The Centrality of Exploratory Talk in Dialogic Teaching and Learning

by

Janet Louise McConaghy

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Department of Elementary Education
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Abstract

Every day, children and teachers at all levels of schooling engage in classroom talk for a variety of purposes as a natural and essential aspect of teaching and learning and in the development of social relationships. Over the years educators have come to see talk as not only a major means of communication or as an instructional strategy for effective teaching, but as a powerful tool for thinking, learning and understanding. We now know that when students are given the time and the opportunity to engage in informal conversations in an exploratory way to generate and sort out ideas, hypothesize, test and clarify new ways of thinking, talking together can play a vital role in their understanding and construction of meaning.

Through the established and ongoing development of research in classroom discourse and meaning making, the interest in the centrality of talk as a mode of learning in pedagogical practices such as dialogic teaching and inquiry learning has rapidly increased. However, research also suggests that opportunities for exploratory talk to function as an inquiry based and dialogic process for students' learning and meaning making in all subject areas are often left untapped.

This study is an exploration into students' use of exploratory talk as an interactive and dialogic process for thinking, learning and constructing meaning within the social setting of a small group discussion. This qualitative study took place with four students and one teacher in a Grade 6 classroom of 30 students over a period of 6 months. It was carried out during the usual class times when the students were provided with opportunities and sustained time to discuss curriculum related topics of interest. From a socio constructivist perspective I pursued an interpretive inquiry methodological approach, which is rooted in the study of experience and meaning. The primary source of data collection was audio-recorded episodes of student talk.

Others data sources included interviews, researcher's notes and journal entries. Analysis and interpretation of the data revealed three major interrelated features that influenced the effect of exploratory talk on the students' construction of meaning: (1) the social context of the talk, (2) the verbal and cognitive strategies used by the students, and (3) the teacher's role in mediating the talk through intervention.

Insights and findings from this study show how the students' engagement in exploratory talk played a crucial role in their finding their own voice, building their own knowledge and deepening their understanding of themselves, others and the world around them.

This study brings together the notion of exploratory talk as a tool of inquiry and the pedagogical practice of dialogic teaching in the classroom. It demonstrates the interdependence and the interrelationship between exploratory talk and a pedagogy that is based on valuing students' talk in learning interactively as they come to their own understandings. I offer this study as a contribution to the developing research in classroom discourse and to support a dialogic approach to curriculum and to teaching and learning practices in today's diverse and socially changing classroom communities.

Dedication

For my parents:

Whose love and support has been a never ending

source of strength in my life.

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Chapter One: Introduction

> Talk has always been one of the essential tools of teaching, and the best teachers use it with precision and flair. But talk is much more than an aid to effective teaching. Children, we now know, need to talk, and to experience a rich diet of spoken language, in order to think and to learn. Reading, writing and number may be the acknowledged curriculum 'basics', but talk is arguably the true foundation of learning. (Alexander, 2008a, p. 9)

The above quotation by Robin Alexander reaffirms what we know about the potential of classroom talk as a valuable educational tool for the development of students' thinking and learning in all subject areas of the curriculum. Our current awareness and appreciation of the potential that talk holds as a pedagogical tool for learning and understanding, and for the making of meaning, is the result of an accumulation of established research in the role of language as a major means of thinking, reasoning and constructing knowledge. Yet the role talk plays in this regard appears to be little understood by teachers and less often recognized as a learning strategy in classroom practice than reading and writing, even though teachers and students may spend more time talking and listening within a typical day at school.

Looking Back

As I reflected on my strong interest in the *role of talk in learning*, I realized that using talk to share events, to work through ideas and to sort out my thinking in everyday situations as a way of coming to know and to make sense of experiences has always been a very meaningful part of my life. Extended conversations among friends, colleagues and my own family members have been enjoyable and important ways of spending time together. Now looking back to my childhood I realize how fortunate I was to have had the advantage of being part of a family where talking together was a warm and integral part of our family life.

Just before I turned 6, along with my parents and older sister, I moved from Ottawa to Edmonton where my father began a new phase in his educational career as he joined the Alberta Teachers' Association. This move meant leaving family and friends behind, which in turn meant we became closer as a family in sharing our feelings and day-to-day happenings. Images now come to my mind of our telling and listening to family stories around the dining room table and sharing conversations about the interesting, enjoyable and sometimes disastrous events of the day. Our talk was filled with questions and responses and sometimes disagreements but we learned to listen to what each other had to say and to appreciate other points of view.

My father's new position in Alberta brought many opportunities for our family to combine travel with attending summer conferences that were held across Canada. Travel in a car at that time lacked many of today's electronic forms of entertainment but it provided a lot of opportunity for talking together as we drove along. Long before leaving on any of these trips we would gather in a "family meeting" to talk and work through all the detailed planning that was required for our long cross country journey. I remember feeling very important at being a part of these *adult like* decisions and having my suggestions heard and taken seriously.

Unfortunately the opportunities for me to engage freely in interesting conversations or to take part in small group discussions did not continue into my own day-to-day experiences at school. During the late '60s and '70s when I was a student in the public school system, I recall sitting at desks in rows, copying notes from the board, answering questions in a textbook and listening to the teacher "lecture" at the front of the room. I don't think I was unhappy because I didn't have any expectations of what school *should look like* other than what I experienced. But

memories are few of my feeling encouraged or having any desire to question, express my own ideas or my own thinking or being part of any small group discussions or even discussions as a whole class. I was usually preoccupied with trying to anticipate the "right" answer to a question in case I might be singled out to respond. Talking with other students in class was associated with causing disruption, and was behavior that was considered unacceptable and which usually resulted in consequences of reprimands or detentions. Informal conversations with teachers were also rare and I viewed most teachers during those years as unapproachable. It seemed quite acceptable that they were there to *teach* rather than *talk informally* with students in any manner that would resemble Douglas Barnes' (1976) theories of sorting out ideas through the use of "exploratory talk." However, throughout my entire schooling I was grateful for friends, family members and my parents who were both educators and who were always open to talking with me, to sort out problems or to share what was happening in our lives. I was also privileged to enjoy travel and other stimulating experiences outside of school that provided me with opportunities to expand my own use of talk. In hindsight my experiences in using "exploratory talk" in everyday situations were very rich and an important part of my life.

My fondest memories of the years when I was a teacher in the classroom are the social times I spent chatting with students as they arrived at school or outside on the playground or during our read aloud times and talking about books. It was during these conversations that I gained a greater understanding of who these children were as persons, and so as their teacher I better understood their thinking and how they approached their learning. Our talking together also played a vital role in our building relationships of trust and respect for each other. Now I

realize how crucial this element of trust is in children's confidence to explore and express their thinking and feelings and to have the courage to engage in talk that often revealed and exposed their very initial understanding. As Mercer and Dawes (2008) suggested, "exploratory talk is . . . rather a brave thing to do, and tends not to happen unless there is a degree of trust within a discussion group" (p. 65). Over the years, I discovered that it can also be a "brave thing" for a teacher to do because it means handing over the control to children and trusting them to learn. "When we encourage children's inquiry in classroom discourse, we may feel that we have 'turned something over' to them–that something has moved from us to them. That something is power" (Lindfors, 1999, p. 156).

My work with children and my growing interest in using children's literature across the curriculum ultimately led to my pursuing a master's degree. My enjoyment in teaching through literature and talking with children about the books we shared led me to explore the study of children's literature in literacy learning and social studies. As an outcome of the master's program I co-authored a curriculum resource *Social Studies Through Literature* (2001) with Dr. von Heyking, a professor in social studies education with whom I shared a strong interest in the power of literature for learning. This activity-based resource was designed from a social constructivist stance to allow children to engage in creating meaning through discussing, debating, hypothesizing, investigating, and taking different points of view (Phillips, 1995). My work in creating this resource served as a valuable means of enriching my own approach to teaching through literature when I returned to the classroom.

My compelling interest in the power of talk for learning and understanding continued when I moved professionally from classroom teacher to language and literacy consultant. In my present role as consultant I work in a number of different schools across the district with a wide range of at-risk children, mostly in one-on-one situations of academic assessment. In these one-on-one settings we talk together about their personal interests, their school experiences, my role in their learning, and about the purpose of our sessions together. I have listened and observed their thinking out loud to sort out and make sense of some of the unfamiliar tasks I ask them to do as part of the assessment procedures. These experiences have heightened my awareness of the power and the possibilities that talk holds for developing relationships and for learning as part of our everyday lives both in school and in any informal conversational type setting that brings people together in dialogue and interaction.

When I entered the PhD program to pursue further studies and research in the area of classroom discourse in the form of exploratory talk for learning I continued to explore and learn more about this exciting topic. The main concern that I brought to this research was the ongoing emphasis on classroom talk for mainly instructional purposes or talk that limited students to present a "finished product" of what they had already learned. I saw a general lack of understanding, among educators, of talk as a vital dialogic tool for thinking, exploring, inquiring and reasoning. I also believed there was a need for teachers and policy makers to rethink how the role of talk is presented in curriculum and in pedagogical practices as a viable and accessible means for students to develop as engaged discussants and decision makers.

My belief in the power of talk as a means of interpreting meaning and coming to an understanding of events, feelings and ideas is rooted in my personal and professional experiences which all helped to shape the plan for this qualitative research study. Under the umbrella of a qualitative approach this study was designed as an interpretive inquiry into the meaning of exploratory talk as a process for discovery, learning and creating knowledge. In keeping with the philosophical underpinnings of this approach I conducted the research from a sociocultural constructivist perspective, which reflected the view that meaning is personally constructed by the knower and involves bringing together what we already know with what we are newly encountering.

The Purpose of the Study

The purpose of this research was to explore children's use of exploratory talk as a process in their learning and construction of meaning within a social and dialogic context of small group discussions. I had a strong desire to know how students' use of exploratory talk helped to shape their thinking and further their understanding of curriculum learning, their worlds and of themselves.

Situating the Study

Traditionally, spoken language has been recognized as "the medium by which much teaching takes place and in which students demonstrate to teachers much of what they have learned" (Cazden, 2001, p. 2). Wells (1999) posited "speech plays a significant role in the life of classrooms . . . in the conversations among children that accompany curricular activities, as well as formally in teacher-led discussions" (p. 114). When educators think about the kinds of

classroom talk that go on throughout the day, images come to mind of students and teachers talking and listening in social conversations, teachers talking to students, teachers providing information and giving directions, and students answering questions and talking with each other in small groups.

Mercer and Hodgkinson (2008) pointed out that one of the most important insights educators and researchers have acquired over the years is a deeper understanding of the value of talk as more than a mode of communication and acknowledging talk as a means of learning, discovering and constructing knowledge. They explain:

> It is now appreciated that classroom talk is not merely a conduit for the sharing of information, or a means for controlling the exuberance of youth; it is the most important educational tool for guiding the development of understanding and for jointly constructing knowledge. (p. xi)

From a social constructivist perspective and based on the "pioneering work of Douglas Barnes" (Wells, 1999, p. 120) educators and researchers (Alexander, 2008a; Barnes, 1976; Barnes & Todd, 1977, 1995; Britton, 1970; Cazden, 2001; Littleton & Mercer, 2013; Mercer, 2000; Mercer & Littleton, 2007; Wells, 1999;) carried out extensive research on the notion of language as a powerful and dialogic tool for learning. Over the years this contribution to educational research helped to reshape our previous understanding of talk as individualistic: "cognitive theories of learning gave way to more social, culturally located interpretations of learning" (Mercer & Hodgkinson, 2008, p. xi).

Barnes' seminal work in language for learning and the construction of meaning along with the research and theories of other social constructivist language and literacy educators was strongly reflected in the changes and new directions in provincial subject area curricula that first

appeared in Alberta and elsewhere in the early 1990s. The initial changes at that time in curriculum approaches and accompanying resources were initiated by a shift in education to a social constructivist approach to teaching, learning and language discourse practices. The Alberta mandated curriculum documents over the past 20 years have stressed the role of language for meaning construction and have supported the notion of exploratory talk as a tool for learning in the philosophy statements and student outcomes in the English language arts curriculum.

> Exploratory language enables students to organize and give meaning to experiences. Students use exploratory language to share thoughts, ideas and experiences and to express and acknowledge emotions. Exploratory language enables students to discover and understand what they think and who they are. It also helps them reflect on themselves as language learners and language users. In addition it helps them establish and maintain relationships. (Alberta Learning, 2000, p. 7)

Within the 2000 curriculum document, an increased emphasis was placed on the interrelationship of thinking, learning and language through the philosophy statements and student outcomes from Kindergarten to Grade 12. However, these explicitly stated philosophical perspectives and mandated statements on which the current curricula were based have not always been reflected in the day-to-day practice of teaching and learning in classrooms. Current programs of study have presented challenges to many teachers to understand the significance of these directives in relation to their role in enacting the curriculum. Unfortunately some teachers have been hesitant or resistant in planning and implementing more interpretive and dialogical pedagogical approaches into their teaching, particularly those whose own beliefs about teaching and learning tended to be inconsistent with the assumptions that support the current programs of study.

Mercer (2008a) pointed out that, "many researchers have put forward persuasive and influential arguments for the importance of the quality of teacher-student dialogue on the development of children's understanding in curriculum areas" (p. 92). The question asked by Barnes as early as 1976, "Why then is exploratory discussion so infrequent in school lessons?" (p. 115) has been repeated over the years and is still a question being asked by researchers and educators today.

Wells (2009) suggested one possible reason:

> For as long as teachers retain a vision of teaching as ensuring that students 'learn' and remember the material predefined by the curricula guidelines they are likely to abandon the new strategies as soon as the pressure to 'cover' the prescribed content becomes too severe. (p. 276)

Mercer and Hodgkinson (2008) suggested that we may have given little thought to how talk is used in classrooms because our focus during recent years has been on the many challenges children face in "how they can become productive members of an increasingly technological society" (p. xi). They go on to point out that although this trend and focus has been understandable it may have resulted in our taking too much for granted concerning the role of talk. Or as Britton (1986) wrote, "we believed that expressive talk would manifest itself in the classroom if we as teachers merely indicated our willingness to accept it" (p. 125).

My own experiences and reading of the scholarly work of theorists and researchers in the important role of talk in language for learning and thinking in the construction of meaning have raised my concern about the limited ways that talk is generally used and understood in most classrooms. I continually see a lack of awareness and little understanding of how talk in its exploratory form actually functions in the development of students' thinking and learning. This

lack of knowledge has created a gap between our theoretical understanding and what is happening in the reality of the classroom. It is this concern that led me into this research study of exploratory talk in an attempt to address "the need to bridge what often seems like a vast conceptual gulf between practitioners and researchers" (Mercer & Hodgkinson, 2008, p. xii).

Research Questions

The main research question guiding this study was:

How does exploratory talk serve as an essential tool for children's learning and construction of meaning in small group discussions within curriculum subject areas?

Sub-questions were:

- How do children use language within the framework of exploratory talk to construct meaning while engaged in small group learning?

- What is the influence of peer social interaction on children's construction of meaning?

- What is the role of the teacher in orchestrating opportunities for students' exploratory talk?

- What meanings and insights do students demonstrate through their use of exploratory talk?

Research Initiatives Leading to This Study

The Bullock Report: One of the most important and influential education reports to come out of Great Britain in the 1970s had a direct effect on furthering the recognition and credibility of the use of exploratory talk for learning and constructing meaning. *The Bullock*

Report – A Language for Life (Department of Education and Science, 1975) was the outcome of an inquiry "into the teaching in the schools of reading and the other uses of English" (p. v) such as writing and speech. Since that time, the Bullock report has served as the basis of educational discussions, other writings and further research on language and literacy learning. The report focused mainly on the teaching of reading, writing and speech, the improvement of classroom practice and the monitoring and assessment of student achievement (DES, 1975). The need for this inquiry stemmed from ongoing concerns in Britain about the status of reading and other language skills. Although attention had been given to reading in the release of The Trend of Reading Standards Report (Start & Wells, 1972) it was felt that speaking and listening had not been given the same weight as reading and writing within the curriculum. This concern highlighted the gap that existed in the lack of attention paid to the role of speaking and listening in the development of thinking and learning.

In order to address these concerns the Secretary of State for Education, Margaret Thatcher, established the Bullock Committee to inquire into the teaching of reading and to examine other language skills within the teaching of English. The committee was chaired by Alan Bullock and members included James Britton and numerous other scholars and educators. The work of Douglas Barnes and his colleagues in the National Association for the Teaching of English was instrumental in influencing and shaping the recommendations that came out of this report (DES, 1975).

The report, entitled *A Language for Life,* stressed the interplay among language, learning, and the constructing of meaning. This principle was reflected within statements such as "It is the

role that language plays in *generating* knowledge and *producing new forms* of behaviour that typifies human existence and distinguishes it from that of all other creatures" (DES, 1975, p. 47). And as expressed by the committee, "we construct for ourselves a past and a future. . . . We interpret what we perceive at any given moment by relating it to our body of past experiences, and respond to it in light of that interpretation" (DES, 1975, p. 47).

Many of the recommendations in the Bullock report called for a "change of approach and redirection of effort rather than for additional resources" (DES, 1975, p. iii). Two of the recommendations related to oral language that resulted from the report supported the value of students engaging in exploratory talk for learning in small groups: (1) exploratory talk by the pupils has an important function in the process of learning, and (2) oral work should take place in both large and small group situations, with an emphasis on the latter (DES, 1975).

National Oracy Project: Another influential British educational initiative that centered on the study of talk in language and learning was the National Oracy Project, which was established by the School Curriculum Development Committee and ran from 1987–1993. This project was conceived in an attempt to further address the "disappointingly narrow range of attention to the development of speaking and listening skills in primary and secondary schools" (Keiner, 1992, p. 252). Despite the insights acquired from numerous earlier studies and projects on the value of spoken language for learning, the gap remained between research findings and students' school experiences. As noted in the publication *Thinking Voices,* which evolved from the work of the National Oracy Project, the aims of the project included the following:

> to enhance the role of speech in the learning process; to develop the teaching of oral
> communication skills; to develop methods of assessment of and through speech; to

enhance teachers' skills and practice; to promote recognition of the value of oral work in schools and increase its use as a means of improving learning. (Norman, 1992, p xii)

The project involved the participation of classroom teachers in local education authorities across England and Wales. Within the context of classroom practice, the teachers and coordinators explored the way children used language in different situations across a diversity of subject areas. Barnes (1993) commented on the importance of the focus of this project as

> not to be a set of skills that might be taught and tested out of context . . . .it was the language used by students in the course of any of their activities in and out of school that should be the central concern of teachers. (p. 28)

Although funding for The National Oracy Project came to an end in 1993, its legacy still appears in reports today. In October 2006 a review of primary education in England was launched. In 2010 *Children, their World, their Education: Final Report and Recommendations of the Cambridge Primary Review* was published and edited by Robin Alexander, Director of the Cambridge Primary Review. One of the findings from the review, in regard to the role of spoken language and oracy in primary education, was that:

> The current national curriculum formulation, as 'speaking and listening', is conceptually weak and insufficiently demanding in practice, and we would urge instead that important initiatives like the National Oracy Project be revisited, along with more recent research on talk in learning and teaching. (Alexander, 2010, pp. 268–269)

The insights acquired through these research studies and reports served as important catalysts in beginning to change the way talk was viewed by educators in regard to curriculum and pedagogy. A change in the status of oral language (speaking and listening) in the curriculum began to emerge with the introduction of the National Curriculum in England, Wales and Northern Ireland; "The curriculum for English brought speaking and listening on to the statutory

agenda of every classroom, and accorded it equal weight with reading and writing" (Keiner, 1992, p. 254).

The TALK Project: In 1988 within Canada, similar concerns about the lack of attention given to the important role of speaking and listening in learning prompted the Ontario Ministry of Education and the Peel Board of Education to conduct a 3-year project to explore the role of talk in Ontario classrooms. It had been observed by David Booth and Carol Thornley-Hall (1991a) and other organizers and consultants of the project that teachers had not had the support or the opportunities up to then to explore the role of talk as a medium for learning in the day-to-day activities of the classroom. The purpose of the TALK Project was to encourage teachers "to examine their own classroom practice by observing their students in action and then analyzing and reflecting upon their observations in order to change their teaching" (Booth & Thornley-Hall, 1991a, p. 5). It was hoped that new insights into the power that classroom talk held for learning would bring about more opportunities for students to make use of this valuable language resource to further their potential in listening and speaking. Booth and Thornley-Hall (1991b) explained the meaning at the heart of the Talk curriculum:

> The talk curriculum, then, is not a period in a day or a series of skills to be conquered; it is the result of a realization that schools can focus their energies on developing students who use talk to think, to communicate, to reflect, and most of all, to belong. (p. 152)

In carrying out their classroom research studies the teachers drew on the theoretical writings of Gordon Wells, Douglas Barnes, Andrew Wilkinson, and Yetta Goodman (Booth & Thornley-Hall, 1991b). The holistic perspective of these scholars along with other educators whose research and writing contributed to the book *The Talk Curriculum* (1991b) both inspired

and informed the teachers about the multiple and theoretical aspects of talk as a means of learning and constructing meaning of their experiences.

Throughout the 3-year project over 80 teachers from eight different schools participated as teachers and researchers who investigated their experiences with talk in their classrooms. Each teacher selected a focus for the research based on a specific area of talk across the curriculum that was of interest and concern to their particular students. Some of the topics explored by the teachers included: talking to learn during problem solving and in group discussion, encouraging talk with the quiet child, the role of talk and computers, and the role of talk in drama, writing and responding to literature. One of the important findings revealed through this research project was a heightened awareness on the part of the teachers of the different kinds of talk going on in the classroom. The benefits for the students' learning "to work toward understanding" through the use of exploratory talk were also revealed. As a result of this research experience the teachers promoted and developed further strategies to implement talking and listening into their daily teaching. They also planned more time and provided more opportunities for students to engage in talking and listening with each other. Moreover, they discovered their students' growth and development in self-confidence as learners and in their perceptions of themselves as readers and writers (Booth & Thornley-Hall, 1991a).

The success of this work and the support to teachers that resulted from the TALK Project were revealed through the teachers' thoughtful and appreciative collection of essays published in the book *Classroom Talk*. In conclusion, Booth and Thornley-Hall (1991a) in their response to this TALK Project pointed out the reoccurring and very important interwoven theme that carried

an enduring message for teachers and for all who are involved with children at school. "What matters most at this crucial time is the need for us to *listen*, not only to experts and to our own instincts, but, first and foremost, to the children with whom we spend our working lives" (p. 6).

The research studies and various national projects I have presented in this chapter, as examples of educational initiatives on the role of talk in classroom learning, are only a few among many others designed to support an understanding and valuing of the role of talk in teaching and in students' learning. I selected these particular projects because of their constructivist theoretical underpinnings and their important influence on curriculum in Canada. In addition, each study drew on the work of theorists and educational scholars whose thinking was relevant to my own research inquiry.

The research study I present in the following chapters centers on the way talk was used, particularly in its exploratory form, to function as a learning process through which a group of students generated knowledge and constructed meaning within a variety of curriculum areas. My interest in this topic also stemmed from my desire to empower students as learners to voice their own points of view, and to become more critical and creative thinkers both in school learning and in their everyday lives.

I carried out this research in a suburban K-9 school two mornings a week over a period of 6 months. Four learners in a Grade 6 classroom of 30 students, taught by one teacher, were involved as participants in a discussion group during the course of their regularly scheduled learning activities. All of the episodes of talk among the group were audio recorded and transcribed, and these transcripts served as the main source of data along with my journal writing

and field notes. I conducted audio-recorded informal interviews with the students, the teacher and the parents of the student participants to learn more about the students' prior experiences with talk in dialogic interaction or as casual conversations at school or elsewhere. Through the interviews, I also gathered expressions of the students' and the teacher's reflections on the research experience during and at the end of the study.

Definition of Terms

The Webster's Collegiate Dictionary defines *talk* as "to deliver or express in speech; to express or exchange ideas by means of spoken words. The Oxford English Dictionary defines *talk* as "a more or less formal or public oral interchange of views, opinions, or propositions; a conference; to convey or exchange ideas, thoughts, information etc. by means of speech."

The term *exploratory talk* is defined by Barnes (2008): "Exploratory talk is hesitant and incomplete because it enables the speaker to try out ideas, to hear how they sound, to see what others make of them, to arrange information and ideas into different patterns" (p. 5). Mercer (2000) defined *exploratory talk* as talk "in which partners engage critically but constructively with each other's ideas. Relevant information is offered for joint consideration. Proposals may be challenged and counter-challenged, but if so reasons are given and alternatives are offered" (p. 98).

Barnes and Todd (1995) defined the term *understanding* as "the procedure by which the learner constructs patterns to explain what has happened, to make links with similar phenomena, and to predict the future – including the likely result of his or her actions" (p. 13). In this study I will consider these definitions within a social interactive context.

Significance of the Study

 The significance of this study goes beyond one small group of students in a particular classroom and contributes to the existing body of research on classroom discourse, language and literacy learning and development. Over the years, many research studies in classroom discourse have concentrated mainly on teacher talk or teacher-to-student interaction with an emphasis on the talk strategies the teacher used during instruction rather than on the kind of talk the children themselves used in learning and constructing knowledge (Alexander, 2008a). Within the context of current research in classroom interaction, this study also generates further thinking and understanding about the essential part that exploratory talk plays in the pedagogical approach of dialogic teaching and inquiry learning.

 This research provides teachers and other educators with a clearer pedagogical understanding of the role of talk as an alternative and feasible way for students to learn and to construct meaning through social and collaborative interaction. It demonstrates practical ways of organizing patterns of interaction as well as showing recognizable indicators of exploratory talk in action. Moreover, it reveals the empowering effect of this mode of learning on students when they themselves are aware of the power that talking together can bring to their understanding. Further significance of the study for students' development as learners goes beyond creating personal and curriculum knowledge and addresses the students' cultivation of the discussion skills required for effective problem solving and decision making throughout a lifetime of interactive activities.

Finally, this research study speaks to the constructivist view of learning, which supports the principles and design of current curriculum as well as to policy makers who are concerned about all aspects of teaching and about students' well-being and their successful academic achievement. I believe that success of this kind depends strongly on the accumulation of classroom based research inquiries that can contribute to the quality of pedagogical practices across the curriculum and throughout school systems.

Delimitations

The study is delimited to one classroom, one teacher, one group of four selected students and their parents.

Limitations

The small number of student participants situated within one elementary school classroom limits the findings of this study. The findings cannot be directly applied to all students in all classrooms, but the findings may be transferrable to other students in other classroom contexts. The study was further limited and directly shaped and influenced by my own ontological and epistemological beliefs. My role as both participant and observer created a shaping effect on the nature of the data gathered and on the interpretation of them. Therefore, the emphasis was on my understanding and the meaning I constructed of the students' experiences of using exploratory talk to create meaning within one particular classroom context.

Ethical Considerations

I obtained ethics approval from the University of Alberta and research permission from the school district where my research was conducted. Prior to the study, information letters and

consent forms were provided for the teacher, parents and the student participants. These forms included information about the purpose of the study, and assured participants that their anonymity and confidentiality would be protected. It was made clear that participants could withdraw at any time without penalty or prejudice. This information provided the participants with the opportunity for voluntary and informed consent.

Overview of the Study

Chapter 2 provides the work of theorists and educators whose scholarly ideas served as the major theoretical framework in support of this study. It also presents the various perspectives on the value and function of exploratory talk. In Chapter 3, I describe the methodological approach of interpretive inquiry and explain the procedures used for selecting the participants, gathering the data and analyzing the talk. In Chapter 4, I present selected transcribed episodes of the students' engagement in exploratory talk during eight of the small group discussions. A summary at the end of each episode describes my initial interpretation of the role of talk as a process in meaning making. This chapter includes samples of the students' reflections on their experiences as research participants. I also present the teacher's reflections on her participation in this study and comments made by the parents of the student participants at the end of the research. Chapter 5 presents the main interpretations and discussion of the data in relation to the power of exploratory talk in the construction of meaning. It also includes a discussion of the insights and meanings the students constructed through the talk. The final chapter will present the findings and implications that emerged from this study, followed by recommendations for

further research. I conclude this dissertation with my personal reflections and thoughts on the meaning I have created of this research experience.

Chapter Two: Theoretical Framework

> We are still drawing rich sustenance from our more distant, pre-positivist past: Chomsky acknowledges his debt to Descartes, Piaget is inconceivable without Kant, Vygotsky without Hegel and Marx, and the once towering bastion of "learning theory" was constructed on foundations laid by John Locke. (Bruner, 1990, p. x)

The above quotation was a reminder to me that all new academic ideas are not created in an isolated vacuum but are rooted in the earlier thinking of many other scholars and philosophers. As Bruner posited, "We do not operate on some sort of aboriginal reality independent of our own minds or the minds of those who precede us or accompany us" (Bruner, 1986, p. 96).

