presently known, toward what is sensed to be beyond it, e.g., “See if we can find out things we’re not sure of!”).

vi) Inquiry’s stance is uncertain and invitational (i.e., wondering about the text and issues related to it, e.g., “I wonder why dinosaurs stayed in herds!”).

This study suggests that if children are to engage effectively with informational texts, the teacher should scaffold children’s understanding of the social practices that determine how a particular text type is used. Being able to read a particular text type in a given way requires that one has membership in a social group and is able to engage in their practices, in this case, engaging in acts of inquiry. These practices, even though they utilize written texts, rarely use only written texts; they also involve particular ways of talking and listening, acting and interacting, thinking and believing and feeling and valuing (Gee, 2001).
In addition, the teacher in this study was knowledgeable about informational texts and was, thus, able to identify appropriate books based upon the children's interests and levels of understanding. This suggests that teachers must develop their own understandings of the particular and complex features of informational texts and identify appropriate examples for sharing with young children.

**Recommendations for Further Research**

The findings of this study have implications for further research into young children's informational literacy development.

1. The conceptual categories of young children's engagement with informational texts and the grounded theory of young children's informational literacy development that arose from them need to be tested across many cases in order to validate, extend and refine them. In addition, this study was only three months in length. Other questions, therefore, which might be addressed are as follows:
   - What would a longitudinal study reveal about how informational literacy development progresses over time?
   - Do the conceptual categories hold over time or are modifications or refinements required in order to characterize the informational literacy development of older children?
   - Do children's early experiences with informational texts affect/address the fourth grade slump?

2. The focus of this study was on what young children's talk revealed about their emerging understandings of informational texts. Further studies are needed that
investigate other ways in which young children represent their understandings. Questions which might be addressed are as follows:

- What do children's emergent writing, painting, pretend play, block constructions and interactions with other play materials reveal about their emerging understandings of informational texts?
- How do the play centers of an early childhood education classroom support young children's informational literacy development?

3. The informational texts used in this study ran the gamut of narrative-informational texts, informational poetry, expository texts and hybrid texts that fused poetry, narrative and information. Research is needed that carefully identifies and categorizes the different types of informational texts. Questions which might be addressed include the following:

- Are there differences in the ways children engage with different types of informational texts?
- What understandings does each type of informational text require?
- In what ways do the different types of informational texts support or hinder young children's emerging understandings of non-fiction?

4. Finally, the data of this study suggested that there might be differences in the ways that boys and girls engage with informational texts. Thus, a gendered analysis might provide insight into the ways in which gender affects informational literacy development. Questions which might be addressed are as follows:

- Do boys and girls engage with informational texts differently?
• Would an informational text readaloud of all boys or all girls generate a different type of discussion?

• Does the style of engagement with informational texts affect emerging understandings of such texts?

• Does the gender of the “reader” impact on emerging understandings of informational texts? In what ways?

**Conclusions**

In the information age the ability to understand, evaluate and use informational texts is “central to success, and even survival, in advanced schooling, the workplace, and the community” (Duke, 2000, p. 202). Yet, as discussed in Chapter 1, research indicates that students are struggling with informational reading and writing in the intermediate and senior grades. It has been suggested that an almost exclusive emphasis on narrative in the early childhood education years has left children with little experience in reading and writing informational texts. The predominance of narrative in the early childhood education years was based on the notion that narrative was easier for young children to comprehend, that is, children’s understanding of narrative precedes their ability to understand non-story written language (Moss, 1995; Pappas, 1991, 1993). This study, however, provides evidence that children as young as three- and four-years-of-age can demonstrate an impressive understanding of informational texts. Further, since the children involved in this study were novice readers (McGee & Richgels, 1996), the study demonstrates that children need not be conventional readers, that is, be able to decode written text before they develop informational literacy knowledge. Indeed, the evidence shows that although the children in the study were not conventional readers, they were
attending to the unique visual characteristics of informational text format features (e.g., table of contents, pictorial indexes etc.) in order to get meaning from the text. It seems clear, therefore, that children’s awareness and knowledge of textual format features and the linguistic and internal text structures of informational texts develop in tandem.

This study indicates that young children can and do enthusiastically engage with informational texts. There appears to be no reason, therefore, to exclude such texts from the early childhood education classroom.
REFERENCES


Harris, T.T., & Fuqua, J.D. (2000). What goes around comes around: Building a community of learners through circle times. *Young Children, 55*(1), 44-47.


   The cool web: The pattern of children's reading. Toronto: The Bodley Head Ltd.
   Kamil, & P. Mosenthal (Eds.), Handbook of reading research. New York, NY:
   Longman, 319-351.
   and applications of socio-historical psychology. L.C. Moll (Ed.). New York,
   NY: Cambridge University Press.
Moss, B., & Newton, E. (2002). An examination of the informational text genre in basal
   reading and writing through information trade books. Language Arts, 74(6), 418-
   429.
   72, 122-126.
Neuman, S.B., & Roskos, K. (1997). Literacy knowledge in practice: Contexts of
   participation for young writers and readers. Reading Research Quarterly, 32(1),
   10-32.


240


Children’s Books


APPENDIX A: QUESTIONS FOR TEACHER INTERVIEW

1. Briefly, describe your philosophy of teaching.

2. How is the social nature of learning exemplified and provided for in your classroom?

3. One thing we struggle with is how explicit and intentional to be in our teaching of concepts to young children. What are your thoughts on this?