Bruner's words strongly resonated with the sociocultural constructivist thinking and philosophy that guided my entire study and particularly my approach to developing the theoretical framework presented in this chapter. As I read and reflected on the various theoretical perspectives of the different researchers, philosophers and psychologists who shaped and informed my study, I was continually struck by the interconnectedness of their thinking and ideas. As Bruner pointed out, the ideas and the theories we construct are built on those who came before us.

Because my study explored the use of language in the form of talk for the social construction of meaning and learning within the culture of the school, I drew mainly on the sociocultural and language theories of Lev Vygotsky (1978, 1986), Jerome Bruner (1986, 1990, 1996) and James Britton (1970, 1982c, 1993). I also drew on the work of Douglas Barnes (1976), and Neil Mercer (2000), whose research focused more specifically on the inquiring and

interactive nature of spoken language in the construction of meaning that they described as "exploratory talk." Their studies centered on the use of talk in educational activities as a tool for interpreting meaning both individually and as a joint activity with others. Finally, I considered the relationship between the use of exploratory talk in learning and the concept of learning through the inquiry process, referred to as "dialogic teaching," as presented through the research and writings of Robin Alexander (2008a, 2008b).

The theorists I have mentioned above approached their research and writing from a sociocultural constructivist perspective. The readings I encountered that presented the ideas and history of this theoretical perspective emphasized its origins as rooted in the philosophy of the constructivist tradition. I will discuss the notion of constructivism in the context of the meaning I have constructed from this philosophy and how these beliefs relate to the research approach I have undertaken in this study.

Constructivist Tradition

The meaning of constructivism, according to Schwandt (2007), is "that human beings do not find or discover knowledge so much as construct it or make it" (p. 38). He went on to explain that this construction comes about through thinking and re-thinking and creating ideas and plans as we continually search for the meaning of our experiences. "We invent concepts, models, and schemes to make sense of experience, and we continually test and modify these constructions in light of new experiences" (p. 38). Barnes (1976) explained further, "Our interpretative systems are modified not only by existential events and by communication with other people but by ourselves" (p. 24). Bruner (1990) posited that, "Constructivism's basic

claim is simply that knowledge is only 'right' or 'wrong' in light of the perspective we have chosen to assume" (p. 25). It is a move away from "authoritative meaning" to individual interpretation (Bruner, 1990, p. 25).

The origins of constructivism as a world view can be attributed to the early philosopher Kant, "who first fully developed it" (Bruner, 1986, p. 96). But Bruner (1986) also shared the constructivist views of the American philosopher Nelson Goodman who believed that "no one 'world' is more 'real' than all others, none is ontologically privileged as the unique real world" (p. 96). "What is 'given' or assumed at the outset of our construction is neither bedrock reality out there, . . . it is always another constructed version of a world that we have taken as given for certain purposes" (p. 97). Bruner commented further on Goodman's views of world making: "The world of appearance, the very world we live in, is 'created' by mind. The activity of world making is for Goodman a diverse and complex set of activities" (p. 96). Bruner further explained it involves as Goodman expressed, "making not with hands, but with minds, or rather with languages or other symbol systems" (cited in Bruner, p. 96).

Since that time the philosophy of "constructivism" has been taken up by many different disciplines, which has resulted in a wide range of interpretations (Davis & Sumara, 2002; Schwandt, 2007). In Bruner's (1986) discussion of the history of the constructivist perspective, he cited Goodman's (1984) view of the "constructivist" philosophy: "It is at one blow a philosophy . . . of art, and a philosophy of cognition - he ends by calling it 'a philosophy of understanding'" (p. 95). Bruner explained that "constructivism" as its central thesis was based on the rejection of one predetermined or "unique 'real world' that pre-exists and is independent

of human mental activity and human symbolic language" (p. 95). Goodman believed that the world as we know it is a creation of the mind through the active use of language as a form of symbolism in the construction of meaning. Or as Bruner explained, "what we call the world is a product of some mind whose symbolic procedures construct the world" (p. 95). Bruner (1986) acknowledged Goodman's contribution in sorting out the "tangled set of problems" (p. 95) that evolved in the 1950s as a result of the changing perspectives on cognitive processes within the scientific and psychological community. Later, Bruner (1990) explained the thinking that surrounded the cognitive revolutionary changes at that time:

> It was . . . an all-out effort to establish meaning as the central concept of psychology . . . . Its aim was to discover and to describe formally the meanings that human beings created out of their encounters with the world, and then to propose hypotheses about what meaning-making processes were implicated. (p. 2)

This was a time of change among scientific scholars in how knowledge was viewed and the place of the knower in how this knowledge is acquired. As Bruner (1990) explained, "It focused upon the symbolic activities that human beings employed in constructing and in making sense not only of the world, but of themselves" (p. 2).

Schwandt (1994), in a similar way to Bruner, attributed Goodman's ideas to shaping constructivist theory and to making this view of how we acquire knowledge more understandable when he stated, "The philosopher most responsible for defining the contours of a constructivist theory of reality and cognition is Nelson Goodman (1984)" (p. 126). Schwandt described Goodman's constructivist philosophy as "pluralistic and pragmatic" and that "through our nonverbal and verbal symbol systems we create many versions of the world in the sciences, the arts, and the humanities" (p. 126). Schwandt continued to stress the point that these world

versions "are not simply different interpretations of the same world, but literally different world versions" (p. 126). In other words, our version of the world changes through the rethinking and reordering of our earlier interpretation of experience. Schwandt (1994) explained that "Constructivists are deeply committed to the . . . view that what we take to be objective knowledge and truth . . . are created, not discovered by mind" (p. 125). He pointed out that constructivist views resonate with the belief expressed by Bruner (1986) that there are multiple realities of the world and these realities are created through the interaction of the symbolic use of language and thought.

Guba and Lincoln (1994) spoke of their commitment to constructivism within the context of a comparison of four competitive paradigms in qualitative research. They described the basic beliefs of the four inquiry paradigms "Based on Ontological, Epistemological, and Methodological Assumptions" (p. 107). The following are brief excerpts from their discussion of the constructivist paradigm:

> *Ontology: Relativist*. Constructions are not more or less "true," in any absolute sense, but simply more or less informed and/or sophisticated. Constructions are alterable, as are their associated 'realities'.
>
> *Epistemology: Transactional and subjectivist*. The investigator and the object of the investigation are assumed to be interactively linked so that the "findings" are *literally created* as the investigation proceeds.
>
> *Methodology: Hermeneutical and dialectical:* The variable and personal (intramental) nature of social constructions suggests that individual constructions can be elicited and refined only through interaction between and among investigator and respondents. (pp. 110–111)

Schwandt (1994) and Guba and Lincoln (1994) expressed similar viewpoints on the meaning of constructivism as a paradigm or philosophical theory of what knowledge is and how

we acquire knowledge through interaction with our thoughts and with others. They suggested that these world views embedded within the theories of constructivism may be somewhat "tentative" or problematic because of the wide range of interpretations of the meaning of the term "constructivism." Guba and Lincoln (1994) included "constructivism" among the paradigms that "are all still in formative stages; no final agreements have been reached even among their proponents about their definitions, meanings, or implications" (p. 109). In my search of the literature I found Guba and Lincoln's descriptions of the tentativeness and the multiple interpretations of the term "constructivism" were a reoccurring theme that sometimes created more questions than answers as I worked toward understanding the meaning of this theoretical frame.

Schwandt (2007) referred to the diversity of different interpretations of the term "constructivism" when he described it as "a particularly elusive term with different meanings depending on the discourse in which it is used" (p. 37). Davis and Sumara (2002) accounted for the varied interpretations of "constructivism" by explaining that the term is used within a variety of different educational contexts by researchers, policy makers, classroom teachers and other educators. They suggested that the diversity of use of the term within a wide range of settings may be a contributing factor in the inconsistent interpretations of the term found in the literature. They also pointed out other examples of the wide range of categories and descriptors attached to this term. "In our readings of some of the theoretical and research literature . . . we have encountered radical, cognitive, situated, social, cultural, sociocultural and critical constructivisms" (p. 409).

As I pursued my understanding of the notion of "constructivism" I discovered there were two major strands of constructivist thinking described in the literature. Schwandt (2007) explained one of these strands as "radical constructivism or psychological constructivism, [which] focuses more on the individual knower and the acts of cognition" (p. 38). Schwandt described the second strand of constructivism as focusing "more on social process and interaction and is generally known as social constructionism" (p. 39). Similarly Davis and Sumara (2002) referred to these strands as first, "subject centered," which they said "include current radical constructivist and cognitive constructivist theories" (p. 411), and second, "social" or "Social constructivisms - or 'constructionisms'" (p. 411), which focus on "language itself, . . . social habitus, school cultures, classroom collectives, and so on" (p. 414). Schwandt (1994, 2007) and Davis and Sumara (2002) agree that the radical constructivist strand is usually identified with the work of Piaget and the social strand is more closely associated with Vygotsky. And yet as they suggested "the term 'constructivist' cannot be found in the writings of either Piaget or Vygotsky. However, both theorists used similar and related vocabularies" (Davis & Sumara, 2002, p. 411).

A few years ago I encountered the work of George Hruby (2001) at which time I discovered his use of the term "constructionism," which he used in connection with his interest in literacy research. He pointed out that the term "constructionism" in relation to literacy education research is less clear than the term constructivism. Based on Spivey's work (1997) he believed constructivism was "reasonably well understood as a theory or set of theories about how individuals fashion or structure knowledge, rather than receive it pipeline fashion" (Hruby, 2001,

p. 48). Hruby suggested that, "the simplest way of distinguishing constructionism from constructivism is by defining the former as a *sociological* description of knowledge, while understanding the latter as a *psychological* description of knowledge" (p. 51).

In his explanation of the meaning of "constructionism," Hruby (2001) cited Green (1997) as he explained the distinction between "constructivism" and "constructionism." "While constructivism deals with knowledge formation *in the head*, constructionism deals with knowledge formation *outside the head – between-participants in social relationship*" (p. 51). Hruby acknowledged that "some scholars consider social constructionism synonymous with social constructivism" but he pointed out "such forms of macroconstructivism still primarily concern themselves with the influence of social processes upon an *individual's* psychological . . . construction of meaning" (p. 51). He explained "constructionism . . . as being about the way knowledge is constructed by, for, and between members of a discursively mediated community" (p. 51). Hruby emphasized the lack of a clear understanding of the two ambiguous terms, "constructivism" and "constructionism."

As I considered the wide range of descriptors and meanings attached to the notion of "constructivism," I also reflected on my own understanding of this theoretical framework, particularly in light of this research study. I found that the essence of the constructivist perspectives I have presented, those of Schwandt (1994, 2007), Goodman (1984), Bruner (1986, 1990), as well as Guba and Lincoln (1994), resonated with my own ontological beliefs about the nature of knowledge itself and the activity of mental processes involved in how we come to new understandings. That we construct meaning individually, through negotiation with others and

through the interactive use of language as a symbolic system in the form of talk, are all important aspects of my sociocultural constructivist stance. I also believe that our knowledge is not static. It is ever changing as we encounter new experiences and modify our ideas as we draw on what we already know. From his sociocultural constructivist view, Barnes (1976) suggested that "this is why pupils' talk is important, in that it is a major means by which learners explore the relationship between what they already know, and new observations or interpretations which they meet" (p. 81). The notion of "constructivism" in this sense is fundamental to this research of exploratory talk as a meaning-making process. In addition to the individual meanings the students created, I also explored the meanings students created through their social and cultural interactions. I assumed a sociocultural constructivist perspective, which was based on the theories of both Vygotsky and Bruner.

The Influence of Lev Vygotsky

Over the past few decades the sociocultural constructivist theories of Vygotsky have had a shaping influence on educational research, curriculum studies and on the work of educators who were looking at possible changes in the traditional practices of teaching and learning in schools. The influence of Vygotsky's (1978) ideas on educational theory and pedagogy stemmed from his perspective of "learning as a profoundly social process, [which] emphasizes dialogue and the varied roles that language plays in instruction and in mediated cognitive growth" (p. 131). Similarly Wells (1999) suggested that Vygotsky's theory "proposes a collaborative community in which, with the teacher as leader, all participants learn with and from each other as they engage together in dialogic inquiry" (p. xii).

The story of Lev Vygotsky's influence on educational thinking in the west began in Russia when he was a young Marxist intellectual and a student of literature. It was over a period of about 10 years that Vygotsky, along with colleagues, developed the original ideas for his first book, which centered on the relationship between thought and language (Britton, 1987). Bruner (1962) described this earlier work as "a presentation of a highly original and thoughtful theory of intellectual development," which Bruner also suggested was "at the same time a theory of education" (p. v). Shortly before this first book was published in 1934, Vygotsky died of tuberculosis at the age of 38. After his death his ideas remained unknown and unaccepted for many years.

In 1936, 2 years after the Russian publication of Vygotsky's original work, *Thought and Language* was banned for political reasons by Soviet Officials and, as a result, his work was suppressed for the next 20 years. However, according to Britton (1987) it was during this period of silence when "the substance of a magnificent last chapter, presented as a paper at an American conference [found] its way - in English - on to the pages of a psychological journal" (p. 22). This brief exposure to Vygotsky's ideas may have prompted the appearance of an English translation of *Thought and Language*. In 1962, the Russian edition of Vygotsky's *Thought and Language*, was edited and translated by Eugenia Hanfmann and Gertrude Vakar, and with an introduction written by Jerome Bruner, was published by MIT Press. In Britton's (1987) words, "A long silence is finally broken" (p. 22). In 1986 this same English translation was again revised and reedited by Vygotskian scholar Alex Kozulin. Kozulin introduced this edition with an essay "that offer[ed] new insight into the author's life, intellectual milieu, and research

methods" (Citeulike, 2014). This newest edition was also described as having "restor[ed] the work's complete text and add[ed] materials that will help readers better understand Vygotsky's meaning and intentions" (Citeulike, 2014).

Other scholars of Vygotsky's work focused specifically on the theoretical assumptions that supported Vygotsky's thinking about the relationship between the concepts of thought and language. Alexander Luria, a friend and colleague of Vygotsky, convinced four American editors "to edit a collection of Vygotsky's essays which would reflect the general theoretical enterprise of which the study of the relation between thought and language was one important aspect" (Vygotsky, 1978, p. ix). Alongside Luria, Michael Cole, Vera John-Steiner, Sylvia Scribner and Ellen Souberman believed that the ideas presented in Vygotsky's seminal work suggested far broader implications than were indicated in *Thought and Language*. Together their editing and writings produced the well-known book *Mind and Society,* published in 1978.

Embedded throughout all Vygotsky's published work is the emphasis on the importance of the social context within which meaning is constructed through the mediation of language as a tool for thinking and learning. Jaramillo (1996) explained that Vygotsky "as a social scientist. . . employed a micro view towards studying how we learn in a given social situation" (p. 134) and "how students construct meaning" (p. 135). "Intrinsic to Vygotsky's sociocultural theory is the notion that social experiences shape the ways that students think and interpret their world" (p. 139). Bodrova and Leong (1996) also emphasized the importance of the social context as central to Vygotsky's theory of cognitive development: "For Vygotsky, the social context influences learning more than attitudes and belief; it has a profound influence on how and what we think.

The social context molds cognitive processes while it is also part of the developmental process" (p. 9).

Tools and Signs. An important notion within Vygotsky's theories was the idea of mediation through the use of language as a mental tool for understanding. Vygotsky (1978) believed that language, particularly in the form of speech, played a crucial role in mediating "individual developmental change" (p. 7) over time by facilitating change in thinking and behaviour within a shared social setting. Vygotsky drew on the ideas of Marx and "Engel's concept of human labor and tool use as the means by which man changes nature and, in so doing, transforms himself'" (p 7). He also "extended this concept of mediation in human - environment interaction to the use of signs as well as tools" (p. 7). Sign systems are described as language, writing, and number systems, and like tool systems are created and change according to society's present nature and level of its cultural development.

Vygotsky pointed out that "signs and words serve children first and foremost as a means of social contact with other people" (p. 28). Within Vygotsky's sociocultural theories of development, one of the essential aspects is "the increasing ability of children to control and direct their own behavior, a mastery made possible by the development of new psychological forms and functions and by the use of signs and tools in this process" (John-Steiner & Souberman, 1978, p. 126). Vygotsky (1978) explained that tools and signs, such as pointing, gesturing and speech, have important common properties in that both function as mediated activities in cognitive growth. But the difference lies in that tools are "externally oriented" (p. 55) with the aim at accomplishing control beyond oneself to one's external world, whereas signs

are "internally oriented" (p. 55) with the goal of controlling or mastering oneself and one's immediate environment. Vygotsky explored the development of speech as an important tool in the mediation of cognition in the context of children solving "practical tasks with the help of their speech, as well as their eyes and hands" (p. 26). John-Steiner and Souberman (1978) pointed out that "the distinction between signs and tools is a good example of Vygotsky's analytical capacity to interweave diverse and similar aspects of human experience" (p. 127). They suggested other examples– "thought and language, immediate and mediated memory, and, on a broader scale, the biological and the cultural, the individual and the social" (p. 127). I also saw the examples provided by John-Steiner and Souberman as strong illustrations of Vygotsky's holistic approach to children's construction of meaning, learning, and development of language and cognition that is embedded and interwoven throughout his wide range of sociocultural theories.

  Speech and Thought. At the center of Vygotsky's (1986) work on the relationship of speech and thought is the important role that language plays within a social setting in the development of thinking and learning. Bodrova and Leong (1996) explained Vygotsky's belief that "Language is an actual mechanism for thinking, a mental tool. Language makes thinking more abstract, flexible, and independent from the immediate stimuli" (p. 13). Barnes and Todd (1995) stressed the importance of the sociocultural experience in the development of thought as they commented on the differing views of Vygotsky and Piaget in how the development of cognition comes about. Although Vygotsky and Piaget were considered constructivists and believed that knowledge is constructed by the individual, they parted ways in their thinking

about how knowledge is constructed and the processes that are involved in the construction of meaning. Both Piaget and Vygotsky recognized the interconnectedness between language and thought but for Piaget "social and cultural factors play little part in the Piagetian model of cognitive development which sees intelligence developing out of the child's interpretation of his action on the world" (p. 136).

Vygotsky (1986) explained that the central focus of Piaget's psychological theory was situated in the concept of egocentrism. "The concept of the child's egocentrism is a major focus of the entire psychological theory of Piaget" (p. 25). This statement stressed the individual and egocentric nature of learning that is associated with Piaget whereas Vygtosky saw learning as less egocentric and more as a socially mediated linguistic activity. I was reminded of the work of Margaret Donaldson (1978) who indicated that although children are indeed egocentric, their egocentrism is not strong enough to prevent them from being able to take another point of view or to "reason deductively" (p. 58). Donaldson argued:

> Children are not at any stage as egocentric as Piaget has claimed. For all human beings, the taking of another point of view requires a certain effort, and the difficulty is bound to vary from one situation to another in many complex ways. But the gap between children and adults is not so great in this respect as has recently been widely believed. (p. 58)

Barnes and Todd (1995) described Vygotsky's model as "quintessentially social: behaviors and operations appear first in the social sphere with others and only then become available to support the individual's internal mental functioning" (p. 138). Vygotsky (1978) explained how a child's social and cultural development evolves through a process of transformation from activities that are social to activities that become inner functions. Vygotsky calls this transformation of an external operation *"internalization"* (p. 56). "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*)" (p. 57).

Vygotsky (1978) explained that, when socialized speech is turned inward children turn to themselves rather than to an adult, and take on an "intrapersonal function" in addition to the "interpersonal function." The key to this thought are the words *in addition* because it is important to understand that the interpersonal function does not disappear but is joined by the intrapersonal function. Britton (1987) confirmed this point about the enduring quality of intrapersonal speech when he contrasted Vygotsky's views on the relationship between speech and thought with those of Piaget:

> Rather than 'withering away' as Piaget had suggested, speech for oneself became internalized and continued to operate as the genesis of thought, perhaps moving through the stages of *inner speech* to *verbal thinking* and thence to the most elusive stage of all – thought itself. (pp. 23–24)

Vygotsky (1962) hypothesized "that egocentric speech is a transitional stage in the evolution from vocal to inner speech" (p. 17). He explained how "aspects of external or communicative speech as well as egocentric speech turn 'inward' to become the basis of inner speech" (Vygotsky, 1978, p. 57). Bodrova and Leong (1996) described inner speech as "totally internal, non-audible, self- directed, and retain[ing] some of the characteristics of external speech" (p 100). Vygotsky (1986) approached the concept of inner speech by acknowledging this form of speech as having a "specific formation, with its own laws and complex relations to the other forms of speech activity" (p. 225). Or as suggested by Bodrova and Leong (1996), "Inner speech contains all of the things you might actually say, but it is an abbreviated version"

(p. 100). Vygotsky explained that "[speech] turns inward because its function changes" (p. 86). He compared the self-centred purpose of inner speech with the communicative purpose of external speech when he posited that "inner speech is speech for oneself; external speech is for others" (p. 225). However, according to Vygotsky "there remains a constant interaction between outer and inner operations" (p. 87) in which each form changes back and forth into the other. He further suggested that we visualize this interaction as "two intersecting circles" (p. 88). This back and forth process in the construction of our own knowledge is mediated through the role of language in social interaction. Vygotsky pointed to the importance of having a clear understanding of "the psychological nature of inner speech" in order to understand the complex relation of thought and word (p. 224).

Word Meaning and Concept Development. Vygotsky (1986) believed word meaning was an integral part of the relationship between word and thought as a process that leads to concept development. He used the analysis of word meaning to study the development of consciousness and the development of concepts. When young children use words we cannot assume the meaning they intend will be the same meaning that an adult might use. Vygotsky pointed out that "word meanings are dynamic rather than static formations. They change as the child develops; they change also with the various ways in which thought functions" (p. 217). Vygotksy also explained that the child coming to word meanings does not happen in a ready-made form but is a part of the developmental process. The importance of words in speech is the direct relationship to the development of thought; "Thought is not merely expressed in words; it comes into existence through them" (p. 218). In the beginning stage of using words, children

usually begin using one word at a time. As they advance to using two or three words and then simple sentences Vygotsky stated that they are proceeding "from a part to the whole" (p. 219). Semantically the child starts from the whole and later develops the separate parts. Britton (1987) suggested that "in conversation children extend their control of the grammatical structures of the spoken language and increase their resources of conventional word meanings" (p. 23). Vygotsky (1986) stated that when a child learns and uses a new word the development of the word meaning is just beginning. For example, "the word at first is a generalization of the most primitive type as the child's intellect develops it is replaced by generalizations of a higher and higher type – a process that leads in the end to the formation of true concepts" (p. 149).

Vygotsky (1986) believed that children's conceptual learning is influenced by the conversations and dialogue they have with an adult. He divided the notion of concepts into two distinct groups, scientific and spontaneous or everyday concepts. Vygotsky explained these concepts as two different but interrelated forms of reasoning. Scientific concepts develop "under the conditions of systematic cooperation between the child and the teacher" (p. 148) within an educational setting, whereas, "the development of spontaneous concepts knows no systematicity" (p. 148). According to Bodrova and Leong (1996), "Once children learn scientific concepts, their everyday concepts are restructured" (p. 102). Wells (1999) defined Vygotsky's scientific concepts as "systematic and, for the most part, encountered in educational contexts" (p. 29). He described spontaneous (or everyday) "concepts . . . that are constructed in the context of action and interaction in the varied and naturally occurring events of everyday living" (p. 29). It is usually within the setting of the school curriculum and classroom learning that children have an

opportunity to explore concepts they have known in experiential or spontaneous terms and to begin to understand them in new and more scientific ways.

Language plays an important role in the transition from spontaneous to scientific concept formation. My research revealed examples of the use of language in peer interaction as a means for students to restructure their everyday concepts and move toward a deeper understanding of the scientific concepts. Vygotsky (1962) explained how these two concepts ultimately come together as an integrated process. He stated "*the development of the child's spontaneous concepts proceeds upward, and the development of his scientific concepts downward, to a more elementary and concrete level*" (p. 108). Throughout Vygotsky's entire discussion about the child's development of word meaning and growth in understanding scientific concepts, he strongly emphasized the crucial role of the adult in helping the child to make this transition and to integrate these two ways of reasoning and knowing. Vygotsky went on to discuss the place of the adult in the child's learning within the context of what he called the "zone of proximal development."

Zone of Proximal Development. Throughout Vygotsky's (1978) discussions of the relationship between learning and development he introduced educators to the concept of the Zone of Proximal Development (ZPD). He explained this concept as "*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).

Within this concept of ZPD the "actual" developmental level according to Vygotsky (1978) is "the level of development of a child's mental functions that has been established as a result of certain already *completed* developmental cycles" (p. 85). Children's early learning experiences through play and interactive encounters with family and others in their preschool years have all worked together to contribute to the actual developmental level before they come to school. Or in Vygotsky's words "learning and development are interrelated from the child's very first day of life" (Vygotsky, 1978, p 84). Vygotsky pointed out that formerly, in schools, the level of instruction was usually directed at the child's "actual" developmental level, which in Vygotsky's view was a level of "yesterday's development" (p. 89) or of one that had already been achieved.

However, the level of "potential development" in Vygotsky's (1978) terms rests in the ZPD, which "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). Then, "what is in the zone of proximal development today will be the actual developmental level tomorrow" (p. 87).

Vygotsky (1978) saw an essential feature of learning as one that creates the ZPD. He explained that, "learning awakens a variety of internal developmental processes" (p. 90). He did not see the process of learning and development coming into fruition at the same time. Rather he believed that "the developmental process lags behind the learning process; this sequence then results in zones of proximal development" (p. 90). From this perspective "learning is not

development" (p. 90) although Vygotsky believed learning is an important contributor to the advancement of mental processes that lead to development.

It was through my exploration of the concept of the ZPD that my understanding of the social and cultural nature of Vygotsky's (1978) theory of learning and development became clearer. These insights strengthened the relevance of his theories for my own study. Of particular importance was the notion of children's construction of meaning not being a solitary activity. Rather, their meaning making depends on the relationships and the kind of interaction within the group and among other individuals such as teachers, parents and more capable peers. The students' construction of meaning is embodied within the concept of the ZPD. Bruner (1986) credited the extraordinary force of Vygotsky's theory of the ZPD to their shared belief that "we do not construct a reality solely on the basis of private encounters" and that "most of our approaches to the world are mediated through negotiation with others" (p. 68).

Vygotsky's (1978) theory of the ZPD raised the importance of talk as a fundamental tool within this process of mediation through negotiation, which leads to children's learning and development. The experience of working with children in the ZPD allows educators to consider the child in a holistic manner, taking into account the child's development that has already taken place as well as the potential development that is in the process of maturing (Vygotsky, 1978). The more that can be learned about the importance of talk and the nature of interaction between the adult and the child within the ZPD the better prepared educators will be for planning and organizing curriculum and instruction. This knowledge will also help educators to be mindful of

Vygotsky's (1986) words that "the only good kind of instruction is that which marches ahead of development and leads it" (p. 188).

The Influence of Jerome Bruner: Construction of Meaning

The theoretical perspectives of Jerome Bruner have had a very meaningful effect on my thinking and growth in understanding the social, cultural and cognitive processes involved in students' use of exploratory talk and the construction of meaning. Bruner (1986) situated himself as a constructivist who believed "that we construct or constitute the world" (p. 130). He also believed "that Self is a construction, a result of action and symbolization" (p. 130). Bruner described the changing nature of the self as individuals move "from young to old" and "from one kind of setting to another" (p. 130). For Bruner, the meaning of ourselves and of our worlds is created through our own mental activity and mediated through cultural and social interaction. Bruner's influence on my study was based on his more recent work *Actual Minds, Possible Worlds* (1986), *Acts of Meaning* (1990) and *The Culture of Education* (1996), which reflected the influence and the interrelationships of his ideas with those of Vygotsky.

One of the most commonly cited influences of Vygotsky's work on Bruner's ideas about educational practice, was the notion of the Zone of Proximal Development (ZPD) and the related notion of scaffolding. Bruner (1986) researched the concept of "scaffolding" in order to understand what this notion meant even though "nowhere in Vygotsky's writings is there any concrete spelling out of what he means by such scaffolding" (p. 74). Bruner was intrigued by Vygotsky's "fresh ideas about the now famous Zone of Proximal Development" which Bruner described as "an account of how the more competent assist the young and the less competent to

reach that higher ground" (p. 73). Bruner's description of the ZPD was rooted in Vygotsky's

own words: "that an essential feature of learning is that it creates the zone of proximal

development" and that "learning awakens a variety of internal developmental processes that are

able to operate only when the child is interacting with people in his environment and in

cooperation with his peers" (Vygotsky, 1978, p. 90). Based on the Vygotskian theory of the role

of the adult in guiding the student through the ZPD and the lack of "studies of tutoring and what

makes it effective" (Bruner, 1986, p. 75), Bruner pursued his own research, as well as research

with David Wood and Gail Ross, to explore the role of tutoring in the procedures for learning

within the area of the ZPD (Bruner, 1986).

Wood, Bruner, and Ross (1976) in their research studies on "the nature of the tutorial

process" and the "role of tutoring in problem solving" (p. 89) explored the crucial nature of the

intervening role of the tutor in assisting the child to work through a problem or to complete a

task. They discussed this interactive and helping role of the tutor as an enabling process which

they termed "scaffolding." They further suggested that learning, when viewed as understanding,

comes about through social interaction with others. This emphasis on social interaction points to

the important role of language as a mediating tool in understanding and the construction of

meaning.

As the literature on the role of the adult in children's learning has indicated, over the

years there have been multiple interpretations and definitions to describe the term "scaffolding"

(Hogan, 1997; Rogoff, 1990). Stone (1993) explained that "more recent discussions of the

concept of scaffolding have included a greater emphasis on mechanisms of transfer," and in "the

initial discussions of scaffolding . . . little attention was paid to the mechanism by which this

transfer of responsibility from the adult to the child was accomplished" (p. 170). I have

discovered that some of the definitions of the term suggested a move away from the original

Vygotskian thinking where the learning depended on the social interaction between the adult and

the child and the active participation of the learner. I see this variation in the multiple

interpretations of the term scaffolding as having implications for classroom practice in the way

this intervening strategy is interpreted and carried out by teachers in working with children. In

Searle's (1984) discussion about scaffolding in schools he expressed his concerns about the

overemphasis on an organized structure that is pre-planned for instructional purposes. He also

pointed out that in these situations the interaction is sometimes more controlled by the teacher

than by the student. A more systematic and structured approach to scaffolding may be useful,

however, in classroom learning activities that are focused on information giving or skill building

that require an emphasis on more direct teaching. Because of the ambiguity in the description

and meaning of this term I have shied away from the use of the word "scaffolding" to describe

my role as researcher/participant in this study.

Central to my study was the need for a mentoring type of approach that was less teacher

directed and that encouraged exploration and inquiry. It called for students to be in control of

their own language, to explore ideas and to take the initiative in the direction a conversation

might flow. Therefore the role I adopted in my research, as the supportive adult who worked

with the students through dialogical intervention, was more closely aligned with Wells' (1981)

notion of "lead[ing] from behind." Wells stressed "the need for the adult to lead from behind,

letting the child take the initiative and then using various devices to support and extend the topic that he has proposed" (p. 104). Well's reminder to "lead from behind" provided me with a closer description of my role as researcher and as the helping adult than did the more frequently used and somewhat ambiguous term "scaffolding."

One of Bruner's greatest contributions to the field of psychology, and ultimately to education (which I discussed earlier in "The Constructivist Tradition"), was his involvement in what was considered the "cultural revolution" or the ongoing changes in philosophical thinking within the scientific community. Bruner (1986) explained the nature of these altering viewpoints: "The social sciences had moved away from their traditional positivist stance toward a more interpretive posture: meaning became the central focus" (p. 8).

Olson (2007) explained what this move meant at that time: "The mind was not just responding to the stimulus environment but interpreting that environment, that is seeing or interpreting the environment in a particular way" (p. 14). According to Olson, Bruner at this point was strongly influenced by Karl Lashley (1951) who claimed that the system which receives input is not static but already organized and so any stimuli only changes not causes existing cognitive states. Olson explained that Bruner had a pervasive influence in this major shift toward meaning as the central focus among psychologists and other educators. This shift was a turning point in the field of psychology and ultimately in approaches to teaching and learning in school.

Bruner (1986) explained that the Cultural Revolution, which "had made it possible to consider the question of how knowledge and experience in their myriad forms were organized"

(p. 8), also brought language to the forefront as a means for organizing experience. "Since language is our most powerful tool for organizing experience, and indeed, for constituting 'realities,' the products of language in their rich variety were coming in for closer scrutiny" (p. 8).

Bruner (1990), like Vygotsky, believed that language and language learning are socially and culturally based activities that strongly depend on their development through meaningful use in human interaction. Bruner explained that, "Being 'exposed' to a flow of language is not nearly so important as using it in the midst of 'doing'" (p. 70). This notion of "doing" in my study was enacted through the students' engagement in the dynamics of talk. Through interaction with others, adults and other children, a child learns far more than words alone. By using language for learning the child is also using language to construct meaning. Bruner explained that "the child is not learning simply *what* to say but how, where, to whom, and under what circumstances" (p. 71). For Bruner language was closely tied to meaning itself which he stated "is a culturally mediated phenomenon that depends upon the prior existence of a shared symbol system" (p. 69). He described how language learning in the early years is motivated by the desire to communicate intentions or meaning and that young children do this even before mastering more complex forms of language. "Certain communicative functions or intentions [such as indicating, labeling, requesting and misleading] are well in place before the child has mastered the formal language for expressing them linguistically" (p. 71).

In Bruner's (1986) discussion of the concept of language and meaning he stressed the importance of the notion of transaction in relation to how humans communicate and make sense

of what is said by one to another. He spoke of the transaction that takes place as part of the interaction during a conversation that allowed an understanding to come about by our knowing what others are generally thinking. Bruner acknowledged the difficulty in clearly defining such a term, but explained "transaction" as "those dealings which are premised on a mutual sharing of assumptions and beliefs about how the world is, how mind works, what we are up to, and how communication should proceed" (p. 57). Within the context of shared understanding, Bruner pointed to language as a major means of enabling the transaction of meanings to take place within a social setting.

As one of the functions in communication, and one we often take for granted, Bruner (1986) commented on the use of syntax as a necessary process that strengthens the transaction of meaning. Syntax is one of the elements of language that we learn at an early age as we learn language itself. It provides us with the "rules for generating well-formed utterances" (p. 62). The use of syntax allows language to act as a means of communicating meaningfully with others by providing a common way of ordering words, phrases and sentences to express what we want to say. Bruner stressed the idea that the use of syntax in speaking and listening contributed to generating and sharing ideas for discussion and jointly interpreting and understanding the viewpoints expressed by each other. He explained that syntax is an "abstract" system that allows language to function in "regulating joint attention and joint action, for creating topics and commenting upon them in a fashion that segments 'reality,' for forefronting and imposing perspectives on events" (p. 62). In this way syntax as a characteristic of language plays an important function in the negotiation of meaning through language. Bruner also pointed out that

successful communication involves a common understanding of language as a structured system and of the necessary rules this structure implies. "What we do know from the earliest entry into language is that others can be counted upon to use the same rules of syntax for forming and for comprehending utterances as we use" (p. 62). In terms of syntax, Bruner added that "It is not simply that we all *have* forms of mental organization that are akin, but that we *express* these forms constantly in our transactions with one another" (p. 62).

Another language function that enables the transactional process of creating meaning described by Bruner (1986) was the act of *referring* (p. 63). Bruner used the term "referring" to describe how conversation proceeds when we use language intentionally as a process to direct another person's attention to another possible context in which to think about the matter under discussion. Bruner posited that, "referring to something with the intent of directing another's attention to it requires even at its simplest some form of negotiation, some hermeneutic process" (p. 63). In this sense the act of "referring" is an important process in the transaction of meaning. When the speaker situates the point or the topic within a different but mutually understood frame of reference then the possibilities for further interpretation and shared understandings are increased. Bruner explained how the act of referring strengthens the transactional process and enhances the development of meaning when he said "it uses cues to the context in which utterances are being made and triggers presuppositions that situate the referent" (p. 63). Relevant to my own research, examples of Bruner's notion of the role of "referring" in relation to "transaction" were revealed in the numerous references the students made to other people, situations and events which provided additional contextual "cues" in their negotiation of

meaning. In Bruner's discussion of the role of language in the transaction of meaning he pointed out that "Language is also our principal means of *referring*" (p. 63). Bruner further suggested that this capacity to use language as a means of referring is "a natural organization of the mind, one into which we *grow* through experience rather than one we achieve by learning" (p. 63).

Both the use of syntax and of referring were essential processes in Bruner's theory of transaction in the construction of meaning. He explained "The relation of words or expressions to other words or expressions constitutes, along with the reference, the sphere of *meaning*" (p. 64).

In Bruner's (1986) early work in narrative and the making of meaning, he was inspired by some of the early literary theorists such as Nicholas of Lyra, Roman Jakobson, and Roland Barthes who looked at multiple readings and multiple interpretations of a story or of any text. That literature can be understood from multiple perspectives, depending on the stance of the reader, was a belief rooted in Vygotskian thinking and consistent with Bruner's sociocultural constructivist views of there being multiple realities.

Similarly, the seminal work of Louise Rosenblatt (1938, 1978) and her transactional theory of reading supported the notion of multiple readings and interpretations of literature that Bruner saw in other literary theorists. Rosenblatt opposed the idea that one meaning could exist in any piece of text, or that meaning resided solely in the text. She believed in the strong mutual relationship between the reader and the text and saw the construction of meaning as a transactional experience during the act of reading itself. Rosenblatt (1978) wrote: "The reading of any work of literature is, of necessity, an individual and unique occurrence involving the mind

and emotions of a particular reader" (p. xii). She explained her use of the term "transactional" to describe the dynamics involved in the reading process as originating with Dewey and Bentley (1949).

According to Rosenblatt (1978), "The transaction will involve not only the past experience but also the present state and present interests or preoccupations of the reader" (p. 20). Rosenblatt also discussed other factors that can shape the kind of meaning created through the transaction, such as the purpose for reading, the context in which the reading took place and the stance the reader adopted toward the text.

Of particular importance to my study were Rosenblatt's (1978) observations of the connections between the transactional nature of the reading experience and the "basic transactional character" that is seen in "all human activity, and especially linguistic activity" (p. 20). She explained how this transactional view now existed in the field of psychology and in linguistic philosophy by indicating their findings of factors such as past experience and context that influenced interpretation and perception.

In the field of linguistics Rosenblatt (1978) further described the move toward a transactional emphasis as seen in the distinction that has been made between an utterance and a speech act. An utterance is a string of words or a string of noises that only "becomes a speech act when there is a speaker and a listener sharing the same language and rules of communication in a particular context under particular conditions" (p. 19). Rosenblatt saw the transactional emphasis within psychology and linguistics as consistent with the transactional formulation of Dewey and Bentley. She stated that these findings reinforced her "distinction between the text

(an utterance) and the poem (a speech act)" (p. 19). I also saw the interrelationship of Rosenblatt's transactional theories of reading and the transactional theories of speech that she discussed, and how they related to Bruner's (1986) transactional theories of meaning construction. For both Bruner and Rosenblatt the theory of transaction stressed the importance of the relationship between the knower (speaker or reader) and the known (utterance or text). Upon further reflection on these theories of transaction I gained a clearer understanding of the negotiating process in the students' construction of meaning through the talk.

Another important concept within Bruner's (1986) theories of meaning construction that became relevant in my study was his belief that "There are two modes of cognitive functioning, two modes of thought, each providing distinctive ways of ordering experience of constructing reality" (p. 11). Bruner stressed the point that although these two modes of thought "differ radically in their procedures for verification" (p. 11) it is important to note that they are also complimentary to each other. Bruner believed that it was possible for the paradigmatic and narrative ways of knowing to work and "live side by side" (p. 43) as processes in the construction of reality. Bruner's belief in narrative as well as the paradigmatic modes of cognitive functioning prompted him to say "All the more reason for us to move toward an understanding of what is involved in telling and understanding great stories, and how it is that stories create a reality of their own- in life as in art" (p. 43). Although Bruner is referring to the "great" literary works I found his theories of narrative in meaning making helpful to me when I reflected on the personal narratives embedded in the student's talk in the form of anecdotes.

In Bruner's (1986) discussion of language use in schools, he made the point "that the language of education, if it is to be an invitation to reflection and culture creating, cannot be the so-called uncontaminated language of fact and 'objectivity'" (p. 129). These comments were made at a time when Bruner was turning his attention toward the importance of narrative as a means of meaning making. In keeping with Bruner's shift in attention from the positivistic scientific way as one way of knowing to narrative knowing for understanding experience, he explored questions about the mind, its development, and capacity to create meaning.

Among the many researchers, human scientists and psychologists who were influenced by the work of Bruner in narrative knowing was Donald Polkinghorne (1988). Polkinghorne's study, which added to Bruner's work on narrative knowing, looked at "what contribution the narrative scheme makes to the experience of being human" (p. 15). His ideas supported those of Bruner. "Narrative is a form of 'meaning making' . . . . Narrative recognizes the meaningfulness of individual experiences by noting how they function as parts in a whole" (p. 36). The ideas put forth by Bruner and Polkinghorne concerning the use of narrative as a means of creating meaning became more meaningful to me as I examined the students' use of anecdotes as brief personal experience stories embedded within their exploratory talk.

An important notion that permeated throughout Bruner's (1986) constructivist ideas was the relationship of language and culture "learning how to use language involves both learning the culture and learning how to express intentions in congruence with the culture" (p. 65). Bruner believed that culture shapes the way we use language in our transactions with others and in the

way we create a sense of ourselves. Bruner described the changes over the years in the way

"human culture" has been defined:

> It takes the form of a move away from . . . a set of interconnected rules from which
> people derive particular behaviors to fit particular situations, to the idea of culture as
> implicit and only semiconnected knowledge of the world from which, through
> negotiation, people arrive at satisfactory ways of acting in given contexts. (p. 65)

Bruner (1990) drew on ideas from cultural anthropology and from Clifford Geertz's view

of culture from a constructivist perspective. Bruner stressed the strong interrelationship of

culture and human action and thinking. "It is man's participation *in* culture and the realization of

his mental powers *through* culture that make it impossible to construct a human psychology on

the basis of the individual alone" (p. 12). Citing Geertz (1973) Bruner stated "there is no such

thing as human nature independent of culture" (cited in Bruner, 1990, p. 12).

Bruner (1986) discussed the influence of culture on children's learning as he explained

his own development in thinking about the importance of the social context for learning and

development. "I have come increasingly to recognize that most learning in most settings is a

communal activity" (p. 127). Bruner (1986) described how his earlier ideas were similar to those

of Piaget who believed that children learned through mastery of tasks undertaken on their own.

Bruner went on to explain how his ideas of learning and culture had now moved toward a

Vygotskian model where negotiation and social interaction were central. "It is not just that the

child must make his knowledge his own, but that he must make it his own in a community of

those who share his sense of belonging to a culture" (p. 127).

Olson (2007) described Bruner as someone who "had always been, as he continues to be,

more of a 'formative' than a 'summative' theorist in that he is more concerned with thinking and

inquiry, and in taking on 'ventures of high optimism' than adding footnotes to established closed, deductive systems" (p. xiv). Bruner (1990) pointed out that questions are still being raised among psychologists "about the nature of mind and its processes, questions about how we construct our meanings and our realities, questions about the shaping of mind by history and culture" (p. xi).

I have found, through my reading and rereading of a small portion of Bruner's vast works, that I have become more aware of not only the changes within the field of psychology but the changes in the thinking and perspectives that Bruner experienced over his years as a renowned member of the psychological community. It has been most enlightening to discover some of the roots of these new ideas in psychology and how these ideas have paved the way for current changes in approaches to research and teaching in the areas of language and literacy and the construction of meaning.

The Influence of James Britton: Language and Learning

Throughout my years of study and teaching I was strongly influenced by the work of James Britton and his theories of language learning and literacy development. However, of particular interest to me in relation to this study were his theories of language for learning in spoken discourse as a viable means for understanding and constructing meaning of the world and of ourselves. Britton's constructivist thinking and writings strongly reflected the work of Vygotsky and are also based on the philosophical ideas of Langer and Polanyi and on psychologists Bruner, Piaget, and Kelly (Meek, 1978). I turned to the work of Britton once again

as I undertook this study of the role of exploratory talk and meaning making from a sociocultural constructivist stance.

Britton (1970) expressed his belief about how, through the use of language, we develop our own understanding of reality by creating a representation of our experiences and of ourselves. He believed that we each create representations of our experiences and of the world, and that these representations are different for each person. They are unique just as the individual is unique. Britton explained why these representations differ when he posited, "Your representation of the world differs from mine, and this is not only in so far as the world has used us differently – that is to say we have had differing experiences of it" (p. 14). He added that, "It is also because your *way of representing* is not the same as mine" (p. 14). Like Bruner (1986) and Rosenblatt (1978), Britton suggested that it was not only the uniqueness of our experiences of the world that created the differences in our representations but our mood, personality, our present thinking and the particular situation all shape and influence our ways of representing events and experiences.

Britton (1970) also drew on the theories of the American psychologist George Kelly who used the term "construction system" to describe the same theory that Britton called "world representation" (p. 17). Britton described Kelly's perspective on the way we construct our own realities by continually interpreting and reinterpreting the events and experiences in our lives. He explained Kelly's view as:

> a view of human behaviour that makes living very like learning; that equates learning with learning from experience; and that underlines therefore the importance of our present inquiry into the means by which a man brings his past to bear upon his present. (p. 18)

Similar to Kelly, Britton (1970) believed that in order to make sense of oneself and the events of the world, we draw on our past experiences in order to anticipate or predict the kind of meaning that is to come. Britton stressed the important role of talk in this process. "We habitually use talk as a means of coming to grips with current or recent experience. . . . As people talk, each is relating the event to his own experience, his own world: creating his own personal context for it" (p. 30). In other words as we reflect on past experiences we anticipate meaning that is to come. Britton (1982a) also explained the idea in this way:

> From past experience he derives expectations about the world he lives in; in any situation cues activate particular, relevant expectations, and these are his hypotheses (which he proceeds to put to the test of actuality, revising them in light of what happens). (p. 157)

Britton (1970) pointed out Kelly's important reminder that learning does not automatically happen just by experiencing one event after another. Rather, for Kelly and for Britton, the notion of learning from experience involved reflecting on what has happened and interpreting and reinterpreting its meaning. Kelly expressed this cumulative process when he said:

> Experience is made up of the successive construing of events. It is not constituted merely by the succession of events themselves . . . . It is not what happens around him that makes a man's experiences; it is the successive construing and reconstruing of what happens, as it happens, that enriches the experience of life. (cited in Britton, 1970, p. 17)

Britton (1970) further explained that:

> we construct a representation of the world as we experience it, and from this representation, this cumulative record of our own past, we generate expectations concerning the future; expectations which, as moment by moment the future becomes the present, enable us to interpret the present. (p. 12)

He additionally commented that, "What is fixed in consciousness is there to go back to: a prediction, an expectation, is formulated by reference back" (p. 18).

Like Vygotsky and Bruner, Britton (1970) argued for the importance of language as the major way of representing experience. He expressed this belief when he described the essence of his classic book *Language and Learning* as based on:

> the theory that we use language as a means of organizing a representation of the world - each for himself - and that the representation so created constitutes the world we operate in, the basis of all the predictions by which we set the course of our lives. (p. 7)

Britton (1970, 1982b, 1993) put forth the idea that we use language in two different ways to represent our experiences, in the role of participant and in the role of spectator. As we actively engage in the building of our present representations we are in the role of participant. Britton (1993) explained that, "As participants, we use language to interact with people and things and make the wheels of the world, for good or ill, go round" (p. 6). The participant role has been described as the language used to get things done. Another example of using language in the role of participant is provided by Britton in *Prospect and Retrospect* (1982b) when he explained, "If I describe what has happened to me in order to get my hearer to do something for me, or even to change his opinion about me, then I remain a participant in my own affairs and invite him to become one" (p. 49). Whereas when he explained language use in the role of spectator, he pointed out that:

> As spectators, we use language to contemplate what has happened to us or to other people, or what might conceivably happen; in other words, we improvise upon our world representations - and we may do so either to enrich it, to embroider it, to fill its gaps and extend its frontiers, or to iron out its inconsistencies. (Britton, 1993, p. 6)

Britton (1982a) further commented on the spectator role as one we assume to "reflect our

interests and sentiments but also modify and extend them" (p. 51).

When Britton (1970) spoke of how our representation "lasts and accumulates" even after

events are gone, he also referred to the "successive modifications" that our representations

undergo (p. 18). He stressed the important role of talk in the "bringing up-to-date" of our

representations of experiences when he said "we habitually use talk to go back over events and

interpret them, make sense of them in a way that we were unable to while they were taking

place" (p. 19). We not only use talk to organize and reorganize or modify our own

interpretations but through talk we "greatly affect each other's representation" (p. 19). In this

way the dynamics of talk become the medium for possible changes in our individual views of the

world and through the sharing with each other contribute to the thinking and actions within the

broader community.

Britton (1993) discussed the idea of ordering or classifying objects and events as a way of

knowing and understanding them. He pointed out that ready-made categories do not

automatically exist, but we have separated and grouped objects through the use of language. He

maintained that, "Language is our principal means of classifying, and it is this classifying

function that goes furthest towards accounting for the role of language as an organizer of our

representations of experience" (p. 23). This theory of the role of language in the function of

classifying was a concept I uncovered in examples of student talk in relation to my study.

Through Britton's work I discovered that the classifying function of language develops gradually

over a long period of time, from young child to adulthood. Britton posited that young children

may show signs of classifying by grouping together objects that they call by the same name even though adults or older children might separate them into different categories. The process of making discreet distinctions develops as the child grows cognitively and becomes more competent in the use of language. In Britton's words, "To be able to group objects in accordance with words existing in the language at different levels of generality is a mere beginning, but it is the essential foundation for the higher thought processes" (p. 28).

Britton (1993) also explored the way we use language to classify not only objects but to classify our wide range of experiences. He suggested that, "Without categories of experience, therefore, we should remain imprisoned in the uniqueness of the here and now" (p. 26). Britton described the individual nature of our experiences as "kaleidoscopic." Like a kaleidoscope, every piece appears separately and in a unique form that cannot be repeated. Because the pieces in the kaleidoscope cannot be classified or grouped by similarity, the viewer has no basis for predicting any patterns or sense of order. Britton used the term "kaleidoscopic" to make the point "of the degree to which we rely upon the process of classification" (p. 26). As Britton reminded me earlier, it is the act of classifying that best explains the important role of language as a means of organizing and interpreting experiences, which suggests its useful function in the construction of meaning.

Britton's ideas presented in this chapter, taken from his broadly published research and writings, have continued to serve as the foundation and background for other researchers and writers in the field of literacy and classroom discourse. The influence of his work is clearly

evident in the research of two other notable scholars, Douglas Barnes and Neil Mercer, who in turn have deeply influenced my own thinking and research orientation.

For more than 30 years both Douglas Barnes (1976, 1995) and Neil Mercer (2000, 2008) have studied the role of talk as a powerful means of intellectual growth, learning and understanding for students in school. They also explored the meaning constructions that were involved in the way individuals engage in talk as an ordinary part of their everyday conversational experiences. Their research studies and their work in the area of language for learning reflected a sociocultural perspective that drew mainly on the work of Vygotsky, Piaget, Bruner and Britton, as well as their colleagues and many other researchers whose work I have cited throughout this study.

The Influence of Douglas Barnes: Exploratory Talk

One of the first influencing bodies of research and theory I encountered in the way children used speech in thinking and learning in classrooms was in the work of Douglas Barnes, particularly in his classic book *From Communication to Curriculum* (1976). Barnes' central message in this original work and in his subsequent studies was that we needed to think of the purpose of language not only in terms of communication but to consider its power as a cognitive tool for social and curriculum learning in school. In 1977 and 1995, along with Frankie Todd, Barnes explored the cognitive strategies that students use in social interaction within small group learning.

The main focus of Barnes' research and writings that inspired and influenced my study was his work in the use of exploratory talk as a cognitive tool for learning through the influence

of social interaction. The term "exploratory talk" was one that Barnes created to describe the

nature and the qualities of the kind of talk we use when we are engaged in informal discussions

or conversations in our everyday social interactions or in small group discussions. It is the way

we may use language when we are sorting out our thinking in order to make sense of an idea or

an experience. Barnes, Britton, and Torbe (1990) explained why the use of exploratory talk was

important for learning in school. "Exploratory talk serves the purposes of understanding, giving

the pupils an opportunity to reorder their pictures of the world in relation to new ideas and new

experiences" (p. 73).

Over the past 40 years Barnes' work has served as the foundation for numerous research

studies on classroom discourse and specifically on the crucial role of talk in an exploratory form

as an important means of individual and small group collaborative learning (Barnes & Todd,

1995; Cazden, 2001; Mercer & Littleton, 2007; Pierce & Gilles, 1993)

One of the ways that Barnes and Todd (1977) explained the meaning of the term

exploratory talk was by making a comparison between "exploratory talk" and talk that they

described as "presentational." For example, "Talk is sometimes used for 'presenting' ideas that

are already well-formed, and at other times for 'exploring' and shaping thought in new ways" (p.

92). Barnes (2008) described the characteristics of exploratory talk as "hesitant and incomplete

because it enables the speaker to try out ideas, to hear how they sound, to see what others make

of them, to arrange information and ideas into different patterns" (p. 5). Exploratory talk often

includes tentative ideas which may be expressed in hypothetical terms such as "I think" or "I

wonder." Barnes believed that this use of language can then suggest an openness to further

thinking and questioning which can lead to a deeper meaning. Barnes further pointed out that "In the earlier stages of a new topic, it is likely to be exploratory talk and writing that will contribute more to the interrelating of old ways of thinking and new possibilities: in other words, they will be more likely to enable learners to 'work on understanding'" (p. 7).

Barnes (2008) posited that this kind of informal conversational or exploratory talk, where the speakers are sorting out their thoughts as they speak, looks and sounds very different from talk described as presentational that goes on when a person is giving a polished report or lecture. In the case of presentational talk Barnes explained "that the speaker's attention is primarily focused on adjusting the language, content and manner to the needs of an audience" (p. 5). The emphasis during presentational talk is not on sorting out one's thoughts while speaking but rather on "providing expected information and an appropriate form of speech" (p. 7). Barnes stressed the point that both kinds of talk are expected and necessary as part of classroom discourse and have equal importance for learning. However, Barnes reminded us that in order for both kinds of talk to work effectively, the students need to engage in exploratory talk in order to reach an understanding of what they are learning before being asked to share what they know in the use of presentational talk. When students are engaged in exploratory talk they have more control over their own language and the meanings they construct. In the words of Barnes and Todd (1995), "to place responsibility in students' hands changes the nature of their learning by requiring them to negotiate their own criteria of relevance and truth" (p. 166). In this way students' learning is strengthened as it becomes more personal and knowledge becomes their own.

Barnes' (1976) research was classroom based and was rooted in Piaget's constructivist view and the sociocultural constructivist theories of Vygotsky, Bruner, and Britton. From his own social constructivist perspective, Barnes believed that learning is in the minds and experiences of the learner and that we construct our own models and understanding of the world. Barnes' (2008) explained "that each one of us can only learn by making sense of what happens to us in the course of actively constructing a world for ourselves" (p. 3). He went on to say, "Most of our important learning in school or out of it, is a matter of constructing models of the world, finding out how far they work by using them, and then reshaping them in light of what happens" (p. 3). What knowledge means, according to Barnes (1976), reflects the work of "Cognitive psychologists such as Piaget and Bruner . . . who saw knowledge as a series of systems for interpreting the world" (p. 22). Barnes went on to explain that, "From this point of view learning is a matter of changing the system by which interpretation is carried out" (p. 22). It is part of this act of interpreting and reinterpreting meaning that Barnes described as a process of "working on understanding," which he believed was most readily mediated through the use of talk (Barnes, 2008, p. 5).

In keeping with the sociocultural constructivist views of Vygotsky and Bruner, Barnes (2008) believed in the strong social nature of language and saw the importance of students constructing meaning through the use of talk in social settings such as the small group discussions he described in his research. Barnes' (1976) spoke of the part played by others in our meaning making during social interaction when he pointed out the interplay between our own understanding and the understanding of those around us. "It is as if we bring our own

interpretative systems into interaction with the interpretative systems of other people" (p. 23).

Barnes and Todd (1995) explored the use of exploratory talk within the social context of learning in school. They found that students were more inclined to engage in exploratory talk to explore, reshape and reinterpret ideas when they were working together in small groups rather than in a whole class setting. They discovered that the reason for this increased engagement in exploratory talk was strongly related to the social relationships formed with their peers. "Exploratory talk is more likely in small groups of peers partly because the price of failure is lower: . . . . [They] can risk hesitation and confusion, changes of direction, and rejection of their ideas by others" (p. 15).

A major concept presented by Barnes (1976) in the theories of exploratory talk for learning and understanding was the constructivist notion of learning: that we can only interpret and understand new ideas or new information in light of what we already know. Barnes (2008) expressed his belief that this is the only way the learner can interpret ideas. He posited that, "Since we learn by relating new ideas and ways of thinking to our existing view of the world, all new learning must depend on what a learner already knows. When we are told something we can only make sense of it in terms of our existing schemes" (pp. 4–5). Barnes' (1976) words reflected constructivist thinking concerning the strong interrelationship between the learner, what is already known and the new ideas being presented. "To learn is to develop relationships between them, and this can only be done by the learner himself" (p. 81). The constructivist thinking expressed by Barnes strongly relate to the theories of meaning making presented by

Bruner and Rosenblatt discussed earlier which stressed the relationship between the knower and the known in the transaction of meaning.