4. When choosing an information book to share with children during a book readaloud, what do you look for?

5. What do you look for in an information book that is included in the classroom library?

6. How do you feel you helped children with their understanding of information books?

7. What specific items do you think the children added to their understanding of information books?

8. How do you feel about the experience of having someone do research in your classroom?

9. Finally, what new learnings have you gained as a result of participating in this study?
<table>
<thead>
<tr>
<th></th>
<th>Dinosaur Dinners 04/18</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Book of Dinosaurs: A Prehistoric Rescue! 04/18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dinosaurs 04/17</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dinosaurs (1977) 04/17</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dino-Mighty 04/12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What Happened to P in A 04/10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dinosaur Dinners 04/18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>How do Dinosaurs Say Goodnight? 04/05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**A) Group Activities and Child to Child Book Sharing**

**Appendix B: Informalional Texts Used for Full and Small Group Readalouds, Full and Small**
<table>
<thead>
<tr>
<th>EXAMPLE</th>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: AVAAAVAVAI!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Else: Earthquakes, volcanoes, and I don't know what</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E: He doesn't get to learn about dinosaurs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does your dad find out information like when he's studying?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>They die bones and find out stuff by digging. How does your dad find out information?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Double space</td>
<td>Change of speaker</td>
<td></td>
</tr>
<tr>
<td>Rob = Robert</td>
<td>One or two-, three-letter abbreviation</td>
<td></td>
</tr>
<tr>
<td>L: = Larry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E: = Elle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wyoming not too far from here.</td>
<td>A child is speaking</td>
<td></td>
</tr>
<tr>
<td>They went way out into the desert in Alberta and people first learned about dinosaurs by digging bones and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some of them had guns because it was long ago when</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T:</td>
<td>Teacher is speaking</td>
<td></td>
</tr>
</tbody>
</table>

APPENDIX C: TRANSCRIPTION SYSTEM USED FOR THE STUDY
<table>
<thead>
<tr>
<th>Rob: Tyrannosaurus Rex *** Digging?</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I: How did we find our suit?</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>I: Wow! Tyrannosaurus Rex!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E: Yes ... I do.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I: Do you think there were dinosaurs when those men // No! No! // were walking through the desert?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E: Yes, I do.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I: Does the real world?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rob: Women on Earth. So there it is right there. Dinosaurs died out long before there were any men or we've been wondering. No one ever saw a dinosaur.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E: Oh! Here's some information. Listen. This is something</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Punctuation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transcribed text is shown with passages that are impossible to interpret and no indication or exclamation marks. Punctuation marks are used to indicate pauses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attempted phonetic representation of sounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overlapping: (two or more people talking)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonverbal behaviors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading the last of the book</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

251
APPENDIX D: SAMPLE TRANSCRIPT OF A CHILD TO CHILD INFORMATIONAL TEXT SHARING

Child-Child Book Sharing
Date: April 10, 2001
Time: Book time before Circle


Description: Expository text: Table of Contents, Headings, Maps, Labeled Diagrams, Illustrations, Index.

[E. and La. begin book time looking at books individually. E. puts away her book and moves close to La. who is exploring *The book of dinosaurs: A complete illustrated history.*]

La.: [to E.] Look at this tricerotops! Right there! [points to an illustration on page 12]

E.: [looks at the book with La.] Oh! Look [points to an illustration]

La.: [also points to the illustration] He’s got teeth in his mouth! [La. turns pages glancing at the illustrations]

E.: I want to see that page [La. tries to turn the pages to show E. the book cover. E. pushes open the book to the page she’s interested in. E. points something out to La. in the illustration. The two children continue looking at illustrations and pointing to details]

La.: Eat that one! [pointing] That one’s the real sharp tooth!

E.: Oh! Look!

La.: See! [points to the teeth of a dinosaur p. 18]

E.: Look! He had a tooth out!

La.: Yea!
E.: You know what my uncle did?

La.: What?

E.: Like this [E. puts her finger into her mouth on the upper left-hand side La. listens and watches] He smacked his teeth. Well he didn’t like get a hold of it but it came out!

La.: But I bumped my tooth on the table and there was blood in my mouth and I spit it out!

E.: You know what?

La.: What?

E.: This tooth like he hit it and then he only has half this tooth [finger in her mouth pointing]

[Children begin putting books on the shelf]

La.: [the two children continue looking at the book. La. turns the pages] Crocodile! [page 30 the illustration resembles a crocodile but is in fact a Baryonyx]
### APPENDIX E: INFORMATION TEXTS USED FOR READALOUDS AND ACTIVITIES CHOSEN FOR IN-DEPTH ANALYSIS

<table>
<thead>
<tr>
<th>Mar. 2 -April 6</th>
<th>April 6-20</th>
<th>April 20-May 4</th>
</tr>
</thead>
</table>
| **Stegosaurus (Storrs, 1994)**  
*Now I can read ... Animals* (Attmore & Stanton, 1985)  
| **Alphabet of Dinosaurs (Dodson, 1995)** | Dinosaur Pop-Up ABC (Maguire, 1995)  
Colossal Book of Dinosaurs (Teitelbaum, 1989)  
Dino-might! (Burgan, 2000)  
Dinosaur (Johnson, 2001)  
Dinosaur Dinners (Davis, 1998) |  |
|  | The Big Golden Book of Dinosaurs (Jenkins, 2000)  
Let's Look at Dinosaurs (1992)  
Outside and Inside Dinosaurs (Markle, 2000)  
Prehistoric life explained: A beginner's guide to the world of dinosaurs (Johnson, 1996)  
The Book of Dinosaurs: A complete illustrated history (Rosenstein, 1995)  
Tyrannosaurus Rex (2000) |  |