The notion that we interpret new information based on previous knowledge has great significance for students' learning and also for teachers' teaching. A teacher may not always see the relevancy in the knowledge a student may attempt to bring to the learning. Barnes (2008) stressed the point that, "Whatever teaching method a teacher chooses . . . it will always be the pupil who has to do the learning" (p. 2). Then Barnes went on to explain that, "He or she will make sense of the lessons only by using the new ideas, experiences or ways of thinking in order to reorganize his or her existing pictures of the world and how it can be acted upon" (pp. 2–3). Barnes (1976) spoke of this way of making sense or making "knowledge their own" as "a two-way process: they will be both putting old familiar experience into words in order to see new patterns in it *and* trying to make sense of new experience by finding a way of relating it to the old" (p. 83). This concept, when talked about in schools, is sometimes referred to as "prior knowledge" or "background knowledge" that a student brings to new information or ideas. From my experience, I have found that often these terms are treated more as "clichés" to support brainstorming activities, which may involve the students in making lists of "what they already know about a topic." What I have seen lacking is the opportunity for students to go beyond "listing" as an isolated task and to talk with each other as a way of actively using this "prior" knowledge to reorder and to reinterpret the known with the new. It has been mainly through my reading the works of constructivist scholars such as Barnes, Bruner Britton and Mercer that I

have gained a greater appreciation for what this concept really meant in terms of learning and understanding.

Embedded within the process of merging existing ideas with new ways of thinking, as a means of constructing meaning, Barnes' (1976) discussed the assumption that we learn by modifying or changing our existing knowledge through interaction with others. Barnes strongly believed that new understanding comes about through the act of reflecting, verbalizing, recoding or reinterpreting what we already know (p. 24). He explained "the systems by which we 'organize' or interpret experience can be changed not only by new experiences but by representing old experiences to ourselves anew, and thus 'recoding' them in different forms" (p 24). Barnes drew on the ideas of Bruner (1966) and Britton (1970) and used their words to further describe these ideas. "Bruner writes: 'I suspect that much of growth starts out by turning around and recoding in new forms . . .what we have been doing or seeing'" (p. 24). And in the words of Britton, "Once we may see man as creating a representation of the world so he may operate in it, another order of activity is also open to him: he may *operate directly on the representation itself*" (cited in Barnes, 1976, p. 24).

Like Vygotsky and Bruner, Barnes (1976) believed that a child's development of speech began with the purpose of communication and then moved to "egocentric speech" and then to thinking. Vygotsky described this latter stage as using "speech to plan what he is going to do, or to recall and re-experience what has already happened, re-interpreting this incidentally while doing so" (p. 18). A child's use of language for planning, recalling and re-interpreting can often be seen when they are engaged in play. To illustrate this point, Barnes used the example of a 5-

year-old child who pretended to be the ticket man, talking out loud by calling out announcements to imaginary passengers on a train made up of cardboard boxes. Barnes described this child's use of language in his fantasy role not so much to communicate with another person but as speech for himself. Barnes explained that "Speech is now part of his own thinking and imagining, and not always used for communicating these to other people" (p. 19). Barnes' example is a further reminder of the Vygotskian theories of the development of thought and speech that were fundamental in Barnes' philosophy of language for learning and were strongly reflected in his own research and writings.

The Influence of Neil Mercer: Exploratory Talk

Neil Mercer's work, on learning through exploratory talk in classrooms and in everyday conversational situations, is also rooted in the ideas of Vygotsky and Bruner. It is also strongly related to the work of Douglas Barnes whose work he acknowledged as influential in how talk is used for thinking, learning and in the advancement of students' understanding. Mercer's extensive research studies over the years are not only relevant to my study of language and meaning making but were both informative and inspirational resources for my own research.

Mercer's (2000) work drew on the interrelationships of the social and cultural nature of language, and as Alexander (2008a) pointed out, "concentrated not on whole class teaching but on small-group collaborative discussions" (p. 22). It was Mercer's belief "that language provides us with a means for *thinking together*, for jointly creating knowledge and understanding" (p. 15). Mercer maintained that the tendency in research studies that explore language and thinking is to overlook the power of language as a means of individuals thinking

together or as a joint activity. He reminded us that language is more than a means of communication. Mercer explained "it is not simply a system for transmitting information, it is a system for thinking collectively" (p. 15).

Like Vygotsky, Bruner, Britton, and Barnes, Mercer (2000) saw language within the realm of two major purposes. He discussed Vygotsky's view of how language is used as a "*cultural tool* . . . for sharing and jointly developing knowledge" and as a "*psychological tool* . . . for reasoning, planning and reviewing our actions" (p. 10). Mercer explained Vygotsky's description of the way that language functioned in a psychological relationship between language and thought and the development of thinking and cognition: "[Vygotsky] came to believe that, during early childhood, a fusion of language and thinking occurs which shapes the rest of our mental development" (p. 10). In relation to language, thought and culture, Mercer (2000) believed that "Language is a tool for carrying out joint intellectual activity, a distinctive human inheritance designed to serve the practical and social needs of individuals and communities and which each child has to learn to use effectively" (p. 1). He further supported these ideas as he described Vygotsky's thinking about the role of language in social interaction within the larger society as an active means through which a culture grows and changes. "Vygotsky saw human individuals and their societies as being linked by language into a historical, continuing, dynamic, interactive, spiral of change" (p. 10).

Mercer (2000) pointed out how much we have learned from recent research about the social nature of children's language development, and the influence talking and other ways of communicating, such as the use of gesturing and facial expressions, have on language learning.

"Children do not learn language incidentally, separate from the practicalities of life" (p. 11). In Mercer's discussion of the relationship between social interaction and language use and development, he referred to the work of Bruner and other developmental psychologists by pointing out how their "careful observations . . . have shown how young children's individual development is shaped by their dialogues with the people around them" (p. 11). Mercer supported these findings when he added "Young children learn language, as well as much else that they need to know, through engaging in conversation with adults" (p. 11). These observations, taken from sociocultural and psychological perspectives, provided Mercer with the theoretical basis for his own research on the joint construction of meaning in small-group discussions.

Within the wide range of research carried out by Mercer in the area of language for communication, for thinking, reasoning and for intellectual development, the notion of "exploratory talk" was a central focus. Mercer ,Wegerif, and Dawes (1999) in their research on *Children's talk and the Development of Reasoning in the Classroom* pointed out that an outcome from their earlier research studies "was a typification of a way of using language effectively for joint, explicit, collaborative reasoning" (p. 97). They added: "We called this 'exploratory talk', taking the term from the seminal work of Barnes & Todd (1977, 1995)" (p. 97).

Mercer and Dawes (2008) later commented on the wording Barnes previously used in his description of exploratory talk and suggested that this description might possibly be interpreted "as a kind of lone venture for the individual" (p. 64). But Mercer and Dawes went on to explain that "Barnes' achievement in this definition was to help teachers see that learning happens

through talk between pupils working in groups and not just through the talk between teachers

and pupils" (p. 66).

With Barnes' definition in mind, Mercer along with several other colleagues, "extended

the concept of exploratory talk to cover not only its function for the individual speaker, but for

the work of the group of which they are part" (Mercer & Dawes, 2008, p. 66). This definition

emphasized the joint and reciprocal nature of creating meaning in collaboration, as well as the

usefulness for the individual meaning maker. Mercer (2000) described the following:

> *Exploratory talk* is that in which partners engage critically but constructively with each
> other's ideas. Relevant information is offered for joint consideration. Proposals may be
> challenged and counter-challenged, but if so reasons are given and alternatives are
> offered. Agreement is sought as a basis for joint progress. Knowledge is made publicly
> accountable and reasoning is visible in the talk. (p. 98)

Based on Vygotsky's idea that language acts as a social and cultural tool for people to think and

reason together, Mercer and Dawes (2008) and their colleagues strongly emphasized the

dialogical and collaborative aspects of exploratory talk. They explained that "Talk of an

exploratory kind is thus not only useful for an individual to sort out their thoughts, it can also

help two or more people to solve problems because they are sharing ideas . . . in a genuinely

collaborative interaction" (p. 66).

In Mercer's ongoing research he drew on his earlier thinking and work with his colleague

and co-researcher Derek Edwards (1987). Edwards and Mercer (1987) described how their

earlier research focused on what "knowledge means to people, and in how and to what extent it

becomes part of their common knowledge, their joint understanding" (p. 1). They believed that

"Knowledge and thought are not just to do with how individuals think, but are intrinsically social

and cultural" (p. 160). Together, they explored the use of language as a tool for creating meaning through the process of building common knowledge and a shared understanding "through joint activity and discourse" (p. 160).

The concept of "common knowledge" within Edwards' and Mercer's theories of thinking collectively was an important one for my study. Edwards and Mercer (1987) saw common knowledge as the shared understanding that existed between two or more people who, when engaged in a conversation, were more likely to communicate successfully because of their shared understanding of the topic. "What matters is what the participants in the communication understand and see as relevant" (p. 66).

Edwards and Mercer (1987) also pointed out that common knowledge, or the shared understanding as it exists at the beginning of a conversation, can grow and build into a broader body of common knowledge as the interaction proceeds. They provided examples of some of the interactive techniques used in conversation that can establish a shared understanding, such as the "offering of new information, reference to existing past experience, requests for information, and tests or 'checks' on the validity of interpretations of information offered" (p. 6). Edwards and Mercer also stressed the use of these "basic elements" (p. 6) as a way of expanding the knowledge that the group has created so that it goes beyond the meaning making of the individual and becomes the shared knowledge of the group. Edwards and Mercer explained this idea. "By the use of these elements, or mechanisms, two or more people can construct through discourse a continuity of experience which is itself greater than their individual experience." They added that, "They may construct it well, or badly" (p. 6). In other words, not all dialogue

or conversations go smoothly and achieve a common understanding through the talk. It depends on how the participants use these and other elements of language "in a collaborative endeavour in which meanings are negotiated and some common knowledge is mobilized" (Mercer, 2000, p. 6).

Mercer (2000) provided examples of different sources of common knowledge that students might draw on as they begin to engage in a joint activity of collective thinking. He suggested a common experience such as viewing a film could provide students with "a basic shared understanding," "a shared frame of reference" and "the purpose of their talk" (p. 50). Mercer also suggested drawing on their common past experiences of "collective remembering" and following appropriate ground rules (p. 50). Mercer went on to identify, as another source for common knowledge, the experience of working together as classmates over a long period of time where group members develop a personal relationship with one another.

Edwards and Mercer (1987) remarked that the development of common knowledge was a major part of the social and cultural purpose of schooling. It is through the individual sharing of experiences and information that we build a common set of values and traditions within society and through the process we come to learn about our individual differences. Edwards and Mercer explained that creating a body of common knowledge was essential for the development and expansion of culture and it was also an essential aspect of carrying out effective communication as we interact with each other within that culture. Therefore culture not only influences the language we use but culture is also shaped and influenced by the knowledge we create. The notion of "context" is another important concept in relation to my study that Mercer (2000)

addressed in his research as a joint collaborative activity. He pointed out that, in order to

understand how meaning is constructed through the joint activity of interaction and group talk,

we need to consider the influence of "context" on how we create meaning together. He stated

that, "The concept of 'context' is necessary for understanding how we use language to think

together" (p. 17). He also pointed out the multiple definitions of the term "context," and their

limitations, as the term is used in the literature on spoken language. "Some researchers define

'context' in terms of the physical environment in which language is used, but that only provides

potential resources for our context-making" (p. 19). Mercer, on the other hand, saw "context" in

a broader sense and believed that it was a "mental phenomena" that includes everything that

influences or affects the way participants make sense of what they hear or what is said. Mercer

explained that, "We always make sense of language by taking account of the circumstances in

which we find it, and by drawing on any past experience that seems relevant" (p. 20). In this

way, the common knowledge and shared understandings that are created and the establishment of

common frames of reference that we draw on, all became part of what Mercer considered

"context" for jointly creating meaning through the use of language.

Mercer (2000) also pointed out how some of the ways in which we use language itself, in

a variety of different forms, can provide a context of its own. He described how we sometimes

use language to create and share stories of our everyday experiences, which then become

contextual resources for creating new meaning and understanding. Mercer commented: "We use

language to make the future from the past, to build a relationship between what has been and

what is to come; and we use the resources of past experience to make new, joint, knowledge and understanding" (p. 46).

Both Barnes and Mercer argued for the value of exploratory talk in teaching and learning and for its value as an effective tool in helping learners make sense of experiences, both past and present. The strong influence of both the cultural and social nature of language was evident throughout their findings regarding exploratory talk as a means of thinking, reasoning and creating meaning, both individually and as a collaborative activity. Their research showed how individuals actually use language as they talk together about a wide range of topics and how through their dialogic exchanges they grow toward a greater understanding of the topic under discussion and of themselves as learners.

The Influence of Robin Alexander: Dialogic Teaching

Robin Alexander's (2008a) research on classroom talk and dialogic teaching was carried out as an important aspect of a major British educational research project entitled *Culture and Pedagogy*. This research was conducted over the past two decades in classrooms across five different countries (England, France, India, Russia, and the United States) where Alexander and other researchers explored and compared the relationship between culture and pedagogy. Alexander (2008a) explained: "Its principal theme was the way a country's culture and history shape the values and processes of public primary schooling, from the broad sweep of policy down to the day-to-day activities of teachers and children in classrooms" (p. 5). From this research, studies evolved of "kinds of classroom talk which seemed likely to exert the greatest leverage on children's learning and understanding" (p. 6). In many European countries "Oracy

[was] regarded as no less important than literacy," whereas in Britain at that time the purpose of classroom talk was seen as more "social and affective – about developing children's confidence rather than developing their thinking" (p. 19). These findings along with Alexander's earlier work with his colleague Douglas Barnes concerning the character of talk in children's learning, led to Alexander's further inquiries into dialogic teaching as an emerging pedagogy.

Alexander (2008b) explained that dialogic teaching "is a pedagogy which exploits the power of talk to shape children's thinking . . . and understanding" (p. 92). These words reflected Alexander's (2008a) belief that the purpose of classroom talk goes beyond serving the "social and affective" aspects of schooling to being foundational to knowing and learning. Dialogic teaching is not a method or program but a sociocultural philosophy of teaching that is based on the Vygotskian belief that "talking, thinking and knowing are intimately connected" (Alexander, 2008a, p. 10). Alexander also argued that these processes are mediated through the active use of language in interaction.

In Alexander's (2008a) work entitled *Towards Dialogic Teaching: Rethinking Classroom Talk* he described the theoretical framework that supported his research studies in the role of dialogic talk in thinking and learning. He cited the views on dialogue of Mikhail Bakhtin (1981) as being "critical to this movement, for he deals not with the mere mechanics of communication, but with language in the broadest possible context" (p. 24) within a wide range of disciplines and "society" (p. 25). He explained Bakhtin's belief that "dialogue is essential to discourses-to a world-where meanings are neither fixed nor absolute, and where the exchange, acquisition and refinement of meaning is what education is centrally about" (p. 25). In relation to "educational

discourse and classroom talk" (p. 25) Alexander stressed the importance of the principles of "questions and answers" within dialogue. Alexander went on to emphasize his belief "that classroom talk through which educational meanings are most characteristically conveyed and explored, dialogue becomes not just a feature of learning but one of the most essential tools" (p. 25).

Alexander (2008a) drew on the "substantial body of research on language, learning and teaching" (p. 10) and identified two particular strands that he considered most significant for his studies on the quality of classroom talk and learning. He discussed how findings within psychological research and sociolinguistic research informed his own work. In his discussion of psychological research, Alexander described the shift in the view of the child from being, in Piagetian terms, "as a 'lone scientist' . . . interacting with stimulating materials" to the Vygotskian thinking that "the child's cognitive development also requires it to engage, through the medium of spoken language, with adults, other children and the wider culture" (p. 11). This change meant that learning was now viewed as a social process in which children's meaning of the world and of themselves was constructed "not only from the interplay of what they newly encounter and what they already know, but also from interaction with others" (p. 11). Like Vygotsky and Bruner, Alexander stressed the need for children to learn to reflect on experiences and to think for themselves, as well as to interact and collaborate with others if they are to fully understand what they are learning.

In relation to the power of talk in student's development of thinking and understanding, Alexander (2008a) pointed out the contribution of neuroscientific research, which had revealed

the influence of talk through social interaction on children's brain growth and development. "It is now understood that talk is necessary not just for learning but also for the building of the brain itself as a physical organism, thereby expanding its power" (p. 12). It has now been shown that the child's preschool and elementary school years are a time when the brain "restructures itself, building cells, making new fibre connections between cells, . . . developing the capacity for learning, memory, . . . and language" (p. 12). Alexander emphasized the point that "Talk actively and vigorously fuels these processes" (p. 13). This point reinforced his own theory "that discussion and dialogue are the rarest yet also the most cognitively potent elements in the basic repertoire of classroom talk" (p. 31).

Alexander (2008a) also considered the sociological or sociolinguistic strand of research as he explored different ways that language was used in classrooms and the kinds of language patterns and communicative environments that actually existed. He shared the concerns expressed by many other researchers about the overly dominant role of the teacher in the talk that went on and the lack of open ended and authentic questioning within the talk. Further concerns had also been raised about the tendency for students to focus on finding the one right answer rather than thinking about the problem. Alexander also examined the pioneering work of Philip Jackson (1968) who "chartered the consequences for children of the unequal relationship of teacher and taught" (p. 14). Alexander (2008b) described the influencing work of Barnes' (1969) analysis of classroom talk. He explained Barnes' interest in the kind of questions that teachers asked students, such as ('factual', 'reasoning', 'open', 'social') (p. 94), as well as the students' participation and use of language in relation to the task. Alexander (2008a) was also

guided by the "sociocultural" ideas that supported Barnes' research into the dynamics of interaction, the social relationships and "the patterns of teacher-pupil communication" (p. 14) in classrooms.

Alexander's (2008a) central message was that, "Dialogic teaching harnesses the power of talk to engage children, stimulate and extend their thinking, and advance their learning and understanding" (p. 37). Based on this assumption Alexander argued for classroom discourse patterns to include more opportunities for students and teachers to engage in "a particular kind of interactive experience which we call dialogic teaching" (p. 37). As a guide, Alexander (2008b) put forth five essential principles to support "teaching which is dialogic rather than transmissive" (p. 105). He further cited these principles as "the heart of the matter" (p. 105) and "the most important component of this theory or framework of dialogic teaching" (Alexander, 2008a, p. 38). The five principles state that dialogic teaching is:

- *collective:* teachers and children address learning tasks together, whether as a group or as a class;
- *reciprocal*: teachers and children listen to each other, share ideas and consider alternative viewpoints;
- *supportive*: children articulate their ideas freely, without fear of embarrassment over 'wrong' answers; and they help each other to reach common understandings;
- *cumulative*: teachers and children build on their own and each other's ideas and chain them into coherent lines of thinking and enquiry;

- *purposeful*: teachers plan and steer classroom talk with specific educational goals
  in view.

An important reminder that Alexander (2008a) embedded throughout his writing about the quality of classroom talk for learning was that "we need to work hard at it in all the contexts in which it is used - whole class, group and individual" settings (p. 22). Alexander believed that dialogue as a mode of talk was not restricted to any one particular way of organizing for learning in the classroom. As he explained, "what matters most: the quality dynamics and content of talk, regardless of the way classrooms and lessons are organised" (p. 23).

Within Alexander's (2008a) discussion of the term "dialogic teaching" he pointed out some of the terms used by other scholars and educators in language and learning to describe their similar and compatible pedagogical ideas. He described Bruner's "'mutualist and dialectical' pedagogy in which 'understanding is fostered through discussion and collaboration'" (p. 23). He also pointed to Wells' use of the term "dialogic inquiry" "to encapsulate his updating of Vygotsky's ideas for today's classrooms" (p. 23). In addition Alexander likened Wells' idea "promoting of a 'community of inquiry'" with that of Neil Mercer, whose idea "that talk in learning is not a one-way linear 'communication' but a reciprocal process in which ideas are bounced back and forth" (pp. 23–24). Mercer's (2000) description of exploratory talk emphasized the dialogic and reciprocal characteristics of the participants' conversational exchanges when he explained that during exploratory talk, "Partners engage critically and constructively with each other's ideas" (p. 98). Alexander (2008a) also commented on Douglas Barnes' belief in "the importance of fostering both the spirit and the procedures of a 'joint

enquiry' through which learners can construct shared meanings from the necessarily different frames of reference which each of them brings to the common learning task" (p. 24). Barnes (1976) stressed the interactive nature of dialogic talk in our construction of meaning through interaction with others and with our own thoughts: "our interpretative systems are modified not only by existential events and by communication with other people but by ourselves" (p. 24).

"Exploratory talk," in the way I have used this term in my study and the way in which it is defined and discussed in the work of Barnes and Mercer, is by its very nature dialogic. The concepts within exploratory talk in this sense share the same characteristics that Alexander (2008a) described as "essential features of the dialogic classroom [that] are brought together in the five principles" (p. 28). Knowledge of the interrelationship of these features strongly suggests the need for teachers to understand the important role that exploratory talk plays in developing a dialogic pedagogy for teaching and learning.

Chapter Summary

> Theory is intended to make coherent what otherwise appears as disparate and disconnected individual events. Theory is the means through which we learn lessons that can apply to situations we have yet to encounter. (Eisner, 1993, p. viii)

In this chapter I presented a framework of interrelated theoretical perspectives and research that both inspired and informed my study of exploratory talk as a process for the making of meaning. As I read and reflected on the work of Vygotsky, Bruner and Britton in light of my own research study I came to a clearer understanding of why talk within the context of social interaction was so powerful as an exploratory tool for making sense of events and in shaping students' thinking and curriculum learning. The work of these major theorists revealed their

shared beliefs about the philosophy of knowledge, how knowledge is constructed by the knower, and the crucial role of language in this process of meaning making.

I attempted to show how the social and cultural theories of Vygotsky, Bruner and Britton that guided my study were founded on the early thinking and philosophy of constructivism. Then, through the research conducted by Barnes and Mercer, I explained their theories of how talk functions as a meaning-making tool for both individual and collective thinking and reasoning. Finally, through the research and writings of Robin Alexander, I described the interrelationship between the use of exploratory talk and the pedagogical notion of dialogic teaching.

In the next chapter I will discuss the methodological approach I adopted for my study and the methodology I used to pursue this research inquiry in light of the theoretical assumptions I have presented.

Chapter Three: Methodology

> Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach in its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. (Denzin & Lincoln, 1994, p. 2)

I began this qualitative and interpretive inquiry as an attempt to understand the power of exploratory talk as a process for students to create meaning of their experiences and of the subject matter they were learning. I explored ways in which the students experienced their participation in small group talk with one another during conversational discussions that were a usual part of their classroom learning. The questions that guided this research stemmed from my strong interest and concern about the gap that research has uncovered between the efficacy of exploratory talk for learning and the lack of opportunities for students to engage in this mode of learning in school. I not only wanted to enhance my own understanding of the value of exploratory talk but I also wanted to contribute to the body of research on how this form of talk acts as a way of knowing and constructing meaning. And so through this research I sought "to grasp the processes by which [students] construct meaning and to describe what those meanings are" (Bogdan & Biklen, 1992, p. 49). A further interest concerned the place of exploratory talk in the model of dialogic teaching.

While the participants in my study engaged in making meaning as they talked in a small group, I too, as researcher and participant, was involved in the process of creating meaning as we participated together in the discussions. As Ellis (2006) reminded me "it is not enough for a researcher simply to report quotations of what participants have said . . . and to presume that they

have passed on the participants' meanings unaltered." Rather "there is no meaning until it is constructed by the one hearing or perceiving" (p. 115).

In keeping with my social constructivist perspective, I believe the meanings we create form the multiple realities that we apprehend and that these meanings are constructed through language and through our interaction with others. Within the context of qualitative research, Guba and Lincoln (1994) explained the constructivist view of how meaning is created:

> Realities are apprehendable in the form of multiple, intangible mental constructions, socially and experientially based, local and specific in nature (although elements are often shared among many individuals and even across cultures), and dependent for their form and content on the individual person or groups holding the constructions. (pp. 110–111)

Merriam (1998) described qualitative research as "an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena with as little disruption of the natural setting as possible" (p. 5). Under this metaphor of an "umbrella concept" Merriam discussed the characteristics and origins of qualitative research when she pointed out that constructivism has been traced as one of the philosophical roots of the worldview of qualitative research (p. 3). She described interpretive research from the constructivist view "In *interpretive* research, education is considered to be a process and school is a lived experience" (p. 4). She went on to say, "Understanding the meaning of the process or experience constitutes the knowledge to be gained from an inductive, hypothesis-or theory-generating (rather than a deductive or testing) mode of inquiry" (p. 4). My interpretation and the understanding of exploratory talk that I created from this research came about inductively through the uncovering of signifiers of language use, common threads and patterns of meaning

making interwoven throughout the talk. These findings evolved into interrelated thematic areas that helped me to bring a sense of order to the data and to further explain the meaning I created (Ely, Winz, Downing, & Anzul, 1997; Merriam, 1998; Mishler, 1986).

In Bogdan and Biklen's (1992) description of the characteristics of qualitative research "*the natural setting as the direct source of data*" is emphasized along with the important point that "*the researcher is the key instrument*" (p. 29). Ely et al. (1997) explained, "The instrument metaphor is widely used in qualitative research texts, and we trust that you understand it as person-centered, sensitive, and exquisitely human" (p. 329). Similarly Merriam (1998) described "the researcher [as] the primary instrument for data collection and analysis" (p. 7). She explained, "Data are mediated through this human instrument, the researcher, rather than through some inanimate inventory, questionnaire, or computer" (p. 7). Merriam pointed out that "the researcher is responsive to the context; he or she can adapt techniques to the circumstances; the total context can be considered" (p. 7). Merriam added "The researcher must physically go to the people, setting, site, institution (the field) in order to observe behaviour in its natural setting" (p. 7).

In order to pursue the philosophy and the goals of this research study within the natural setting of the classroom, I turned to an interpretive inquiry methodological approach, which Denzin and Lincoln (1994) described as part of a "qualitative multimethod focus."

Interpretive Inquiry

I selected an interpretive inquiry approach, which was rooted in the study of experience and meaning, because I believed it was the most effective and naturally suited way to pursue this

exploration of children's experiences using exploratory talk and meaning making. This interpretive approach is philosophically and practically consistent with my beliefs about knowledge, learning and classroom practice. The approach drew on the principles and beliefs that fit most closely with my own ontology - my views of the world as a creation of our own minds and our own interpretation and how I see knowledge as constructed by individuals through social interactions within the influence of the culture. As a methodology it also provided an openness and flexibility that centered on description, experience, process, interpretation and meaning all of which were fundamental to the essence of this study.

Ellis (1998a), who wrote about interpretive inquiry as a formal research process rooted within the theory and traditions of Hermeneutics, pointed out that "Gadamer and other writers on hermeneutics show that the processes or dynamics of interpretation constitute our very mode of being in the world" (p. 15). This statement stressed the important interplay between the philosophical beliefs and stance of the researcher and the meaning that is created through interpretation of the research data.

Ellis (1998a) suggested that, "any discussion of interpretive inquiry ought to start with a review of three themes present in hermeneutics" (p. 15): (1) Interpretation as a Creative Act, (2) The Part-Whole, Micro-Macro Relationships, and (3) The Key Role of Language and History. As I reflected on these themes in light of my own research methodology and from a holistic perspective, I saw them as interrelated and interwoven throughout the flow of activities involved in the interpretive process. I was mindful of the advice offered by Ellis (2006) regarding these thematic ideas. She pointed to "the need to work holistically to ascertain meaning, to examine

part-whole relationships to clarify significance, and to appreciate how interpretations – the researcher's and the participant's – arise from the language and the history of a person's community" (p. 115).

Interpretation as a Creative Act: Packer and Addison (1989) spoke of interpretation as "the working out of possibilities that have become apparent in a preliminary, dim understanding of events" (p. 277). Similarly, Paul and Elder (2005) commented "all reasoned thinking, all genuine acts of figuring out anything whatsoever, even something previously figured out is a new making, a new series of creative acts" (p. 9). I believe that as the participants in my study and I engaged in the process of discovering something for the first time or rediscovering something we already knew, we were engaged in a series of creative acts in our construction of new knowledge.

In interpretive inquiry the researcher works creatively and holistically, which means drawing on the researcher's beliefs, intuition, and on everything we have experienced, sensed or know at this time. It requires being "committed to learning what the participant means by his or her expression [and] to be committed to learning about the wholeness and complexity of his or her experience" (Ellis, 2006, p. 115). It sometimes means creating "the path by walking it" (Ellis, 1998a, p. 16) because following an interpretive inquiry approach to research is not a straightforward *method* that can be described as a step-by-step, linear or sequential process. Rather it is understood as a process "articulated as "the hermeneutic circle" at work in all human understanding" (Smith, 1991 p. 190). The researcher as an integral part of this circular process

is, according to Prasad (2005), required to use "*imagination* for a creative interpretation of the text" as well as "skills that are more typical of the humanities than the social sciences" (p. 41).

For some researchers the use of imagination in creating their own pathway of interpretive procedures would be seen as vague and undefined and even unreliable if mistakenly thought of as a guessing game. However, Packer and Addison (1989) were very clear in their argument that "Interpretation is not Conjecture" (p. 276) and stated that, "To see interpretation as conjecture is to misunderstand interpretive inquiry, just as to think that the natural sciences proceed by guess-and-validation is to have a mistaken view of science" (p. 277). An interpretive inquiry approach requires a researcher who is comfortable with living in grey areas while keeping an open mind and responding to any surprises that may arise in the search for meaning. These "surprises" in hermeneutics are called "uncoverings" that can lead the researcher to understanding the problem or question differently (Ellis, 1998a, p. 22). This openness to what might arise was for me one of the appealing features of the interpretive inquiry process. I saw this broad journey from a hermeneutic perspective as a rewarding learning opportunity of discovery that can occur when the researcher is not locked into a specific method or classification system. Smith (1991) explained, "that the mark of good interpretative research is not in the degree to which it follows a specified methodological agenda, but in the degree to which it can show understanding in what is being investigated" (p. 201).

The Part-Whole, Micro-Macro Relationships: Ellis (2006) described the second theme present in hermeneutics as "The importance of part –whole, micro-macro relationships" (p. 115). As interpretive inquirer, I worked holistically throughout the research process in order to

understand the meanings as a whole before examining the parts and juxtaposing the parts and the whole picture. In other words the meanings that were created as the study went along, and when the formal data collection was completed, the end results were not viewed as the sum of the parts but the blending or fusing together of the parts into the creation of the whole. Merriam (1998) pointed out that, "qualitative research can reveal how all the parts work together to form a whole." And "It is assumed that meaning is embedded in people's experiences and that this meaning is mediated through the investigator's own perceptions" (p. 6). Merriam contrasted this back and forth process with "quantitative research, which takes apart a phenomenon to examine component parts" (p. 6). This point is particularly important in understanding the holistic approach taken in interpretive inquiry research. Ellis (2006) suggested that the relationships between part-whole and micro-macro are "fundamental to interpretation" (p. 116). I found that this back and forth process of interpretation within my research provided a means of my ordering and reordering elements of the research activities, which according to Barnes (1976) are important aspects of the way we interpret and construct meaning out of our experiences. This process was evident when I examined in a back and forth manner the particular features of talk that individual students were engaged in and then looked at these specific features in light of the students' larger interactive experiences in group discussions.

In Ellis' (2006) discussion of the importance of the part-whole, micro-macro relationships, she explained how the hermeneutic circle also invites researchers to recognize the stories uncovered in their research as microcosms of larger macro stories. Some of the stories told by the students in my study as part of their exploratory talk revealed feelings and incidents

in their everyday lives. And as researcher I read and reread these stories as Ellis suggested "in the larger story" of their family values and traditions which were part of the story of their socio economic and ethnic backgrounds.

The Key Role of History and Language: This third hermeneutical theme "The Key Role of History and Language" and its relationship to Interpretive Inquiry was particularly important in my research of exploratory talk which was in itself a study of language and meaning. Ellis (2006) posited that, "Because language is such a significant element in the construction of understanding, it is important for researchers to give careful attention to the language used by themselves and by participants in their research" (p. 117). Ellis (2006) also pointed to the strong relationship between language and interpretation in an interpretive inquiry approach to research. "Language both enables and limits interpretation" (p. 116). Therefore, in the realm of interpretive inquiry language enables our interpretation because it is through the use of language that we communicate, develop relationships and most importantly make sense of our experiences. Language can also limit interpretation because the meaning that language conveys can vary according to the history, the context and the culture in which we live. Mercer (2000) suggested that language can be a limiting factor in our communication and interpretation even when we share past experiences because we sometimes are unsure of how much context we need to provide to each other to make the communication meaningful. "Attempts to build context from shared history can be done well, or badly; they may or may not succeed" (p. 47).

Therefore, in order to interpret meaning from the language participants use, it is important for the researcher to pay attention to and to try to understand the influencing role of

culture and the discourses within the particular communities in which they live. Smith (1991) also emphasized this point when he described the need for "a deep attentiveness to language itself, to notice how one uses it and how others use it" as one of the requirements "by those who find hermeneutical formulations fruitful for new lines of research in the human sciences" (p. 199).

Ellis (2006) cautioned researchers "to refrain from assuming that there is a shared meaning for words . . . that are central to their research questions" (p. 117). She suggested that the researcher use open ended questions or ask the participants to share stories of their experiences that are relevant to the concept under discussion rather than introducing language "that may not reflect their most salient ideas or most common forms of everyday sense-making" (p. 117).

Throughout this research study I was especially careful and sensitive to the idea that not all students expressed themselves in the same way or that the words they used necessarily conveyed the same meaning for the listener. In Smith's (1991) words I was committed to "a deep attentiveness to language itself" (p. 199). This meant paying attention not only to how I used language but also how carefully I listened to what was said by others during the discussions. I wanted the words the students chose and the language they used to be their own. In this way their language would be best described in Britton's (1970) term "expressive language," which is language closest to the self or closest to their natural way of speaking as an expression of their own ideas and their own thinking. This term "expressive language" also described the nature of language used in exploratory talk.

As key instrument in this study I was guided through the research process by continually reflecting on the meanings of the three hermeneutical themes discussed above as the philosophical foundation of the interpretive inquiry approach that I undertook in this study. Prasad (2005) stated:

> Hermeneutics also relies considerably on the researcher's *imagination* for a creative interpretation of the text . . . . In the final analysis, however, hermeneutics is invaluable in its capacity to go beyond the appearance of everyday life to capture its deeper meanings. (p. 41)

I carried forward these philosophical and hermeneutical ideas, which were also embedded in my own pedagogical assumptions, as I turned my attention to thoughts about the stance I assumed as the researcher.

Researcher Stance

Denzin and Lincoln (2002) posited that, "Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible" (p. 3). Then later they concluded that, "All research is interpretive; it is guided by the researcher's set of beliefs and feelings about the world and how it should be understood and studied" (p. 22). My own ontological, epistemological and methodological beliefs that I brought into this research all shaped and had an influencing effect on my approach to data collection and my interpretation of the meaning of the student talk within their dialogic interaction. These beliefs also created and determined the interpretive framework that guided this research as a hermeneutically based interpretive inquiry.

Within this interpretive framework I became self-conscious of my influencing role as key instrument, mediator and interpreter of what I saw and heard during this research. This

awareness of my role as key instrument heightened my sense of responsibility and increased my

commitment to carry out this study with sensitivity, integrity and flexibility. As in any research

that involves working with children it is important for the researcher to be mindful of the

imbalance that exists in the relationship between the researcher and participants and to take the

appropriate steps to address this issue. It was important to me that the students view me not as

an authority figure but as someone who was there to learn and as another resource for their

learning. When I was introduced by the teacher on my first visit to the classroom, I explained

that I was also a teacher who wanted to learn more about students talking together in small group

discussions and I was also there to help. Throughout the interaction during their conversations I

made a deliberate attempt to refrain from taking control of the language used or of the ideas and

the thinking expressed by the students. I wanted the students to feel free to express their

opinions rather than to present me with what they thought was the "right answer." The questions

I asked during the interviews were intentionally structured to be as open ended as possible so the

students would be in control of the flow and use of their language and be comfortable in sharing

their stories. Mishler (1986) emphasized:

> The asymmetric power relationship between interviewee and interviewer . . . is a
> particularly significant influence on whether and what kinds of narratives appear. If we
> wish to hear respondents' stories then we must invite them into our work as collaborators,
> sharing control with them, so that together we try to understand what their stories are
> about. (pp. 248–249)

I saw my role not as static but as constantly changing as I responded to students'

comments and to various situations that arose during the discussions and in the classroom.

Times when these changes became necessary happened on a few occasions when the teacher's

agenda was altered and when student or parent interviews needed to be rescheduled. Flexibility was required when I borrowed and adapted new techniques from other disciplines to use in gathering and managing data. Trying out these new techniques allowed my methods of data gathering to evolve flexibly and creatively. Denzin and Lincoln (2002) suggested that "learning how to borrow from many different disciplines" created the image of the researcher as a "bricoleur" (p. 3). They explained that the "interpretive bricoleur produces a bricolage – that is, a pieced-together set of representations that is fitted to the specifics of a complex situation" (p. 4). In order to do this, "the researcher needs to invent, or piece together, new tools or techniques" (p. 4). As a creative *bricoleur,* I needed to work holistically in order to fulfill the tasks required to carry out multiple methodologies and research practices (p. 4). As I visualized myself in this image of bricoleur who was adapting and trying out new ideas as part of the research process, I was reminded again of "the inherently creative character of interpretation" as a central theme in the hermeneutic tradition (Ellis, 1998a, p. 15).

When I began this research study I was reminded of my previous experience as one of the participants in a teacher-researcher project in which I experienced the multiple roles of teacher-researcher, instrument and research participant. Later when I became the primary researcher in this present doctoral study of my own, I recalled many aspects of this earlier research experience. My memories of being involved in this earlier study strengthened my sensitivity of what it means to place oneself in a position of openness with another person as I did in the role of participant and to build relationships of ongoing mutual trust. Ely et al. (1997) reminded me that, "This call

for trust enters into all the stages of a research process in which the researcher is the chief instrument" (p. 277).

Through this earlier teacher as researcher experience I also gained a clearer understanding of some of the similarities and differences in my role as a researcher who was also the teacher and now in my role as an outside researcher who entered into another teacher's classroom. Through the eyes of the teacher I saw different things than through the eyes of a researcher and I interpreted what I saw differently. However, I know now that although both perspectives were equally important, the observations and the interpretations were informed by different experiences, concepts and different kinds of knowledge that I brought to the research at the time. Boostrom (1994) explained that, "it is impossible for any human observer to exist without concepts, though the concepts are often tacit rather than acknowledged" (p. 52).

In my current research, which followed years of working with children in the classroom and reading recent studies, I was still operating from my tacit knowledge but I was far more cognizant of the work of scholarly theorists and other researchers in a far broader context. Nevertheless, some of the challenges in being an observer in both situations were similar. What to notice, what to pay attention to, "which details of the environment should be assessed and which ignored?" (Boostrom, 1994, p. 51). And now as a researcher I might add to Boostrom's comments, 'how to manage and document what I observed during the activity of a busy classroom.'

As the researcher in this present study, I brought with me my pedagogical beliefs, my world-views, and my background knowledge and experiences as a teacher and consultant, all of which influenced and shaped the way I approached this research endeavour.

Methodological Processes[1]

Approaching the Teacher: Before I began this research as a formal process I thought about the kind of teacher I would like to work with and who would like to work with me as I pursued this study. I knew in order to work together collaboratively we would need to share our pedagogical beliefs and interests in children engaged in learning interactively in situations that provided opportunities for small group discussions. It would also need to be a teacher who was willing and comfortable with my being part of the classroom activity for a period of several months. The first person who came to mind was Adette, a former colleague who had been a Grade 6 teacher in the K-9 school where we both taught and team-taught several years ago. Adette was an experienced teacher of nearly 20 years who had taught at a special needs site as well as in multiple grade levels in elementary school.

I remembered her as a warm and thoughtful, holistic teacher whose practice reflected her beliefs that children were active participants in their own learning and that they learned in many different ways – but that language was always central to their understanding. Over the years, I visited her classroom many times and observed the variety of learning opportunities she provided that allowed students to work in small groups on curriculum related tasks and to have time to talk together as part of their learning. During those years we established a collaborative professional relationship and often talked about our mutual interests in learning more about the value of talk

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[1] The names of the participants and the school have been changed through the use of pseudonyms.

as a tool for learning. During some of our conversations she raised pertinent issues and questions that related to the practical aspects of organizing and engaging students in using this mode of learning. I recalled many of Adette's questions when I began to plan this research and also found them thought provoking and helpful after I entered into the formal research process. Our "past shared experience and relationship" (Mercer, 2000, p. 44) as former colleagues provided a valuable context for our learning collaboratively during the research period.

Adette and I had stayed in touch after I left the school where we had both been teachers and I knew that she had moved to a new school across the city where she was continuing to teach in Grade 6. While Adette was still teaching at the previous school she completed a Master's Degree in Education that focused on School Improvement and Teacher Change. We met and talked about the possibilities of my doing this research study in her classroom and she was very willing and excited at the prospect of learning and working together. My next step was to obtain ethics approval before continuing further discussions with the teacher. Then I was able to approach the school district and apply for permission to conduct this research within the school system and at this particular school. The principal of the school was contacted and consulted by the school district resource director who offered her support in this research. With this necessary approval in place I made arrangements to meet with the principal of the school to discuss further plans for this research process to begin. I discovered on our first meeting that the teacher had already shared her interest in my study with her principal and together they had agreed that the topic of my research was very fitting for their present school initiative, which focused on "inquiry learning."

The Research Site: Lakeview School was the site of this research and was opened in 2010 as a new school in a rapidly growing suburban community within an urban setting. The school had approximately 700 students ranging from Kindergarten to Grade 9 who mostly lived within the community. This community consisted of families from a diversity of socio economic and cultural backgrounds.

When I read the school's Vision/Mission statement I was struck with the philosophy that emphasized "collaboration and support" not only with the immediate community but with community partners and outside agencies. In a letter sent out to the community, the principal expressed the school's goals to build strong relationships between staff, students, families and the community. She also shared the school's beliefs about the importance of a positive learning environment. "Our learning environment is positive and caring and thus supports individual differences, allowing all students to take risks in pursuit of excellence." These vision and mission statements strongly resonated with my own beliefs about students' learning and the philosophical goals of this study. They were a vital part of the context for my research within the natural setting of the classroom.

The classroom in which I conducted this research was made up of a group of 30 Grade 6 students - 18 boys and 12 girls. Out of the 30 students 16 were English Language Learners. This ratio reflected the wide diversity of multicultural backgrounds that was evident in the school and in the community. The range of ethnic backgrounds other than the majority of Western European included First Nations, Middle Eastern and students from India and Pakistan. Because

this was only the second year the school had been operating, some students in this class had been together in the previous year while others were new to the school.

The classroom was bright with large windows looking over the school grounds and sports field. Although it might be described as relatively large, it appeared to be somewhat crowded with 30 students, their desks plus the desks of the teacher and educational assistant. A Smartboard was mounted at the front of the room and the walls were covered with samples of students' art work and their writing (book reviews and other projects). A world map was displayed along with colourful charts and posters and randomly posted vocabulary cards that showed examples of words found in the context of social studies such as *diversity*, *consensus*, *perspective*. The teacher had posted a large chart displaying speaking rules that students used as a guide to follow during discussion activities.

When I first visited the classroom in January, and throughout the research period, the desks were arranged in five groups of four and two groups of five. However, as Adette explained, she liked to try a variety of different configurations of desk arrangements depending on the kind of projects the students were working on and on the dynamics among the group of students. For example, at the beginning of the year she sometimes arranged the desks in pairs or in a large circle that included the whole class.

It was in this classroom that the students experienced most of their subject area studies, which included language arts, social studies and science. However, they left the room for classes with different teachers for music, French and math.

Entering into the Classroom:

First impressions of the new terrain are, of course, based on older journeys already taken. In time, the new journey becomes a thing in itself, however much of its initial shape was borrowed from the past. (Bruner, 1986, pp. 36–37)

It was a cold mid-January morning when with mixed feelings I arrived at Lakeview School to begin my first day as a guest and researcher in Adette's classroom. I was excited but somewhat apprehensive at the same time about actually beginning this stage of the research process within this "new terrain." Although I had not visited the classroom before, I felt comfortable as I entered the room and saw a lively group of Grade 6 boys and girls all involved in various activities with their teacher whom I already knew from our previous experiences of working together. I was also accustomed, as part of my consultant role with the school district, to visiting a wide range of different classrooms in schools. I believed this experience helped in my adjustment to being with children in this classroom in this new role and seeing the whole learning environment through the eyes of a researcher and learner. Adette also explained that the students were used to having other people in and out of their classroom. Other teachers and administrators often visited because of their involvement in inter-school projects.

Although my frequent visitations to other classrooms had been an advantage to my immediate feelings of ease in this new setting, I was mindful of the inevitable biases that I brought to this situation. And in the words of Ely et al. (1997) "The distortions, blind spots, and limitations that contribute to our various stances are what people usually mean by bias" (p. 346). He added that "Bias in one who knows the Self, can perhaps lend strength to the story" (p. 347). These thoughts drew my attention to the importance in observing with an awareness of myself,

and my own history and perspectives, which all had a researcher effect on the data of this study.
It also pointed to the need to approach what I saw with an open mind.

Adette introduced me to the class as a teacher/friend and someone who would be
spending time in their classroom over the next few months in order to learn more about how they
were learning in their small group activities. I explained that for the first few weeks I would
work with everyone in the class but the rest of the time I would only work with a small group of
four or five students. It was important to me that all of the students felt comfortable with my
presence in the classroom and felt a part of the activities that were going on.

This initial period of working with the whole class provided opportunities for Adette and
me to make a decision as to which four or five students would be selected as participants for the
study. Together Adette and I read aloud numerous books, stories and chapters of a novel. We
encouraged the students to make comments or to ask questions during the reading. The readings
were also followed up with small group discussions during which time I was able to join into
some of the group talk. I also circulated among the groups and observed the dynamics and noted
particular features of their mode of interaction. The students were welcoming and seemed to
view me fairly quickly as "just another teacher" who was there to help them. They approached
me with questions, their thoughts about the novel I was reading with them, other work and
personal experiences they wanted to share.

I was getting a strong sense of the positive learning environment that existed within this
classroom. There was an atmosphere of warmth, respect and obvious strong attachments
between the students and their own teacher. These caring relationships appeared to be present

throughout the entire period of the research process which proved to be a crucial element in the success of the students' meaning making.

Selecting the Student Participants: Together the teacher and I selected the student participants for this study. We approached this process as sensitively and carefully as possible and took into consideration the benefits of this experience in regard to individual student's interests and needs within the context and nature of my study. We discussed some of the particular characteristics and attributes of the students that we would keep in mind as we narrowed down the numbers from the whole class to a possible four or five. This was the group size the students were used to working in and it was appropriate and manageable for my method of data gathering during the research. I relied on Adette's knowledge of her students' interests and personalities, and she was sufficiently familiar with my study to help me through this selection process. I was aware that in order to find out as much as possible about exploratory talk as a process I would need to work with students who were willing to engage in small group discussion and were able to sufficiently articulate their thinking and express their opinions and ideas. In order to encourage a variety of perspectives within the discussions it was also important that the group we identified represented a balance in gender, and reflected the diversity of sociocultural backgrounds and various levels of academic abilities. Because I worked with this group within the context of their regular classroom activities and did not take them out as a separate group, it was important that the makeup of participants reflected the class as a whole.

After much thought and discussion we decided to approach four students as possible participants. When we approached the students to see if they would be interested in

participating, they all expressed their willingness and interest. I explained a little more about the purpose of my study to the students and reassured them that they could "drop out" at any time if they changed their mind. I also let them know that we first needed to contact their parents to obtain their permission. Adette made the initial contact with the parents to briefly explain the purpose of the study and to request their verbal permission. I followed by providing the parents with copies of the ethics information/permission form outlining the study. At this point all four parents had verbally agreed to allow their child to participate but after they received the request in written form, one of the parents changed his mind without any reason and declined permission. Adette and I returned to our original list and selected another possible student to complete the group. These four students, two girls and two boys, remained participants for the duration of the research process.

Data Collection

Denzin and Lincoln (1994) suggested that, "Qualitative research as a set of interpretive activities, privileges no single methodological practice over another" (p. 6). Later they made a further point about the open approach that qualitative research allowed when they added "nor does qualitative research have a distinct set of methods or practices that are entirely its own" (p. 7). Denzin and Lincoln's perspectives are supported by Ely et al. (1997) who found that because of the "eclectic nature" of qualitative endeavours presented in the literature, "each researcher is seen as structuring the research project by using to a large extent whatever is called for during the emergent process of data collection, data analysis, and the construction of the final

document" (p. 4). This structuring and restructuring during the research process meant I needed to draw on the characteristics and practices of the notion of *bricoleur* as described earlier.

In order to monitor how the data collection was progressing I drew on the ideas put forth by Ellis (1998a) who suggested that the researcher try "to visualize the process as a series of loops in a spiral" (p. 20). Ellis explained that, "each loop represents a different attempt to get closer to what one hopes to understand" (p. 20). The researcher enters each loop with a question in mind and then what is discovered at that point can shape or even change the nature and focus of the next stage of the inquiry process. "What one learns in a loop provides direction or a reframing of the question for the next loop" (Ellis, 1998a, p. 20).

I considered each of the methods of data collecting such as observing, talking with the teacher and interviewing as one of the loops in "a series of loops in a spiral" (Ellis, 1998a, p. 19). Through my reflections on the individual nature of these processes I became clearer about the interrelationships among the various inquiry procedures that I had structured. I also saw the significance of these activities as tools that helped me to understand the parts as I worked toward a further understanding of my research subject as a whole. Or in the words of Prasad (2005) "'the whole', in turn, can only be understood from its 'parts'" (p. 35).

Although I had gathered data from a holistic perspective from the moment I entered the classroom (Boostrom, 1994) after the first 3 weeks I narrowed my data collecting more specifically to my research participants two mornings a week over a 6-month period. The primary source of data collection was the audio recording of the students' talk during small group discussions. These audio recordings were important and revealing sources of data for

further analysis and interpretation. The other sources of data included: my observations as participant observer (field notes), my written journal entries, and the student participant interviews. In order to understand this research experience from the perspective of the teacher, I interviewed Adette at the beginning and the end of the study. I also talked with the parents at the end of the study. The insights I acquired from all of these conversations supplemented my primary data and enhanced my own understanding of the research study. Students' artifacts such as drawings and writings as part of the pre-interview activity were also useful in my getting to know the student participants. In order to manage this data from multiple sources I, as *bricoleur,* in Denzin and Lincoln's (2002) words "pieced-together [a] set of representations that is fitted to the specifics of a complex situation" (p. 4).

Audio Recording the Students' Talk in Small Group Discussions: The students in Adette's class were accustomed to meeting regularly in small groups for discussion purposes and on a variety of assigned tasks. It was evident that they enjoyed working on activities with their peers. As previously agreed the four participants in my study stayed together as a group except during times when the teacher reorganized the groups for other purposes. Comments from the other students in the class revealed their comfort level at my involvement and audio recording of only one particular group.

Rather than taking the students to another location, all the audio recording was done within the classroom and during the course of the regular classroom activities. This idea is supported by Bogdan and Biklen (1992) who stated, "qualitative researchers are interested in

how people act and think in their own settings . . . so the activities that occur in their presence do not differ significantly from those that occur in their absence" (p. 47).

To begin the discussion period either Adette or I introduced a curriculum related topic as a focus for the talk. It was at this point that I would turn the audio recorder on. Apart from the occasional disruption in the classroom the recorder stayed on for the length of the discussion, which varied from 30 to 60 minutes. The recorder, being very small, went unnoticed in the middle of the table. It wasn't until the end of the research period that the students made any reference to the recorder (see Episode 8). Overall the process of audio recording went smoothly and proved to be a very effective means of capturing the talk.

Interviewing: Interviewing is described in the literature as an important means for the researcher to hear and understand from the participants' perspectives how they view their situations, their everyday lives and experiences (Ellis, 2006; Merriam, 1998; Mishler, 1986). Ellis (2006) pointed out that "the object of an interview is not simply to get answers to the questions but to learn what the topic of the research is about for the participant" (p. 115). Merriam (1998) explained that, "Within interpretive inquiry, the key concern is understanding the phenomena of interest from the participants' perspectives not the researchers" (p. 6).

I interviewed the teacher and the students at the beginning and at the end of the study. The interviews of the parents were conducted once at the end of the study. The purpose of the interview with the teacher at the beginning of the research process was to inquire into her past experiences as a teacher and to hear her perspectives on the role of talk for students' learning in the classroom. Then at the end of the study I interviewed Adette again to discover her

perceptions of the effect of this study on her students and what it meant for her to be part of this research study. The purpose of the first interview with the student participants was to become better acquainted and to learn more about their group work experiences using talk up to this point. The purpose of the final interview was to hear the students' perspectives on their experience as participants in this study. The interview with the parents at the end of the study was to hear from their perspective about their own child's experience using talk both in and out of school. All of the interviews were audio recorded and transcribed.

My approach to interviewing was to create a conversational style of openness as much as possible. But as Carson (1986) suggested "How to maintain the openness of the conversation is both an art and a skill" and he further pointed out how this challenge is sometimes "mediated by the pragmatic requirements of doing doctoral research" (p. 78). I was guided by Ellis's (1998b) suggestions for the interview process when she stressed the value of maintaining the open-endedness in the questions asked. "They avoid eliciting specific factual information. Instead, they invite interviewees to search for memories or thoughts they would like to talk about" (p. 37). I kept the questions I asked as open-ended as possible to act more as prompts, which encouraged the interviewees to provide details and to expand on their ideas without feeling rushed to "answer the question." By allowing the students time to share their comments, stories and experiences in their own words, the meanings they revealed provided me with rich and very meaningful data.

The interpretive strategies of interviewing and audio recording described above provided the major data for this research study. My approach to the data collection was holistic in the

sense that the interpretive inquiry activities were not carried out separately in a linear step-by-step process. Strategies such as interviewing, note making, writing, audio recording, and conversations with the teacher were ongoing and often used simultaneously and interwoven throughout the data gathering process.

Observations and Writing: Boostrom (1994) suggested that, "the classroom will teach the observer who is patient and wants to learn." He also proposed that, "learning how to observe and learning what to observe are accomplished in the same way and at the same time" (p. 52). Then later he further explained this point: "To say one learns what to look at in classrooms by seeing it may sound simplistic or paradoxical, but I doubt there is any other way" (p. 64). I found that these statements resonated with my experiences as an observer and note maker throughout the research process.

The observations, notes and written reflections that I recorded were important sources of data for this study. These observations began with all of the students in the whole class and then later became more narrowed on the small group of four student participants. I was aware of Boostrom's (1994) reminder of the researcher's "dilemma . . . if they look too narrowly, they will see little and may learn nothing from the environment they study . . . . If on the other hand they do not attempt to limit their focus, they may see too much and still learn nothing" (p. 52). Knowing when to observe broadly and when to "look more narrowly" was an ongoing challenge but one that became a back and forth process as I moved from one aspect of the classroom context to another. As well as listening and recording their verbal language, I paid careful attention to other forms of communication such as facial expressions, rolling of the eyes, hand

gestures and indicators of other messages they conveyed through body language. These observations became colourful images in my head that I recalled and pictured when I was transcribing the audio recordings.

At times I wrote more reflectively as a way of thinking through and interpreting my observations, field notes or new understandings in the way that Ely et al. (1997) suggested: "writing [as] a tool for sorting through and finding nuggets of ideas that trigger new ways of seeing and understanding" (p. 20). Ellis (1998a) described this form of writing as "self-conscious reflection" which she says is "a particular signature of interpretive inquiry." Then she continued to explain that, "Wherever it occurs, this reflection is the thread that holds the research story together" (p. 32). My reflective and interpretive writing at this stage of the research played an important part in my analysis and interpretation of all of the data I had gathered throughout this research process.

The Process of Data Analysis and Interpretation

> Confronted with a mountain of impressions, documents, and field notes, the qualitative researcher faces the difficult and challenging task of making sense of what has been learned [through] *the art of interpretation*. (Denzin, 1994, p. 500)

Denzin's (1994) words closely described the place in which I found myself when I entered into a more deliberate approach to the data analysis and interpretive stage of the research process. As other researchers have experienced, I felt somewhat overwhelmed at the daunting task of organizing and making sense of this data which included audio tapes and written field notes and ultimately presenting it in written form for others to read. I soon agreed with Morse (1994) who said that, "Doing qualitative research is not a passive endeavor." She spoke of "data

analysis [as] a process that requires astute questioning, a relentless search for answers, active observation, and accurate recall. It is a process of piecing together data, of making the invisible obvious, of recognizing the significant from the insignificant" (p. 25).

Through the process of analyzing and interpreting I attempted the challenging task of "bringing out" and creating meanings from the data. Polkinghorne (1988) explained some of the reasons why studies within the realm of meaning making can be difficult:

> The realm of meaning exists in a different form than natural objects do. It is an activity, not a thing. It cannot be picked up and held, nor measured by an impersonal instrument. . . . The activity of making meaning is not static, and thus it is not easily grasped. (p. 7)

I did not enter this research process with a list of prescribed procedures or specific categories to use in data collection or in analysis. Rather, I preferred to stay open to an inductive approach that would allow the data to determine the specific process in the way that Ely et al. (1997) expressed: "The process itself emerges from the data and the purposes of the study" (p. 163). This statement reminded me again of what Ely et al. called the "deeply interpretive" (p. 160) nature of qualitative research and of my role as researcher to negotiate and compose meaning from the data. They explained that, "Instead of an attempt to find or see meaning 'in the data' it is far more productive to compose meaning that the data may lead us to understand" (Ely et al. 1997, p. 20). This perspective on how the researcher approaches the constructing of meaning as expressed by Ely et al. is rooted in the socio constructivist assumptions that meaning does not pre-exist as an object but "what exists is a product of what is thought" (Bruner, 1986, p. 96).

The analytical and interpretive processes that I undertook in this study evolved from the data and was conducted through four phases: (1) Transcribing the audio recordings (2) Returning to the literature (3) Analyzing the talk (4) Interpreting patterns and themes.

Transcribing the Audio Recordings: I began the analytic and interpretive process with the daunting task of transcribing all of the audio recordings of the small group talk in order to create a written form of text. There were 20 separate recorded episodes of group interaction and 11 interviews. I found this experience to be more time consuming than I anticipated, sometimes frustrating, but very interesting and enjoyable to hear the students' voices again and to revisit the lively interaction.

As I listened to the frequent stops and starts in the conversations, I was reminded of Martin, Williams, Wilding, Hemmings, and Medway's (1976) description of recorded talk. "Talk between people in a group will show a certain jumping about from point to point, 'irrelevant' interruptions, and speakers continuing with *their* idea despite what has been previously said" (p. 22). Then on first reading of the written transcriptions I was struck with the reality of an "example of what ordinary everyday talk might look like, written down" (Martin et al., 1976, p. 20). It was as Martin et al. described in reading a transcript, "the page looks messy . . . . The speakers don't seem to have any very clear ideas, or much originality- there doesn't seem to be much point to it all" (p. 20). However I discovered, as Martin et al. pointed out, "an accurate transcript where what is actually said is carefully written can still be extremely useful and revealing, even when used completely without the original sound recording" (p. 21). Martin

et al.'s description of "everyday talk" reminded me of the similarities of the characteristics of exploratory talk that permeated throughout the literature.

Schwandt (2007) pointed out in qualitative research "the inquirer employs a variety of analytic strategies that involve sorting, organizing, and reducing the data to something manageable and then exploring ways to reassemble the data in order to interpret them" (p. 7). I sorted the numerous transcribed episodes of the group talk chronologically and into broad curriculum subject areas, which were then reduced in number to eight. This reduction made the data manageable for further analysis and interpretation. The decisions on which written transcripts to use in the final analysis were based on the range of topics, interesting content and the best illustrations of students' talk as meaning making. I organized all of the transcripts of the recorded talk, which included filing the transcribed interviews in binders. Transcribing the recordings was my initial step in the analytic and interpretive process of the data.

Returning to the Literature: Before I entered into any kind of systematic process in analyzing and interpreting meaning in the transcripts of talk, I knew I needed to return to where I began and to think about why I decided to pursue this study of classroom talk. I thought back to my early teaching experiences when I first became intrigued with listening to children interactively engaged in talking together in small group learning. It was during those years that I began to read for the first time, the early work of language educators whose studies centered on the power of everyday talk as a means of constructing meaning such as: *Understanding Children Talking* by Martin et al. (1976) and *From Communication to Curriculum* by Douglas Barnes (1976) and Britton's (1970) *Language and Learning*.

Now as an inspirational guide to developing procedures for analysis and interpretation I continued to read and to review the work of these particular scholars as well as other theorists and researchers who had conducted studies using discourse and narrative analysis in conversational settings. I returned to the ideas expressed by Bruner (1986) and Britton (1970) about the role of language in learning and understanding and the way we structure and use language to determine our perspectives and to create meaning. I also drew on the numerous examples of the analytic strategies of discourse analysis discussed and illustrated in the work of Barnes, 1976; Barnes and Todd, 1977; Martin et al., 1976; Mercer, 2000; Polkinghorne, 1988; and Wells, 2009. I designed my own list of meaning making strategies based on these theoretical ideas, principles and illustrative examples and categories of student talk to guide me in the analysis and interpretation of the students' conversational discourse. I drew on the work of Mishler (1986) and Polkinghorne (1988) in the area of narrative analysis as a framework for the analysis and interpretation of the student interviews and for the anecdotes of personal experiences that I uncovered in the talk (see Appendix A for a sample list of meaning making strategies).

Analyzing the Talk

I began the analysis of talk by reading and rereading the eight transcribed episodes along with my notes of written observations of the students' small group interaction. During these initial readings I noted numerous examples of the established characteristics of exploratory talk such as the use of tentative language and the hesitant tone. However, my focus at this point was on trying to get an overall sense of what each episode was about by asking myself "what is going

on in this sequence of talk?," "what is happening in this episode?." Using the list of meaning making strategies I created as a guide, I identified and color coded examples of specific features of language the students used, for example: "questioning," "hypothesizing," re-articulating," "interpreting," "explaining" and "statements of expressions of feelings." I then looked at these features in light of the thinking processes involved in the way we construct meaning such as "recalling," "ordering," "reordering," "reinterpreting" (Barnes, 1976; Barnes & Todd, 1977; Mercer, 2000).

I also uncovered certain sequences of dialogue as narrative accounts in the form of anecdotes or personal experience stories which I again tagged with color. This discovery of the insertion of personal narratives into the talk was consistent with the note I had made in my written observations. I drew on Ellis' (1998b) suggestion to begin by "clustering the stories or statements" (p. 41) and I clustered them not according to topics but according to the purpose for telling and for the contribution the story made to the process of students' understanding. In order to analyze the significance of these anecdotes in relation to my research questions, I turned to the work of Mishler (1986), Polkinghorne (1988), and Rosen (1985) in narrative analysis. I discovered, as Mishler (1986) and others have found, stories or anecdotes were also revealed in the transcripts of the interviews. As Mishler suggested, "stories are a recurrent and prominent feature of respondents' accounts in all types of interviews" (p. 235). He also stressed the importance in allowing the participants' stories to be told in their own way and "together to try to understand what their stories are about" (p. 249). I reflected on the students' acts of sharing their experiences in story form as anecdotes and how meaning was constructed through the telling.

All of these analytical procedures worked together to provide a holistic picture of the way talk functioned in the process of meaning making.

In order to address the research question of the influence of the peer social interaction I looked at styles of communication and how students listened, interacted and responded as part of their interaction (Lindfors, 1980). I examined the dialogue in search of indicators of the effect of the contribution of the words of one participant on the others in their coming to an understanding (Barnes, 1976). I looked at these elements of social interaction within the context of each episode and then in comparison with the other episodes as a whole. I then identified my own contributions to the discussions within the excerpts of the talk. I examined my mode of communication and the nature of my intervention and the effect on the dialogue that followed. Throughout the entire process of analyzing and interpreting the data I was noting within all the episodes particular insights that the students were acquiring. These insights were also revealed through the conversations with the students in their final interviews.

I was reminded of Ely et al. (1997) who encouraged researchers to write at the beginning stages of the research process as a way of working toward understanding. I responded to the text as a whole by writing a description of the interaction within each episode. This writing provided an initial interpretation of the talk and appears in Chapter 4 as a descriptive commentary at the end of each transcribed episode.

Barnes and Todd (1977) explained the purpose of analysis is to discover meaning in the talk. "When we analyse talk, what we are trying to do is to feel our way into the meanings the participants made for the interaction as it happened" (p. 17). It was through these back and forth

processes of inquiry by describing, analyzing and interpreting the data that led me to now think

about the meanings I had created, in terms of uncovering common threads, significant patterns

and themes.

Interpreting Patterns and Themes

Ely et al. (1997) described an analysis for themes as "one of the most frequently

mentioned analytic approaches used by qualitative researchers" (p. 205). They explained that,

"We need to tease out our meanings and discuss them with our readers. This is most commonly

done by a search for important patterns, themes, and perhaps issues that seem to reach to the

heart of these meanings" (p. 205). Ely et al. further explained how the process of theme analysis

fits well with other forms of data analysis "because it involves a process of sorting through the

fabric of the whole of our understanding of the threads or patterns that run throughout and lifting

them out - as a seamstress lifts threads with a needle" (p. 206).

In keeping with the "flow and unfolding quality of interpretive inquiry" (Ellis, 1998a, p.

16) I approached the analysis of themes as a back and forth process by returning to the analysis

of the talk and then searching for important interwoven threads and patterns of meaning within

the talk. This back and forth process involved careful reflection on all of the sources of data that

I had gathered. I carefully examined the text I created from the transcripts of talk, the summaries

of the episodes, the interviews and my observational field notes and reflective journal. I also

reexamined the specific features of language that I had identified and coded in my analysis of the

talk. I searched for patterns in the reoccurring signifiers of meaning that were emerging through

the interrelationship of the words and phrases and sentences spoken by the students in their dialogic interaction.

An important part of the process in examining the talk and searching for patterns and themes was revisiting the narrative accounts that I had written as summaries at the end of each of the eight episodes. These storied accounts were filled with "thick description" of my initial interpretation and became text that I approached using the narrative analysis found in the work of Mishler (1986), Rosen (1985), and Polkinghorne (1988). I read and reflected on each narrative account holistically with the overall question in mind of "what is happening in this episode?" and then again looked at the words and phrases that might confirm this perception. I next compared and synthesized the reoccurring threads and patterns that emerged across the eight episodes of talk. These indicators of enabling factors that mediated the talk in the construction of meaning became themes around which I organized my interpretation of the data. I will discuss these three major themes in Chapter 5: (1) The social context of the talk, (2) The verbal and cognitive strategies used by the students, and (3) The teacher's role in mediating the talk through intervention.

The Student Participants: Pre-Interview

After we selected the four participants, I interviewed each student in order to become better acquainted and to begin to develop a rapport through our conversation. Another purpose for this initial interview was to learn more about the students' perspectives and earlier experiences working with their peers in small group situations. I audio recorded and transcribed all of the interview sessions.

I began the interviews with a pre-interview activity, which was an aspect of interviewing I had encountered as a doctoral student in a qualitative research course. The use of the pre-interview activity in this study proved to be beneficial not only for the researcher but for the participant as well in order to gain insights into their own thinking and experiences.

Ellis (2006) described the benefits and the contributions that pre-interview activities can make: "such activities can support getting-to-know-you conversations" (p. 118) and can encourage both the researcher and the participant to begin in a comfortable and relaxed manner. She went on to say "importantly a conversational relationship can be established through discussions of the pre-interview activity products, thus building rapport for the remaining parts of the interview" (p. 121).

To begin the pre-interview activity I asked each of the students to make an "all about me" poster or other format of their choice to represent their favourite pastimes, important people and places. Then I met with each of the students at which time they shared their drawings, stories and experiences with me (Ellis, 2006). The length and format of the product and the detail included in their illustrated samples varied among the students.

The following excerpts taken from the transcribed audio recordings during the pre-interview activity, will introduce the student participants in their own words.

Nicole. Nicole chose to use a presentation website to illustrate her representation of herself. The website provided her with a variety of templates to select from. Nicole was able to customize her presentation using a wide variety of vibrant colors and fonts. She also inserted writing, diagrams and photographs.

I like to go India because that is where my parents were born and I have lots of relatives there. . . . I like going to BC because I have lots of relatives there and I was born there and I lived there for 4 years. And then I like going to the temple because . . . . I learn like things about my culture . . . and I learn how to write in my own language and read in my own language.

Nicole went on to explain that her parents differed in their ability to use English. She said, "My mom doesn't know that much English but my dad is really good with English." She then pointed to a picture of the Golden Temple in British Columbia and explained, "That is in India too . . . and it's actually made of real gold." Nicole went on to describe what she liked to do best in her free time.

I like watching TV, listening to music, playing on the computer, doing crafts/art playing video games, singing, reading really, really good books.

Amber. Amber made a small poster composed of photographs of her family vacation to Disneyworld, her friends and a list of "quick facts" about herself.

My favourite vacation was Florida. . . . It was great we went to all of the parks and to a character breakfast we also went shopping – I totally want to go again. This is a picture of me, my sister and mini mouse. She is in Grade 8. And the great thing is that they don't have any mosquitoes or bugs down there.

As part of the poster, Amber had displayed a list of "some quick facts about me," which she thought would be helpful in my getting to know her better.

I love soccer, I love to party, shop and relax in my spare time – I hate cold weather and love popsicles. I have a dream to have a family and move to Florida. I wish I could be a teacher when I grow up. And I enjoy playing soccer and being with my friends.

Joshua. At the time of this first interview Joshua did not have his drawing with him so I began by asking him to tell me a little bit about himself.

I have four sisters but no brothers, one is 21, one is a pharmacist, the other one does x-rays and my other one is 15 and the other one is only three.

I asked Joshua to tell me some of the things he did in his spare time.

> In winter I will go outside to my cousin's house. They're in junior high. One's in Grade 7 and one's in Grade 8. I'll go to their house a couple of times for 1 hour and then I'll come home. For summer we play floor hockey outside. In winter I play ice hockey. I also like snowboarding.

Joshua talked about Lebanon as a favourite place he liked to visit and he also mentioned

his interest in going to Mexico because of the hot temperatures in December.

> Lebanon . . . 2 or 3 or 4 years ago. The other favourite place I like to go is Mexico – we were planning to go there in December for our winter break because that's usually when it's hot there but I don't know what happened, why it got cancelled.

I asked Joshua if there was anything else he would like to tell me about himself. He

described his dilemma over having pets.

> Well I do like pets, I love pets but my mom doesn't really like them in the house . . . but me and my dad and my 19-year-old sister love them. Like we've had a bunny . . . we gave it to someone to take care of when we were on a trip this was 4 years ago when we were in Lebanon . . . .We came back and they said it got sick. It died 3 days after we got home.

> **Luke.** Luke had prepared his presentation in the form of what he called a "scrapbook"

page that included photographs and drawings and an autobiography written and pasted on the

back of the page. Luke explained:

> This is just like a hockey skate because I like to play lots of sports. These are just kind of pictures of my family so this is my mom, me, my step-brother and my step-dad and this is me and my dad. And I put a picture of like an art kind of potter thing because I love to do art.

Luke turned the page over and read his autobiography aloud.

> I'm Luke. I'm 11 years old and I was born on May 17, 2000. And I was born in (name of city). Some of the things I like to do are hang out with my friends and play sports. I also love to draw and eat food. One thing that you might want to know about me is that

I don't like to be left alone. I am very close to my family and love them all a lot. I love to play sports but my favourite sport is hockey and I love and breath and play hockey almost every day I do something hockey related. I think I am a very good student I always listen and get my work done. I am very social and like to spread my opinion. Now you know a little about me.

Because this was the first time I talked with each person individually I also learned a little more about their mode of communication and I believe through this activity we established an initial level of comfort in talking together. Through these interviews I could see the diversity of interests and characteristics of this group of participants.

The Student Participants: First Interview

Following the pre-interview activity I continued to interview each of the four students to find out more about their previous experiences working on projects or engaging in discussions in small group settings. These experiences were an important part of the background they brought to the present study. The following excerpts were taken from the transcriptions of these interviews.

Nicole: I began by asking Nicole to tell me how she felt about working on activities in small groups in the classroom.

I like it better in small groups. Cause usually teachers make it by yourself you're in rows . . . just by yourself. I like it better in groups of 4 because you are facing each other and you can talk to each other. If you have questions you can like ask the person beside you or the person in front of you or the person across from you so it is easier to just get your ideas straight.

I asked Nicole to tell me about any problems she might have encountered during small group work.

Yeah, especially with Luke not to be mean but it's like we talk and then me and Luke, he always has a different idea and I always have a different idea. We argue about it a lot.

It's difficult because you argue about it you know that you're right and he knows that he's right and at the end if you find out you're wrong it's kind of embarrassing but it's kind of you learn something, but it's kind of embarrassing at the same time.

Nicole's account of this event illustrated Mercer's (2000) description of what happens when talk becomes disputational. "We may treat our talk partners as a threat to the pursuit of our individual interests, in 'disputational talk', in which the participants work to keep their identities separate, and to protect their individuality" (p. 173).

Nicole continued to talk about her past experiences with Luke in the discussion groups. She described the strategies she had learned to use in order to work through problems of disagreement when they occurred in discussion.

You have to defend your answer with like things like, it's like you know that you're right and then you have to like say why you're right – you have to say I know this is right because we learned about this, this, this and then [Luke] always says no I know this is right because we also learned about this, this, this and then after we ask them and we think this is right. If we can't figure it out we ask Mrs. Henderson – but then Mrs. Henderson always says you have to ask someone in your group or someone close to you before you ask me because it's better if a classmate helps you rather than I help you.

Amber: When I asked Amber to tell me about her experiences in small groups she explained:

I like it because then you don't have to be in a big group and everyone just shouts out in a big group. When you're in a small group you kind of have your own chance to talk about the topic and you don't get off the topic that easy. When you're in a big group lots of people have a conversation with them and a friend and not with the whole group.

Amber described any problems that she had encountered in group work as just "little things." She recalled examples of group work that involved making a decision and finding a specific answer to a question. Amber further explained that although there might be different opinions among the group they usually found a way to work out their differences.

Like if one person thought it was that answer and then another person thought it was a different answer that would lead to a little problem but usually we would figure it out and we would get everyone working together to find the true answer because sometimes it wasn't both of our answers.

Amber continued to talk about how the group attempted to solve this problem and to come to a consensus. She described a collaborative process that ensured that everyone's ideas were heard and then pooled together to make a final decision.

One of the ways we tried to solve the problem is that the other two people gave their ideas and then we'd pick the idea that sounded the best. We took a little bit of each idea and put it together as one.

In Amber's final thoughts about small group work she explained that one of the benefits was having the opportunity to hear a wide range of different perspectives.

Everybody has their own ideas so you kind of understand from different perspectives of a way. Like if one person said you could times it first and then subtract and the other person said if you don't want to do that you could add and then subtract that from whatever the answer was. You kind of have different ideas to help you get better.

Joshua: Joshua began by sharing what he thought were some of the advantages in small group work.

It's good because you have people around you to keep you company. If you're stuck on a question then they help you. When you're in rows like when you get into high school it's going to be difficult.

However, Joshua added that at times he found it "easier with two people . . . because then you'll get the answer in a matter of time. You'll get it because you only have to go through two ideas instead of four."

I asked Joshua if he could think of any earlier times that he might have encountered a problem when working in a small group. Joshua referred to a reoccurring problem that he

recalled when the group was required to come to a decision. "When we are coming to a decision. Each one of us has different answers but then at the end we all just come to a consensus."

Joshua further explained how the group worked through the process of coming to a consensus.

> We'll do it pretty much if one of us has an answer and the other one has an answer we'll like talk about it and then we'll ask Mrs. Henderson what the question was again. Then we would see which answer was the closest one to it – the accurate one to it and we would stick with that one.

> **Luke:** One of the questions I asked Luke concerned the configuration of the desks

organized in small groups. *The teacher had recently explained to the students that the desk*

arrangement was conducive to the schools initiative of inquiry learning.

> I think it works really good because [Mrs. Henderson] just mentioned to us a little while ago that it's a new way of approaching learning and just having more discussions in small groups and I think you were there when we had the science people come in.

I asked Luke to tell me more about this "new approach to learning."

> It's good – it's a lot more challenging – it's fun though especially when you get to do it with a group. Because it's way easier to learn when you have a group because everyone has a little bit from here and little bit from there and you combine it and it makes everything even.

I then asked Luke to tell me some of the ways he found it helpful to work in small groups.

> Everybody's good at something. Say you don't know how to explain what the definition would be of some word like "that" or something. Somebody could maybe help you because they're good at explaining that stuff – they're good at reading comprehension and stuff and at just explaining and some people are good at math. Like I'm really good at math – I've never really had problems with math.

Luke further commented on the benefits he saw in small group work.

It's not just me getting more it's everybody else getting more because everyone helps everyone learn – that's the other thing that [Mrs. Henderson] told us at the beginning of the year – because I'm not a very good speller at all and I would always ask her "how do you spell this word" and she would say "ask your friends" because that's what she did at the beginning of the year she put us in groups – it's unfortunate that everybody doesn't get the chance to learn this way because some teachers don't choose to help them learn that way.

In response to my question concerning any problem he might have encountered Luke

described his disapproval of some of the attitudes and behaviours of the other students.

Yeah, some people . . . I'm not trying to be mean or anything but some people are different than others. This is something that I struggle with seeing like being able to deal with some stuff they do like [student's name] he's always making origami and stuff and kind of fooling around so I have a hard time dealing with that sometimes. I like people who like to get their work done because at the end of the day it can affect me just like picking friends and they can get you in trouble.

Then Luke explained the approach he had taken to try to solve this problem.

I've tried to encourage them to work and stuff and say once it's all done it's done and we'll get a better mark and everything. Honestly school is fun if you can do it properly and have fun.

Informal Conversations with the Teacher

The Teacher and I Talked Before the Study: As part of our first informal conversation

I asked Adette to complete a pre-interview activity of her choice as a starting point for

discussion. She selected to draw a timeline that represented her career path in teaching.

The timeline that Adette had drawn guided our discussion about her experiences in using

talk as a tool for students' learning and about her beliefs about children. Adette explained how

her interest in the role of talk for learning began early in her teaching when she first worked with

students in a special needs class. "Right from the start I could see the value in getting students to

talk about their learning in the classroom . . . because some kids don't have a lot of skills for

putting things down on paper." Adette explained that at that time she was introduced to the

notion of "reciprocal teaching."[2] This approach encouraged her to create further opportunities

for students to talk together and to develop the art of asking good questions "and some of the

questions surprised me." She described her classroom as sometimes "noisy" but she had

structures in place such as ground rules to help students feel safe and to learn "how to talk

respectively with one another" because "I try to establish the fact that we are all important."

Adette went on to say that changing schools or changing the grade level she taught did

not change her ideas on the value of "kids teaching other kids and that talking with one another

in groups was important." She referred to the point that "the curriculum called for them to be

talking about solving problems and the need to solve problems." She provided several examples

of the activities the students engaged in during math, social studies and science where the use of

talk had been important and helpful to their learning. She stressed the collaboration involved in

students working through problems together and how she asked them to "explain these problems

to one another in their groups." Adette stressed with her students the importance of helping and

supporting each other "as colleagues in the classroom." She told her students "It's not a

competition; we're here to help one another."

Adette explained that another purpose for her students to have small group discussions

involved the preparation for the provincial standardized tests. She added that questions from

previous tests were used as topics for discussion. Adette explained: "When they get to talk, they

get to read to one another and to work through the questions . . . to talk back and forth. It's sort

of bringing the questions alive." She added that she wanted to help kids to "feel calm" about

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[2] Teachers and students engage interactively through talking and listening and learning with each other.

tests and "not a big stress." Then Adette summed up her thoughts about the benefits of talk for students from her perspective as their teacher. "So I think talking through things and thinking through things and giving people opportunities to flesh it out helps - helps their learning. It can help push learning forward and I think it make learning more enjoyable."

Embedded throughout Adette's view of the role of talk as an important part of her beliefs about teaching, there were many comments that revealed her beliefs and views of children. Adette saw her students as actively involved in their own learning and in helping those around them to learn as well. She explained how "they had to become the teachers in the classroom and they had to become students who were teachers and students who were learners." She believed that the students were capable of finding things out for themselves by doing their own research and then sharing what they learned with others. Trust was an important reoccurring word in Adette's comments about her beliefs in children having the freedom to learn. She spoke of the need for trust among the students themselves and trust in her as their teacher and her trust in their wanting to learn. "The more I let go and let kids do it the better they are and the more willing they are to have discussions." However, Adette recognized that not all children learn in the same way and "if we stop listening to the way other kids think then we're limiting their learning choices really in the classroom." Then she added, "everyone's thinking is acceptable and if we acknowledge our different ways of thinking then we can probably reach more kids in the class."

The Teacher and I Talked Throughout the Study: Adette and I engaged in informal conversations at some point during the day either at recess or before or after school during the entire research period. Our conversations often focused on the students - the recent happenings

in their lives in or out of school that Adette felt might be helpful for me to know before I met with the group. Sometimes she would share a comment that a particular student made to her about their experience during the group work time. We also spent a great deal of time discussing the variety of small group learning activities that the students had engaged in before I came as well as planning for this research period.

Adette and I selected the books we read aloud to the students together and brainstormed ideas for topics for their group discussions that were related to the readings. For example, the novel *The True Confessions of Charlotte Doyle* by Avi (1990), which we read aloud, suggested to us topics for discussion such as the dilemma that can be created when we are faced with having to make an important decision. Excerpts from this discussion are presented in Episodes 5 and 6 in Chapter 4.

During one of our conversations, Adette provided me with valuable background information of what the students had learned in social studies about the consensus model of the Iroquois Confederacy. She described their participation in a role playing activity that allowed the students to use this model in selecting a sports' event for their intramurals. This knowledge of their past experience proved helpful to me in creating the context for a later discussion in social studies.

I often shared with Adette interesting incidents that happened within my particular group during the discussions as well as some of the audio recordings that I had transcribed. Adette became increasingly more interested in the students' use of exploratory talk for learning and our conversations often focused on issues and questions she had about this topic. Together we

explored ideas such as questioning and talked about ways of helping students to learn to develop and to ask "better questions." At times our conversations extended into broader areas such as how the use of exploratory talk related to the notion of dialogic teaching. Adette raised questions about some of the similar challenges in this approach to teaching that are presented in the literature (Alexander, 2008a). She wondered how small group discussions that were more open-ended and allowed students to engage in exploratory talk could be organized for whole class learning when she was the only teacher present. My conversations with Adette continued to be extremely helpful experiences and informative sources of data in this research process.

Criteria for Trustworthiness and Authenticity in a Constructivist Paradigm

Guba and Lincoln (1994) discussed the criteria for judging the goodness or qualities of a qualitative inquiry. They suggested that the qualities of trustworthiness (transferability, dependability, credibility and confirmability) and authenticity (fairness, ontological authenticity and educative authenticity) are considered as part of the criteria to judge an inquiry within a constructivist paradigm. To fulfill these criteria is to suggest that the research study has credibility and deserves the confidence of other researchers and educators. These are qualities that I strived to achieve throughout this inquiry.

To ensure the trustworthiness of my research account I made every effort to develop an open relationship with the teacher and student participants and I was committed to gathering and recording observations in as accurate a manner as possible. In order to verify the accuracy and dependability of what had been said and observed, I shared the interview transcriptions and field notes with the teacher and requested her feedback and verification. I engaged in ongoing

conversations with the teacher as a way of keeping her informed and encouraged her response to my interpretations.

After interviewing the students I shared the interview transcripts with them to verify that what I transcribed was accurate. This was also an opportunity for the students to extend or expand on any of the comments made in the interview. I talked with the students regularly throughout the study in order to monitor their thinking about the benefits and challenges they were experiencing in the small group discussions.

This study is grounded in theories put forward by renowned educators and researchers, which provides strong support for the credibility of the study. The authenticity of this inquiry was met through the educational setting of a classroom during the regular day-to-day teaching and learning activities. My approach to this study of exploratory talk for learning is rooted in my own ontological beliefs as a learner, about children and learning, and about the nature of knowledge and how we acquire it – which is consistent with the principles of the constructivist stance.

Chapter Summary

Mercer (2010) suggested "that particular methods are often embedded in particular methodologies, which are based on specific theories of social action, research paradigms and disciplines" (p. 1). In this chapter I have attempted to bring together the research methods I used in order to grasp the meaning of exploratory talk as a tool for learning and the constructivist methodologies that theoretically framed these procedures. I explained the nature of qualitative research as described by Merriam (1998), Bodgan and Biklen (1992), and Ely et al. (1997) who

emphasized the common characteristics found in this qualitative approach to research. They spoke about the "eclectic nature" (Ely et al., 1997, p. 4) and the significance of the natural setting, the strong interpretive and recursive aspect and the role of the researcher as the key instrument in determining the procedures for data collection, analysis and interpretation (Bodgan & Biklen, 1992; Merriam, 1998).

I moved to the notion of Interpretive Inquiry as a more specific methodological approach, which was grounded in the theoretical principles of Hermeneutics (Ellis, 1998a; Prasad, 2005; Smith, 1991). I explained how this approach was in keeping with my own ontological beliefs and the stance I undertook as the researcher.

Throughout this chapter I have described the research process I followed in search of the meaning of exploratory talk as a process for learning and understanding. I presented the theory and the practical procedures that served as the basis of my making sense of the data. In the next chapter I will present excerpts from the transcripts of eight episodes of students' recorded small group discussions. Each episode concludes with a summary and description of the talk. I also include in this chapter the students' reflections on their experience in the research project.

Chapter Four: Presentation of the Data

> One of the most important things to be said about talking . . . is that it is the normal way in which we endeavor to make sense of our own experiences, so that we store in memory not the raw data of events but the meaning we have come to attribute to them. (Britton, 1982c, p. 115)

This chapter presents the voices of four Grade 6 students through excerpts from transcripts of their exploratory talk recorded during a series of informal small group discussions. The purpose of the discussions was, in Mercer's (2000) terms, to encourage the students to "engage critically and constructively with each other's ideas" (p. 98) through the use of exploratory talk as a process of creating both individual and negotiated meaning. These *talking and thinking together* sessions were held during the usual class periods when the students were provided with opportunities and sustained time to discuss books they were reading along with various concepts and issues across subject areas. The topics under discussion were curriculum related and involved a wide range of current and shared interests among the students. I selected these particular excerpts of exploratory talk because they represented a variety of topics of interest and they best revealed examples of the language and communication strategies the students used as a process to create meaning and to advance their learning (Barnes, 1976). I have provided a brief introduction to each transcribed episode as well as a summary of my initial interpretation. A deeper analysis of the data will be presented in Chapter 5. I have also included in this chapter excerpts taken from the students' final reflections on their experiences of talking together in small group discussions during the research study. I have included the reflections of the classroom teacher and the parents of the student participants, which served as supplementary data to inform this study.

The talk that appears within these excerpts has been transcribed directly from the recordings and so is in a relatively unpolished form. It also demonstrates the characteristics so commonly found in talk that is described as "thinking out loud or exploratory." In such talk the speech is often tentative, disjointed, repetitious and contains starts and stops within incomplete sentences (Barnes, 1976; Mercer, 2000).

Episode 1 – I know Someone Who is Very Brave

The following conversation among this small group of students evolved from spontaneous remarks made while the whole class was listening to my reading aloud the first chapter of the novel *The True Confessions of Charlotte Doyle* by Avi (1990). Several students had commented on their perception of Charlotte as a brave and courageous young girl when she boarded the mysterious cargo ship to begin a sea voyage from Britain to America in the mid-1800's. I asked the students to think and talk about what they knew from their own experiences about being brave and courageous**.**

This transcript illustrated the students' use of exploratory talk as they engaged in the telling of personal experience stories as a way of "building a shared frame of reference" (Mercer, 2000, p. 42).

1. **Nicole**: My cousin when he was like I don't know probably like 7 or 6 he got diabetes and then now every day he has to get like I think two or three needles and then he has to get one needle in his belly button. And I think you have to be like really brave or courageous, like you have to be brave like . . . (*Nicole continued in a mumble*)

2. **Amber:** Don't you have to give them to yourself?

3. **Nicole**: No his mom gives them to him but when he gets older he will have to give them to himself. And then also because like he when everyone else is there and if we go to the house like um and we're all having something sweet and sugary then he can't like have it and if he's watching he gets sad that he can't have it or else he'll get like a sugar high.

4. **Joshua**: Does he take them [the needles] all at the same time or at different times?

5. **Nicole:** No I think it's at different times but I'm not sure though – yeah but his mom gives them to him but probably when he gets older he might have to start giving them to himself instead and he'll have to learn how to do that. I'm really scared of needles or just looking at someone getting it. I don't think I would be able to give it to somebody.

6. **Luke:** They [the needles] look deceiving, they don't look nice.

7. **Janet**: Even though he doesn't have to give himself the needle it would still take a lot of courage to have a needle and to avoid eating sweets.

8. **Nicole**: Well he can but sometimes he **has** to eat something sweet, he **has** to have a snack that has like this much sugar. And it is also hard for his parents because they have to watch him, how much sugar he eats, what he eats every day and stuff.

9. **Amber**: My grandpa he was in the hospital for 3 weeks and he got out yesterday because um his heart wasn't working like only a part of it like 20% of his heart was working. So he was in there for 3 weeks all by himself and they took so many blood tests that you could see all the bruises on his arms and stuff.

10. **Joshua**: That's like my sister. The nurse took like three shots to get her vein because my sister's vein it's hard to get, you can't really see it so the nurse had to take three of them [meaning needles].

11. **Luke**: I have different experiences. Ms. Johnson (*a former teacher*) had to get her um wisdom tooth pulled out. I hate getting teeth pulled, I hate it. And when I dyed my hair pink I thought everyone was going to make fun of me. That was kind of hard but everyone said I looked better with pink hair.

12. **Amber:** But it was awesome hair.

13. **Joshua**: But then you had to shave it.

14. **Luke**: Yeah, I did that.

15. **Janet**: Why did you dye your hair pink?

16. **Luke**: Just because my grandma had cancer and stuff. She had colon cancer plus her grandpa had it or her dad so my great grandpa and he died from it so it was kind of really nice to see that she didn't die from it. And you can tell like everyone catches it in the family. I know my mom always has to go for tests and that kind of stuff.

17. **Janet**: That was a very courageous thing you did to dye your hair pink knowing that your classmates might make fun of you, but you did it for a cause that was very important to you.

18. **Luke:** It's not always just knowing that you're just doing it, it's doing it for a cause. It's not doing it just because you want to do it – like I know some people just dye their hair pink but it's doing it for a reason.

19. Janet: Did you stop to think what the reaction would be from your classmates?

20. Luke: Yeah, everyone wanted to touch it.

21. Nicole: The day before like cause it was going to be crazy hair day right and so I was

walking to my van and he's [Luke] like I'm going to have pink hair tomorrow and I'm

like or you're lying but then he walked in with pink hair. I'm like that's not permanent

right?

22. Luke: Everyone looked at me and thought it was spray or gel or something but it's not

because it's way brighter.

Summary of the Talk: Nicole began by telling the others about her 6-year-old cousin

whom she considered to be very brave because as a diabetic he has to have two or three needles

every day. Not too surprisingly this personal story grabbed the interest of the other students who

immediately engaged in conversation to find out more information. Experiences with having

needles and injections along with the accompanying fears are not unfamiliar to most children of

this age. Amber and Joshua asked questions about the practice of administering needles. Nicole

described how her cousin felt when he watched other people eating sweets and then she

elaborated by explaining how on the other hand there are times when snacks are necessary.

The group talk continued in the form of sharing personal experience stories of themselves

and family members who had demonstrated courage in other situations that involved needles.

For example, Amber's description of blood tests for her grandpa and Joshua's account of his

sister and the nurse, as well as Luke's example of someone he knew having teeth "pulled out."

All of these "stories" were important incidents in the children's lives and conveyed a trust in each other through the sharing.

At this point in the discussion Luke made the announcement, "I have different experiences," which was his way of introducing another personal context to talk about and to illustrate what it means to be brave and courageous. By introducing his comments with this phrase Luke demonstrated an important communicative skill in carrying out a discussion. This statement acted as a signal to the others that he was making a change in the direction of the talk, which then allowed him to tell about another personal experience of his own. He went on to share an account of a time when despite his fears of ridicule from his peers, he dyed his hair pink to show his support for cancer patients and their treatment. Then in answering my question as to why he dyed his hair he explained that the main reason for making this decision was knowing that he was "doing it for a cause" rather than "just because you want to do it." My question to Luke showed him that I was interested in hearing more about this experience and it also caused him to reflect on, to evaluate and to affirm his reasons behind this decision. In doing so Luke was becoming clearer about what it meant to support a worthwhile cause.

This transcript also demonstrated examples of the students' use of tentative language, a major characteristic of exploratory talk. They used sentences that were unfinished or disjointed in dialogue filled with many phrases such as "like I don't know" and "probably like" and numerous "ums" and "ands" (Barnes, 1976). All of which indicated their thinking aloud as they were sorting out their ideas.

This small group discussion provided the students with an opportunity to talk in a meaningful way about notions of fear, bravery and courage which were central to understanding the characters in the novel. The telling and listening of personal stories allowed them to present their own ideas within the context of their life experiences. As Wells (2009) pointed out, the ideas we share in communication with others stem from our "personal understanding of the world" (p. 307). Thinking about these ideas within familiar situations and sharing them in the form of stories not only made sense to them but it also provided a foundation for developing multiple and diverse meanings of the same concepts when presented in new settings. This idea became clearer to me in further discussions of the novel when I observed the students talking together about some of the actions and qualities of the characters they encountered.

Episode 2 – The Ship's Log

I suggested to the students that while we were reading the novel *The True Confessions of Charlotte Doyle*, we each keep a "Ship's Log" to record the daily happenings on board the Seahawk during the long voyage. We all agreed to choose one character and to write the journal entries from that person's perspective. But I soon discovered that writing from another person's point of view was a new experience for the students. This meant they needed more support and assistance in understanding what was involved in this kind of task.

The following excerpt illustrated the students' exploratory talk as they tried to make sense of an unfamiliar task. My role as facilitator/participant in mediating the talk is also highlighted.

The discussion began with Luke asking me "Who are you going to do?"

1. **Nicole**: Charlotte?

2. **Janet:** Yes, Charlotte or I thought maybe . . . . (*Nicole interrupted*)

3. **Nicole**: Zachary.

4. **Janet**: Yes, maybe Zachariah.

5. **Luke:** He (*the captain*) is off the ship so you can probably tell that nobody wants to get on the ship and all these people are supposed to get on the ship and they didn't, right? *I reminded the students that they could refer back to the book to help them recall any events (they each had a copy of the novel*

6. **Luke:** So are we supposed to kind of do it from his (*the captain*) perspective?

7. **Janet:** Yes, try to visualize that you are that person on the ship i.e., Captain Jaggery – you're writing from his perspective. Also try to take yourself back to 1832 and what we had talked about life was like during that time – no phones, no computers.

8. **Nicole:** So um we don't write in the 3rd person?

9. **Janet:** Right, you are going to be writing in the 1st person.

10. **Luke:** Third person everybody . . . (*couldn't hear the next few words – Luke mumbled*)

11. **Nicole**: So we just write um Charlotte this person's name is Charlotte?

12. **Janet**: Or "My name is Charlotte" because you are pretending that you are Charlotte and this is why you are writing in the first person. And remember you can also write about what you were thinking and feeling at the time not just what you saw.

13. **Nicole:** What is the ship's name?

14. **Janet:** The Seahawk. *At this point I reminded the group that if I were writing from Charlotte's perspective I might think about "what was she like?" "What kind of family did she come from?" or "Had she ever been alone in any other similar situations before?," "Was she feeling frightened."*

15. **Luke**: Yeah but there's another thing you could add in for Charlotte showing how her life was before – going to a private school and being at the top of the class – they mention that at the very beginning.

16. **Janet:** I like that idea and with Captain Jaggery – the same thing even though he isn't introduced in the story until Chapter 3 (*Luke interrupted*).

17. **Luke:** He still sees everything probably.

18. **Janet**: That's right. You know the events that happened in chapter one and two and so you could still include those from Captain Jaggery's perspective. Captain Jaggery probably knows himself that the people and crew are afraid of him – and even though he spoke to the crew once before the ship sailed he did tell them that his mates would be doing the talking for him.

19. **Nicole:** What was the person's name who um took um Charlotte to the dock?

20. **Janet**: Oh Mr. Grummage.

21. **Nicole**: Mr. Grummage, how do you spell it?

We looked up the spelling together in the novel.

22. Luke: Another thing though you also kind of get that feeling where he's not nice to people – because he's oh I just want to get there, get my money and go home right– like he doesn't seem like he just wants to have like a fun trip and care for people.

23. Janet: I think you're right. I think his main goal is to just get the cargo and his ship to America.

24. Luke: It doesn't sound like he's interested in the people on the ship.

25. Janet: I wonder if he doesn't appear to be interested or care about the people on the ship if that will affect how he treats Charlotte and the crew.

26. Nicole: Cause he was also saying that um I hope we never have to talk again or whatever cause he's like um my first mate will do all the talking for me. So I don't think he wants to like see them and talk to them.

27. Janet: That's right as Luke said all that he seems to be interested in is getting his cargo to America – he doesn't seem to interested in the crew as people – to the captain they are just "workers."

28. Amber: It's like the captain doesn't like people so the captain would be just like yeah you do your stuff and I'll just sit and wait until we get there.

29. Nicole: Maybe that's like why the people are scared (*Nicole is referring to the porters at the beginning of the story*) and don't want to go there.

30. Luke: Another thing that kind of gives him like Captain Jaggery a bad like appearance is that it kind of sounds like his first mate is always with him because his first mate was off

the boat when he was off the boat – it kind of sounds like he is always around him doing everything for him.

31. **Nicole:** And you know how when um they were supposed to do the roll call um like everybody they came up and then they were really stiff and really scared and then after when they walked away they (*couldn't hear the word*) again – so I think they like . . . it was because they were scared of Captain Jaggery that he would like . . . (*Nicole didn't finish her sentence*).

Students continued working on their ship's log – making notes for their first entry.

32. **Nicole:** Do I have to do everything that's happened so far?

33. **Janet:** You don't have to do every event you can just pick out . . . (*Nicole interrupted*)

34. **Nicole:** The most important ones?

At this point I shared with the group some of the notes I was making about Charlotte.

35. **Nicole:** I only put two um dash things so far.

36. **Amber:** I never did it like that I did it like "My name is Charlotte." I kind of did it more as a journal writing like the events she went through, what happened first and stuff like that.

37. **Nicole**: Can we do like the journal part but then put it all in point form so we don't have to write complete sentences just write like the most important thing.

38. **Luke:** It would be hard to write sentences without actually writing a book or something like that. That's what you do when you write a report but this isn't kind of like a report.

39. **Nicole:** Yeah this is journal writing.

40. Janet: And with a journal the purpose is usually to just get your ideas down – to record your thoughts, or events not to worry about perfect spelling – it's not an edited piece of writing –we're more interested at this point in your ideas.

41. Nicole: Yeah, but um Charlotte's dad wants her to have like perfect spelling, perfect grammar cause he was saying that he doesn't like he wants her to have perfect spelling so that she doesn't fall behind in school and stuff – he wants her to have like he said he will be checking her spelling mostly because it's not her strongest thing (*referring to the journal her father had asked her to keep*).

Summary of the Talk: This excerpt began with the children talking together and as they struggled with ways of organizing ideas for creating a ship's log written from the point of view of one of the characters in the novel. The dialogue started off with the students mainly asking brief and direct questions as they were seeking information from each other. Luke wanted to know which character I might choose. His asking suggested his willingness to include me as part of the group engaged in this task. Nicole's one word inquiry "Charlotte?" which acted more as a prediction than a question also indicated her acceptance of my role as less "the teacher" and more as one of the group members. Her suggestion also reflected our developing relationship as a supportive co-participant. My response was tentative and exploratory which may have also helped her to observe my thinking aloud and to see me actively engaged in the role of participant.

The talk continued with questions that were mainly directed to me as the more experienced member of the group. The students asked for clarification about spelling, format

and how to sort out whose perspective they would be writing the journal from and would it be in 3rd person or 1st person. All of these questions were focused on getting on with the task but they also revealed the school knowledge they had acquired about the use of skills and techniques in writing. And through this talk the students had an opportunity to integrate this knowledge of writing and to understand it in the context of a new task (Barnes, 1976). Yet their inexperience and confusion about writing from behind the head of another person was becoming more obvious through their questions and comments. My role as facilitator and participant allowed me to assist their learning through support and guidance. I wanted them to understand that writing from another person's perspective in this instance meant entering into the world of the character in the novel and assuming that person's point of view.

At this point, in order to help them move on I shared some of the questions I might ask myself in order to help me write from Charlotte's perspective. Luke's next comments demonstrated how he was responding to my suggestions by building on to my ideas. He then continued to offer explicit ideas about Charlotte going to a private school and being at the top of the class. He supported these details by referring back to the text, which Barnes (1976) maintained is "a very necessary part of constructing a meaning" (p. 50). By adding more ideas for me to consider about the character, Charlotte, Luke was demonstrating what it means to collaborate and to construct meaning together.

Here the flow of talk was interrupted with a spelling question asked by Nicole. Once again Luke returned to the novel and commented on another characteristic of Captain Jaggery. He began by using the phrase "Another thing though" which provided the others with the cue

that he was rethinking and adding on to their ideas expressed earlier. This phrase also illustrated

his use of an important communication skill in effective discussions, which is to acknowledge or

validate what has been said by another person. Throughout the discussion Luke used this verbal

strategy repeatedly to preface his contribution and to build onto the ideas of others. I supported

Luke's opinions about the captain's possible lack of interest about people and I then

hypothesized about this uncaring attitude influencing his treatment of Charlotte and the crew.

Through my hypothesizing I guided the students to take what they now knew about the captain

and to think about this in new ways and in new situations. Nicole, in following my lead, recalled

further evidence from the text to support Luke's and my perceptions of the captain. She then

used this information to hypothesize what he would do next concerning his communication with

the crew.

The above discussion demonstrated the students' use of exploratory talk to rearticulate

the character traits and events that they recalled from memory and from what they had read and

talked about. Barnes (1976) saw this re-articulation of knowledge that is already possessed

acting as a means of reinterpreting ideas and giving them new meaning, which is "an essential

part of learning" (p. 55).

Throughout this group interaction my role as facilitator and member of the group

provided me with critical moments to facilitate their learning by demonstrating some of the ways

of using language to create meaning. I was able to demonstrate some of the verbal strategies we

often use in exploratory talk such as, thinking aloud, questioning, hypothesizing, looking back at

the text and exchanging ideas. My role also became important in strengthening social

relationships and modeling a collaborative approach to small group discussions.

Episode 3 – The Captain and the Coach

During our next discussion about the novel the students continued to talk about the

character of Captain Jaggery as a stern and authoritative leader. At this point they were

beginning to question the inequitable treatment of the captain toward Charlotte and the crew.

The following excerpt presents a discussion about some of the possible motivations for the

captain's behavior. It illustrates how the students kept the conversation flowing by taking what

Barnes (1976) referred to as an "open approach" (p. 67) in a discussion.

1. **Joshua**: He (*the captain*) probably knows something is going on and he knows probably

   Charlotte is involved in it. If he's nice to the guys (*the crew*) they wouldn't tell him

   because of what he's done to everybody. But Charlotte's new so he would be nice to her.

   So she could help him to find out what is going on and all that.

2. **Amber**: I think maybe the captain is being nice because Charlotte is in danger and he is

   trying to protect her from something or the crew.

3. **Nicole**: Or he could be nice to her because she is a guest on the ship because if he's nice

   to her and builds a friendship with her and if someone else says something about him she

   could go back to him and tell him what they are saying.

4. **Luke:** I think maybe it might be that people when they give first impressions to people

   they always try to be nice. I know everyone is like that. It's always like that the first day

   of school. I remember like last year it was the first day of school and nobody knew

anyone basically . . . . everyone was just shy trying to be nice to everyone to make friends. Maybe he's trying to do that because Charlotte seems like a nice girl to him so he's being nice to Charlotte so Charlotte likes him as a person.

5. **Nicole**: I was also thinking you know how he was saying that Charlotte's dad owns the ship he might be being nice to her because if he's not being nice to her she could go home and tell her dad that he's was like mean to her and he might take him off the ship or something.

6. **Amber:** Or maybe he could be like really lonely because everyone thinks he's mean and he might want to like have a friend.

7. **Luke**: I was thinking maybe Captain Jaggery also likes Charlotte because he has someone to relate to.

8. **Janet**: How do you think he relates to her?

9. **Luke**: As like in his daughter and stuff. She reminds him of his daughter. He's really in touch with his daughter and stuff and he loves her but he can't see her very often because he's always going back and forth on the ship.

10. **Janet:** We see the captain seems to be treating Charlotte with respect right now and you have given a lot of reasons why you think he might be doing that. Let's think about the crew now and why the captain might be treating the crew differently?

11. **Joshua**: I remember at the beginning of the story the crew like did something bad.

12. **Luke:** I know my hockey team is exactly like that you can consider the hockey players on my team like the crew and the coach is like the captain. They're really hard on the

crew and stuff. Except one day we had someone hurt and so we had to call another

player from another team and they were all nice to him and stuff. It almost felt like they

were favouring him and in way that's what they have to do to make sure he's doing what

they want.

13. Joshua: I know in hockey if you win a game the coach is really proud of you but when

you lose a game he yells at you.

14. Luke: And then they make you do all this hard work and stuff.

15. Joshua: And the next practice you're doing laps the whole time.

Summary of the Talk: Joshua initiated the talk by bringing the group up-to-date as to

where they were when they finished up last time in their discussion about Captain Jaggery.

Joshua's opening comments served as a way of establishing the situation where the captain was

becoming suspicious that trouble was brewing onboard the Seahawk and that Charlotte was

involved. Then Joshua went on to elaborate on these ideas by providing more details about why

the crew wouldn't confide in the captain and why the captain was nice to Charlotte. By taking

the initiative in "setting the stage" Joshua was carrying out the important role of helping the

group to think implicitly about the question, "Where have we got to?" which is a question that

Barnes (1976) described as "a request for recapitulation" (p. 60). Joshua's words allow the

group to summarize and reformulate ideas that were talked about in earlier discussions, which is

an effective strategy to maintain continuity in the conversation.

Joshua's comments suggested his thinking carefully about what he had read earlier in the

text and then bringing this knowledge to further his understanding of the actions of the captain.

In making these first comments he also demonstrated his logical thinking to the others by providing reasons to support his statements. His thinking and reasoning are expressed in his use of language such as "if he's nice" "because of what**"** but Charlotte's new" "so he would be" "so she could." Paul and Elder (2004) suggested that this kind of logical thinking allows us to "bring a variety of thoughts together into some order" which in combination helps us to make sense (p. 8).

The students continued by expanding the ideas expressed by Joshua. They offered a number of different reasons why the captain seemed to favour Charlotte by treating her with privileges, respect and courtesy. They extended their thinking by building on each other's ideas and infusing the contributions of others into their own talk.

At this point, as facilitator, I recognized and acknowledged the ideas the students expressed about the captain's respectful attitude toward Charlotte and I then directed their attention back to the crew. Luke brought in an example of his own experience as a member of a hockey team. He described and compared the attitudes and behaviors of the coaches and the players to the captain and the crew. By placing the behaviors of the captain toward the crew into a familiar context he was able to acquire a better understanding of the motives and actions of the fictional characters in the novel.

As the discussion continued, the conversation flowed smoothly with one speaker often completing the thought of the previous speaker by adding on to their words. Through the talk Luke and Joshua were jointly making sense of relationships within the context of their personal

hockey experiences. Throughout this discussion the students were developing a stronger understanding of the complex nature of human relationships.

Episode 4 – You Can Be Strict in a Nice Way

Up to this point in the students talk the focus had been on Captain Jaggery who was portrayed in the novel as a ruthless, strict and often cruel master of the Seahawk. I wondered how the students viewed his behavior and so I asked them to talk about whether they thought the captain, as someone responsible for the ship was at all justified in his harsh treatment of the crew.

The following transcript illustrated the students' developing good listening skills as revealed in their responses to each other's comments.

1. **Luke**: You have to be strict – but you can be strict in a nice way.

2. **Nicole**: You don't have to be cruel but he has to be strict and he has to yell at them if they don't do something right. But you don't have to be that cruel to chop off someone's arm just because they just tied a knot wrong (*referring to the captain*).

3. **Joshua**: He should have just yelled at them – not chop off their arm.

4. **Nicole**: It's a loss for him. He (*the captain*) just lost a crew member – it's a loss for him.

5. **Luke:** I would like to add to Nicole's even though he is losing a crew member that extra bit of help in his eyes he's probably not because if the crew members not doing it right (*Nicole interrupted with "oh that's probably true"*).

6. **Luke continued**: then there's no point in doing it *(the task).* Say I didn't do something right and Joshua knows how to do it why am I here anyway if he can just do it himself.

There's almost no point in me being there unless you're just learning how to do it or getting a new job or something.

7. **Nicole:** But still that's just too extreme just chopping off someone's arm because they didn't tie a knot.

8. **Luke:** I know (*pause*) and some people are just like that. Like I had this one hockey coach he was just so mean . . . they try to focus on one thing. They focused on endurance so we went back and forth and back and forth nonstop. Some people that's just the way they are they feel if they're not like that they don't get the message through.

9. **Amber:** Yeah, like when I was in gymnastics when I was little we had to do this really hard thing we had to do a flip not on the trampoline but it was like a bar – there was this thing hanging down from the middle we had to flip over and grab it – you had to start way back here and run, run, run and then go this way backwards. We had to keep doing it and doing it. Our instructor was saying you're doing it wrong, you're doing it wrong you have to do it this way, you can't do that you have to do this.

10. **Joshua:** Like in hockey there are some people that like don't ever pass – they just go by themselves – they're just like I'm a team they don't care about anyone else – they don't pass it and usually when that happens my coach gets really mad and they bench them. That's pretty much like what's his name.

11. **Nicole:** Jaggery?

12. **Joshua:** Yeah, Jaggery.

13. Luke: That's pretty much like cutting off their arm right - taking them away from the situation.

14. Joshua: Yeah, yeah taking them away.

15. Nicole: It could also be that if he was a crew member before and his captain was always yelling at him then he might have carried - got that from his captain.

16. Luke: I know my dad is always like that with me. We do a lot of stuff outside and lots of lifting and stuff we have lots of maintenance in our back yard. I'm like come on why do I always have to do this and he's like I always had to help my dad (*everyone in unison "Oh" and laughed*).

17. Nicole: And it's like you have it easy. My dad always wants me to be the best in the classroom and he wants me to get like highest on everything so he says you guys have it lucky if we got a question wrong our teacher would slap us.

18. Janet: How do you feel when you hear your parents share their experiences?

19. Nicole: Oh I feel like that was the olden days and now we have a democracy.

20. Luke: I feel like you've got to give us a break every once in a while.

21. Nicole: My dad went to school in India so it was different too.

22. Joshua: I think they even still do it in India right now.

23. Nicole: Yeah, probably they do. Also my dad said because he came from a poor family. His family was really poor and he couldn't afford to get books and stuff but he was really smart and he was really good in class. The teacher would help him with the books and stuff. He would do work and get the books beforehand and repay them after.

24. **Luke:** Being harder on someone can also be an encouragement or motivation to do like –

okay I might not do it as good as I can but I at least try to show him that I'm trying to do

my best – nobody likes getting yelled at – or being told negatively something – so maybe

it could be a motivation. Like I don't like it when my dad yells at me in hockey so I try

harder so he doesn't– it's my motivation.

25. **Joshua:** My dad had five brothers and my grandpa his dad he couldn't pay for all 5 of

them – so he only put one of them and that was the oldest one my uncle was allowed to

go to school and the other 4 had to stay at home. And my dad he had to quit school at

Grade 8 or 9 and he kept my oldest uncle in school – now my dad owns a convenience

store and now my uncle that stayed in school he owns *(is)* a doctor, he owns *(is)*a doctor

he's like a surgeon.

Summary of the Talk: Luke expressed his opinion regarding the captain's harsh

treatment of the members of the crew by pointing out that you can be "strict in a nice way." The

other students agreed by providing suggestions to illustrate the difference between strict and

cruel. Nicole and Joshua approved of the captain "yelling" but agreed that by chopping off

someone's arm the captain had gone far beyond being strict and was extremely cruel. They

continued to listen carefully to each other's words and to consider each other's ideas as they

offered various perspectives on the captain's actions. For example, at one point Luke began his

comments by explicitly responding to Nicole "I would like to add to Nicole" which indicated his

awareness and acknowledgment of what she had contributed earlier. The use of this

communicative skill demonstrated Luke's open, supportive and collaborative approach to talking and listening in a small group.

Again, in order to make his points, Luke drew on his personal knowledge of a particularly "mean" coach he had known and together with what he had learned about the captain in the novel he made a generalization about people and human nature. Amber and Joshua supported Luke's thinking and responded with personal stories of their own involving similar types of people and situations they had known. Joshua described an angry coach who benches players who don't follow the rules. He then turned his thoughts back to the captain in the novel and compared the behavior of the two men.

It was interesting to note that the discussion moved on to the question of how people generally learn and develop attitudes and behaviours. This question came from the students themselves and was initiated by Nicole who had been thinking about alternative explanations for the captain's behavior. She hypothesized that the captain had probably learned this behavior through his own experience as a crew member.

Nicole's use of the hypothetical mode of language illustrated Barnes' (1976) point made earlier about some of the ways we keep a conversation open for more ideas to flow. For example, Nicole's comments triggered a thought for Luke about the reasons his dad had certain expectations of him. As the talk continued the students shared more personal stories of their parents, especially "dads." Stories were told and heard that suggested how the students' parent's social, economic and cultural backgrounds influenced the way they parented their own children. Finally Luke summed up his thinking on a positive note when he concluded that being hard on

someone can also act as encouragement or motivation. His comments indicated his taking on another perspective and offering alternative ways of viewing the concepts of "firm and strict." The talk had enabled the group to work through a clearer understanding of what words such as "strict" and "cruel" can mean within a particular context.

Throughout this conversation the students had an opportunity to explore their own and each other's cultural backgrounds as well as their parents' well-meaning intentions. In this way they demonstrated a shared understanding of the idea that cultures are different in the values and traditions they live by and that they are a shaping influence on our thinking and actions. They were also coming to a greater personal understanding of each other, which was strengthening their friendships and social relationships. As they recalled and shared the stories of their sports' worlds and family life they were "explicitly relating current activity to past experience" which is part of the process of rethinking and reshaping our understanding (Mercer, 2000, p. 160).

Episode 5 – Decision Making: Not a Simple Task

As we continued to read *The True Confessions of Charlotte Doyle* the students recognized how often in the story Charlotte was in a position that forced her to make important decisions. With this in mind I asked the group to think about the following quotation in the book and to talk about the kind of decision Charlotte might make to solve this dilemma. "More than once I touched the dirk that lay in my pocket. I was resolved to give it to the captain. Whether or not I should *tell* the captain what I'd just heard was a more delicate question."

This transcript illustrates the students coming to an understanding of some of the complexities involved in making appropriate choices in decision making.

1. **Luke**: Honestly, right now there's lots of things she could do but maybe they're trying to convince her to get revenge on the captain for them because the captain thinks she's on his side – so if they don't get revenge they don't have to lose an arm or a leg or get exiled. They might try to use her to get revenge on the captain.

   I asked the others in the group if they agreed with this point.

2. **Nicole:** Sort of - I don't think she should tell him that because she has just started to know him now she saw how he was treating the crew and if they want revenge it's not really her business because they want revenge on him because they're the crew and he must have done something to make them want revenge. I don't think she should tell the captain it's not really her business.

3. **Amber**: I think she should tell the captain - Charlotte doesn't know for sure if it's revenge. If she says the crew is ganging up on you to do something bad to you and then a couple of days later they may be planning a tea party.

4. **Nicole:** And she doesn't even know if they are really going to have revenge maybe Zachariah was just playing around with her just like kidding – *Nicole paused at this point and then continued –*

5. **Nicole**: Zachariah was really nice to her and telling her stuff and she met him before she met the captain – she just met the captain now and she doesn't know completely if she can trust him or not.

6. **Amber:** And maybe to her Zachariah is a friend right now and so she doesn't feel all alone.

7. **Luke**: That would kind of make sense because remember at the beginning of the book every crew member except Zachariah didn't like her because her father owned the ship.

8. **Janet:** I wonder if she wants to keep Zachariah as a friend.

9. **Luke**: She might want to just keep him to herself.

10. **Nicole**: She might also be scared because he was saying he's mean to the crew – she might be scared of the captain still a little bit because if she tells him what would he do to Zachariah?

11. **Janet:** That's right, you mentioned earlier that you weren't sure Charlotte could really trust the captain.

12. **Nicole**: Charlotte probably has mixed feelings about him – because he's been really nice to her but when she handed him the dagger he kind of got like mad "Who gave it to you" and after what he's been doing with the crew he's really mean to them she's probably having mixed feelings about him right now. I don't think she has his full respect yet.

13. **Luke:** I agree with that - the way you think about things and the way you act toward things tells a lot about a person and you can't really tell with Captain Jaggery yet – he's mean to the crew but he's not mean to Charlotte - usually you're just oh you're mean to everybody.

14. **Nicole**: Maybe he's just faking it to be nice to Charlotte to get like details about what the crew's saying about him or what they've been doing. He's probably not going to ask her to spy on them for him - if he invites her for tea he will just ask her something and hope that she tells him whatever.

At this point in the discussion there was a pause. Luke continued the conversation by sharing his thoughts about the structure of the novel.

15. **Luke:** What really stinks though is that you can't see where everybody is at once – it's only two or three people you hear talking – I was just curious when she went to her trunk if Captain Jaggery if it was him following her or something.

16. **Janet:** That's right! In the story you're not sure what everyone else is doing at that point.

17. **Luke:** You would think Captain Jaggery would just be up there steering his ship and he would see everything but that wouldn't really make sense – you'd think he would be trying to find what's happening.

18. **Amber**: I think the crew overestimated the captain and maybe how he said one of the crew members said he got his arm cut off. Well maybe the captain invited him for dinner and he did it by accident he didn't do it on purpose. Maybe it's like a myth he told and people believed it. The crew member accidently cut off his own arm and then told everybody that it was Captain Jaggery and then he would be a bad influence on him.

19. **Luke:** I'd like to add to that – maybe it was more by accident but because Charlotte's dad owns the boat and he pays the Captain Jaggery maybe they're trying to get rid of Captain Jaggery so one of them can become the owner of the boat.

20. **Nicole**: Yeah but it wouldn't be one of them wouldn't it be the first mate?

21. **Luke:** No, because the first mate is just the talker, he doesn't really do anything on the boat he just tells people what to do.

Summary of the Talk: Luke began the discussion by stating that Charlotte had several choices that she could make regarding the decision as to whether or not she should tell the captain about the crew's plans for revenge. But he quickly pointed out his concern that if Charlotte did warn the captain she may be very well playing into the hands of the crew who might be just be "using" her to protect themselves from any severe and harsh consequences. Luke's comments and suggestion indicated his knowledge of the events that had gone on in the story and his ability to summarize the plot up to this point. They also suggested his understanding that making a decision wisely often required careful attention to details and involved making choices that might have repercussions later on. The way the interaction continued showed the students engaged in exchanging ideas about the kinds of things that Charlotte would need to take into consideration before she made this important decision. This point illustrated an essential step for students to learn in developing the skills of problem solving and decision making.

When Luke suggested the possibility that the crew was just "using her" to benefit their own situation, I asked the others if they agreed. Nicole's tentative reply "sort of" indicated her willingness to mull over Luke's comments before she answered. It also demonstrated her intention to engage in thinking aloud about his ideas. Nicole then came to a tentative conclusion about Charlotte's dilemma and suggested that she could detach herself from the situation. The talk continued with Amber disagreeing with Nicole which resulted in Nicole changing her thinking based on Amber's comments. This point illustrated Barnes' (1976) idea, that talking together about a problem can enable "us to rearrange the problem so we can look at it

differently" (p. 19). Luke's statement that what had been said made sense suggested his acceptance and confirmation of the other student's ideas and an awareness that together they were working toward understanding.

As a way of encouraging the students to keep the conversation open I offered another point for their consideration. The student talk that followed included other examples of Barnes' (1976) idea of keeping an open approach and a "hypothetical style of learning" (p. 52). They supported and built on each other's ideas as they hypothesized about Charlotte and the captain, "she might want," "she might also," "Charlotte probably," "maybe he is just faking," and Luke's supporting words "I agree with that."

As is typical during conversations of exploratory talk, Luke momentarily changed the direction of the flow by introducing another thought about the text. His remarks took the others back to other events in the text as he expressed his frustration about the way the text was structured and how it prevented him from "knowing what is going on." In his explicit language he called out "What really stinks though is that you can't see where everybody is at once- its only two or three people you hear talking." He then entered further into the story in a way that suggested his reordering the text. The characters and events were becoming very real to Luke.

Amber brought the conversation back to her point of view about the captain and in her hypothetical and tentative language put forth the idea that the captain's stories of such severe cruelty had been what she called "overestimated" by the crew. Her comments are filled with "I think," "maybe how" maybe it's like a myth" "then he would be."

The nature of the talk throughout this excerpt demonstrated many of the qualities that made it, in Littleton, Mercer, Dawes, Wegerif, Rowe, and Sams (2005) terms, "exploratory" as "Ideas are explicitly debated, requests for ideas and justifications for challenges are made and alternative suggestions offered" (p. 169).

Episode 6 – Talking in Social Studies

During previous lessons in social studies the students had been learning about the consensus model of decision making within the Iroquois Confederacy. The task assigned by their teacher was to discuss among themselves some of the characteristics and basic principles of this model and then later to consider the advantages and disadvantages. The following is a brief excerpt taken from a fairly lengthy recorded discussion.

This excerpt illustrated the students thinking collaboratively and clarifying for each other the meaning of decision-making within the Iroquois consensus model.

1. **Luke:** Everyone would live in harmony because there wouldn't be any war like fighting there would be decision making – they also followed our same rules like our "speaking" rules.

2. **Janet:** Does this mean in order to make a decision everyone would have to agree.

3. **Nicole:** Yeah, . . . they want everybody to agree on what they are doing they don't just say okay because almost everyone agrees it has to be that everyone is agreeing – it can't just be almost everybody (*Nicole was describing the Iroquois confederacy model*).

4. **Luke**: But vice versa if that happened say Joshua wanted lacrosse and I wanted hockey – you guys could also want hockey with me but it could be vice versa you could want

basketball next time and I want say baseball right it would have to be vice versa and I would have to agree with them and they would have to agree with me.

5. **Nicole**: Okay, this time we'll go with what you say but next time we'll go with what I say – sort of a compromise.

6. **Janet:** And sometimes in certain situations you do have to compromise.

7. **Nicole**: And someone might get really upset and say you guys never listen to what I say and I'm always the one that gets thrown out.

8. **Joshua**: Maybe here if one group doesn't always agree there could be a war.

9. **Nicole**: They don't do a war because of the Iroquois confederacy but it might be like a little fight or something but not like a war.

10. **Luke**: Didn't they say they had a fighting sport.

11. **Joshua**: No, because they put all the weapons . . . (*Luke interrupted*)

12. **Luke**: No fighting sports not like weapons.

13. **Joshua**: Maybe.

14. **Luke**: Because I know they had that in Athenian Democracy.

Further along in the discussion the students were asked to discuss the consensus model in terms of the possible advantages and disadvantages. This was a task assigned by their teacher.

15. **Nicole**: She (*the teacher*) said like pros and cons are like advantages and disadvantages.

16. **Janet**: Has anyone mentioned what some of the advantages are?

17. **Amber**: I did, that everyone gets a say in it they don't exclude somebody they bring everything together and make a decision together.

18. **Nicole**: Disadvantage is that it takes a very long time.

19. **Luke**: Yeah, because you have to go through so many processes and if everyone doesn't agree you have to do it again. It could take months maybe even years.

Summary of the Talk: In the discussion Luke first introduced the idea of peace and harmony as a characteristic of a community engaged in the practice of decision making by consensus. He stressed the absence of war-like fighting in this model and described the process as similar to what he called the "speaking rules" that the teacher had emphasized for class discussions at the beginning of the year. He recalled what he had learned about cooperating with one another by listening and accepting and sometimes challenging alternative ideas while working in a group. By making this comparison Luke was expressing his understanding that the consensus model required an element of order and respect for other people's ideas in the same way that he was expected to follow a set of ground rules in his own classroom when students were engaged in small group discussions.

To keep the idea of the process of decision making an open topic, I suggested the possibility that people might comply or appear to agree verbally in order to come to a decision. Nicole was the first to reassure me that in the consensus model they would come to a genuine state of thinking alike, not just giving the appearance of agreement.

However, Luke's used of the term "vice versa" to offer a different perspective by presenting a scenario to illustrate the kind of "tradeoffs" or negotiating that could come about

within a group who were trying to come to a consensus. As a way of letting Luke know she understood Nicole responded by rephrasing Luke's comments. Then, building on Luke's suggestions, Nicole went on to expand on some further possibilities by hypothesizing that this procedure that involved compromising could lead to serious disagreement and conflict among the members of the group. As Joshua listened to all the possibilities raised during the talk his remarks expanded and accelerated the conflict into a possible war.

The interaction up to this point illustrated the collaborative effort and joint reasoning that was going on as the students moved toward a better understanding of some of the issues that might occur within a consensus model. Using talk they were clarifying ideas and building on each other's words. It is through this kind of collaboration that social skills and the interpersonal relationships of trust and respect were strengthened. Using exploratory talk they presented different viewpoints on the topic and supported their reasons by referring to what they had already learned at school as well as what they had experienced in their personal lives.

In this discussion, it is evident that the students were drawing on the knowledge they had gained in social studies lessons at school when they commented on characteristics and principles of the Iroquois Confederacy and the consensus model of decision making. The use of this knowledge is also illustrated in their exchange of ideas about the role of fighting and weapons within the context of sports events.

As part of the recorded talk, toward the end of this excerpt, the students looked briefly at the benefits and some of the possible challenges within the process of decision making as part of the Iroquois Confederacy agreement. They summed up their thinking and shared their

perspectives based on the knowledge they brought to this discussion and based on the results of the talk that had gone on before. Amber pointed out the inclusive characteristic of the consensus model as one benefit. On the other hand, Nicole pointed out a possible disadvantage as she reminded us that using this model required a great deal of time. Luke supported her point by providing reasons as to why the consensus model can be a lengthy process. Within the discussion about these two opposing views the students were left with alternative perspectives and an awareness that concepts such as the consensus model present multiple dimensions and varying points of view.

Episode 7 – Talking in Science

The talk presented in this excerpt is taken from a discussion during a lesson in science where students were working on an assigned task of classifying plants and animals into the categories of consumer, producer and decomposer. The students were comfortable with using these familiar terms in the context of the science lesson and were drawing on what they had already learned at school about the characteristics of each category as part of the food chain.

This transcript illustrates what Mercer (2000) referred to as "collective remembering, a very common kind of joint thinking" (p. 49).

1. **Amber**: Would mushrooms be a decomposer?

2. **Nicole**: Mushrooms, no they are producers.

3. **Luke**: What would an owl be?

4. **Joshua**: An owl is a consumer, it's a consumer isn't it?

5. **Janet**: Joshua, why do you think an owl is a consumer?

6. **Luke**: Well I guess because he does eat mice and stuff.

7. **Joshua**: Well an owl is an omnivore too though isn't it?

8. **Luke**: No.

9. **Nicole**: It's a consumer.

10. **Luke**: Well an omnivore is a consumer

11. **Nicole**: A mouse would be a consumer too right? Or would it be a decomposer?

12. **Joshua**: No, no, yeah, a decomposer because it would eat like anything, kind of.

13. **Nicole**: Would a mouse be a decomposer? It eats leftovers.

14. **Luke**: See I'm confused for a rose because a bee fertilizes a rose so it could make its food – so it could be a consumer because it consumes the nectar.

15. **Nicole**: I think it's a producer. It sort of mixes all through because it also has all sorts of roots in it that bring up the nutrients.

16. **Joshua**: What's a deer?

17. **Nicole**: A deer would be a consumer. I know a fox for sure is a consumer. What about a mushroom?

18. **Joshua**: A mushroom is a producer it can't be a decomposer.

19. **Nicole**: Would it? Wouldn't it be a decomposer?

20. **Luke**: A mushroom is a decomposer.

21. **Nicole**: Yeah that's what I think.

22. **Joshua**: No.

23. **Luke:** Yeah, it is.

24. Nicole: Yeah because fungi are a decomposer.

25. Luke: Yeah it is because it grows in animal's poop.

26. Janet: Joshua why do you think it's a producer?

27. Joshua: It's not a decomposer because it doesn't take away anything, doesn't change anything into soil.

28. Nicole: Because fungi . . . isn't fungi a decomposer?

29. Luke: Fungi is a mushroom.

30. Nicole: Exactly, and fungi's are decomposers aren't they?

31. Luke: What would an earthworm be?

32. Joshua: A decomposer because they eat dirt and all that – what would a grasshopper be?

33. Luke: A consumer because it eats plants.

34. Nicole: Which one?

35. Joshua: A grasshopper.

36. Nicole: Oh yeah, wouldn't a grasshopper be a decomposer?

37. Luke: Nope.

38. Nicole: Are you sure?

39. Luke: Yup.

40. Joshua: A lichen would be a decomposer.

41. Luke: A lichen would be a . . .

42. Joshua: Decomposer.

Summary of the Talk: The interaction began with the students seeking information from each other by asking direct questions as they focused on the assigned task. Amber was looking to the others for confirmation as to whether her idea that mushrooms are decomposers was correct. Then Nicole provided what she considered the right answer when she opposed Amber's idea. Meanwhile, Luke seemed to accept Nicole's explanation and went on to ask what the others thought would be the appropriate category for an owl. When Joshua responded but questioned his own answer that an owl was a consumer, I asked him to explain further. Then before he could respond Luke jumped in and answered **for** him. By answering this question for Joshua, Luke was anxious to establish his own opinion expressed earlier and because of their collaborative relationship Joshua seemed comfortable with Luke's helpful intervention. The participation in dialogue started and continued in an enthusiastic tone and there was a sense of excitement in helping each other to recall information.

Some of the questions the students asked each other that dealt with facts were brief and answers were provided without hesitation. For example, Amber's first question was answered promptly by Nicole. However, Luke's inquiry about the appropriate category for an owl created a little more interaction, which may have been partly due to my asking for reasons for this opinion. It was noticeable throughout the discussion that when reasons were requested or offered to support a statement or point, the conversation was expanded and remained more open. However, the talk about the owl may also have continued beyond the immediate facts because of the way the two statements made by Joshua were structured. Each statement ended with a

question, tagged on at the end: "It's a consumer isn't it?" and "Well an owl is an omnivore too though isn't it ?"

As well as many examples of students engaged in seeking and finding agreement within the discussion there were also times where they felt confident and comfortable with disagreeing with one another. They began to challenge each other's opinions but not in the disputational mode that Mercer (2000) described as a "defensive, uncooperative encounter" kind of talk (p. 98). Rather they engaged more "critically and constructively" or in more exploratory ways of interacting (Mercer, 2000, p. 98). For example, when Luke disagreed when Nicole suggested a grasshopper was a decomposer she questioned his response by asking if he were sure. This request served as an invitation for Luke to rethink his idea. In this case Luke's emphatic response of "yup' indicated that his point of view would stay the same. However, there were other times in other episodes when the students' responses did lead to a "rethinking" and change in their opinion or point of view which can be characteristic of exploratory talk.

Throughout the discussion it was becoming clear that the students felt extremely comfortable in taking risks with each other and confident that what they said would be treated with respect. For example, Joshua broadened his view of an owl as a consumer and suggested that an owl could be an omnivore. He felt safe with demonstrating his knowledge and was confident in introducing the term "omnivore" for the first time in this discussion. Although Luke initially disagreed with Joshua, Nicole verified Joshua's earlier statement establishing that the owl is a consumer. Luke trusted the other students enough that he did not hesitate to share his confusion about a bee and a rose. While the students were carrying out this task of sorting living

things into categories, the mode of communication was one of talk among friends where strong social relationships were evident. It was through these social relationships that the capacity for collective remembering was evident.

The discussion surrounding the task of categorizing and classifying the list of living things continued.

1. **Luke**: I have a question. What would a dog be considered?

2. **Nicole**: A consumer.

3. **Luke**: I don't know because it eats dog food.

4. **Nicole**: But if it's a stray dog then it would probably be a consumer.

5. **Joshua**: Well look at wild dogs or if it's a wild dog it would be a consumer.

6. **Luke**: They would have to be like an omnivore.

7. **Amber**: They are I know some dogs eat grass so they're an omnivore – they are.

8. **Luke**: It really depends what you feed them – it could be plants because I know I give my dog carrots sometimes.

9. **Joshua**: But nature gives them raw meat.

Summary of the Talk: At this point Luke deviated from the list and brought in his own idea "What would a dog be considered?" which indicated his thinking going beyond the items provided and bringing in his pet dog, which was more personal and meaningful to him. Luke introduced this idea by using the statement "I have a question" which demonstrated his skill in learning one way to communicate when a speaker wants to change the direction of the talk. What might have appeared in the beginning to be a straight-forward task of matching items with

a criteria through the discussion became a more challenging and meaningful assignment. By talking and reasoning the students began to consider complexities and the variables involved in classifying living things into categories. For example, they raised the problem that dogs can be categorized differently depending on whether they are a household pet, stray or wild which illustrates this point.

Nicole wanted to get back to the original task so she redirected the talk by asking, "What would be another decomposer?" The following sequence illustrates how through the talk the students were checking and confirming with each other the accuracy of their own answers.

1. **Luke**: A decomposer?

2. **Joshua**: A living thing . . . a consumer would be – what did you get for consumer?

3. **Nicole**: I put bear and buffalo.

4. **Luke**: What would be another producer?

5. **Amber**: Maple tree, apple tree, strawberry bush, berry bush – any flowers.

6. **Luke**: How about sugar cane?

7. **Joshua**: Sugar cane? Wouldn't sugar be a producer – oh.

Summary of the Talk: It is interesting to note that in this excerpt there is a turning point in the way the students used the scientific terms of *Producer, Consumer* and *Decomposer*. Instead of fitting the items into the categories their thinking shifted into using the language of the categories to organize and classify the items. In other words, the students were learning to use the language of the discipline and using language in new ways to explain their thinking as they continued to talk and work together on the task. They were not only "using" the science related

terms and definitions as part of their dialogue but the talk indicated the beginning of

understanding the meaning of scientific concepts which is an important part of school learning.

In Vygotsky's (1986) theories on word meaning and the development of concepts he

made the distinction between everyday concepts and scientific concepts (see Chapter 2). Wells

(1999) described Vygotsky's notion of everyday concepts as "based on direct, personal

experience" and "are not subject to conscious awareness or volitional control" (p. 29). He

contrasted scientific concepts as "being encountered in the course of instruction, and typically

through verbal definitions and explanations constructed in collaboration with the teacher" (p.

29). It is usually when children come to school and their learning becomes organized into

subject areas of particular disciplines that they learn to think and to use definitions to describe

what might have been encountered and understood outside of school as an everyday concept.

Wells (1999) also pointed out that learning scientific concepts at school "often have little contact

with direct experience" (p. 29). The students' conversation presented in this episode of talk

demonstrated how if given the opportunity to talk and think together collectively, students can

bring together their personal and direct experiences with new learning.

Episode 8 – Talking About Talk

In the following excerpt the students talk among themselves about the subject of talk

itself and share stories of how they have experienced talk in different settings and for different

purposes. This discussion came about when we were reading a part of the novel that dealt with

Charlotte Doyle's experience of talking to herself as she reflected on a frightening encounter

with a "grotesque carving" in the ship's hold. To begin the discussion, I asked the students if they could remember any incidents where they were engaged in "talking to themselves."

The transcript illustrates how the students engaged in talking about talk as a metacognitive activity.

1. **Nicole:** If something happened at school and your parents were like, how was your day at school, like or if you're upset and they see you and say what happened? Then you kind of have to talk to yourself to say should I tell them, maybe I shouldn't, they might get mad at me. Let's say I got a bad mark on my test and we usually have to get our tests signed cause they want our parents to see them. So if I grab my test. What should I do? I would be talking to myself - should I go and tell my dad. Should I tell my mom? Will my dad get mad at me if he sees that I got that mark?

2. **Amber:** My dad always talks out loud. He's putting new flooring in our bathroom - okay I have to cut it like this and this and make sure it goes in the corner . . .. (*voice faded)*

3. **Luke:** Usually when you talk to yourself – you get a better idea and you're trying to calm yourself down – a better idea would be like what Amber was saying with her dad and stuff – trying to get a better idea repetitively saying it to himself. I know people understand stuff better if they say it to themselves like when they read a lot of people will say it out loud.

4. **Joshua**: It's kind of better to be in a group because you don't just get one answer like there's four different questions (*4 different answers*) and you try to figure out which one is right.

5. **Janet**: Do you mean if you're talking in a group you have the opinions of other people?

6. **Joshua**: Yeah a variety of questions and answers - you get ideas to questions and different answers and other people's opinions of the answer.

7. **Nicole**: Because talking in a group rather than talking to yourself you're just talking to yourself and you basically you have one opinion because it's only your own opinion but if you're talking in a group and say something happened and you want to talk to someone else then they can give you an opinion like this is what you should do or you should do that – because if you're talking to yourself you only have one opinion – because you only have your own opinion. If you're trying to sort through something it's not really any use with just one opinion – so talk to more people, it just works better.

8. **Luke**: It also kind of helps with having four people. It's almost like reading it to yourself, right. Say you're thinking of something or discussing it like we are if they mention a part like maybe when Charlotte went down to get her trunk that's when you remember it more because you're talking about it.

9. **Amber:** If me and my friend are talking about something that happened that is really exciting I will remember it and whenever somebody is talking about something and my friend says "Oh that was really good" then it always comes back to me – it was that same moment in my life that comes back and I just keep thinking about it.

10. **Janet:** I wonder why you remember that – why it comes back to you?

11. **Amber**: If we're talking about like what we did and something was really fun I would always remember it and in the next couple of days I would still remember it.

12. Joshua: And you experienced it instead of like someone's telling you what happened you've experienced it. You think about it quickly because you've experienced it.

13. Luke: Just a question for you (*referring to me*) – Do you find it easier when you have the tape recorder because someone is actually saying it to you – to understand?

14. Nicole: Rather than writing it down?

15. Luke: Yeah, you probably don't remember as much right now as when it's on there (*pointing to the tape recorder*).

16. Janet: I do find it helpful to have the tape recorder – it helps me to be able to listen to our conversations again – to help me sort through what we are talking about. I am transcribing all the tapes writing down our conversation as I listen to the tape and I will share those with you later.

17. Nicole: Just like before when we were saying about someone telling you something and then you experience it that it's better than reading. Don't you find that when you're reading *Charlotte Doyle* because you read it and you said you have a tape recording of the book that you listen to while you're driving do you find it easier to memorize the things when you're listening to it rather than reading it out?

18. Janet: When I listen to it on the tape after I have read you the chapter in the class I often hear things I didn't see/read/hear the first time-

19. Nicole: Yeah that's what also helps us because when you read it to us it's better than us reading it ourselves and writing it down – you forget much easier when you're reading to yourself.

Summary of the Talk: It was evident that the idea of people talking to themselves for various reasons was not an unusual concept for any of the students. They all came up with examples of either their own experiences or their observations of others. Nicole began by using tentative language to describe in detail a hypothetical situation about a dilemma that could take place where talking to yourself might be a necessary strategy to help solve a problem. Amber followed with sharing her recent observations of her dad who always talked out loud when he was doing chores around the house. She recognized that talking was his way of monitoring his actions. Luke followed with comments that reflected his support of Amber's account of her dad's experience talking to himself. As he demonstrated support for Amber's ideas he was not only building stronger social relationships but he was touching on the idea of talking to oneself as a way of understanding.

Luke's statement about the connection between talking and understanding and his remarks about reading aloud tell us he is becoming aware that there is some connection between talk and learning. Even though the other students do not state this idea explicitly, their examples illustrate an understanding of talk as serving an important purpose in sorting things out, solving problems and interpreting experience.

The discussion about how the use of talk can help with problem solving and learning continued as the students thought about the difference in talking and learning with others in a group and working on a task alone. They all agreed that talking with each other in a group had significant benefits. Joshua pointed out that being in a group provides an opportunity to get more than one answer. When I asked him for further clarification he added that you not only get

different answers but you also hear other people's opinions. Joshua showed his appreciation for

opportunities to hear different perspectives and to see things differently as a result of talking

together. Nicole followed up with her ideas of how talking in group work provided a wide range

of opinions especially if you are trying to figure things out. Luke continued to offer reasons and

examples to support his opinion about group work. He compared the experience of reading a

passage from the novel individually to discussing it in a group. He added the point that you

remember it more when you talk about it. Amber agreed by giving an example of how she

recalls something exciting when she is talking with a friend who might make a remark about the

event which will then trigger her thoughts and memories. I asked Amber if she knew why these

thoughts might come back into her mind. She agreed with Luke's reasoning that talking was an

important aid to memory.

Up to this point the students had been discussing the topic of talk in the context of having

a conversation with yourself, engaging in small group discussions and talking as a means of

triggering memories and remembering people and events. The discussion now moved into

talking about other modes of talk and listening. Luke's attention was drawn to the tape recorder

I used to record our small group discussions. He pointed to the recorder and introduced a

different perspective on talk by announcing "just a question for you." He then asked me if I

found having a tape recorder made it easier to understand what was being said. His question

suggested that he was expanding his thinking about talk as an active process and moving toward

thinking about the subject of talk in more concrete terms of recorded content to be transcribed

and later understood. Nicole then shared her memory of my telling the group how I often

experienced repeated readings of *The True Confessions of Charlotte Doyle* when I listened to an audio tape while driving in the car.

This group discussion about the value and function of talk in learning was not a planned topic for discussion or an assignment given to the students. Rather it evolved as the students commented on the way Charlotte, one of the characters in the novel, engaged in talking to herself as she was trying to make sense of a situation. The conversation became a metacognitive inquiry in which the students were exploring their thinking and talking about talk as a process for learning.

The topics the students talked about throughout the small group discussions evolved out of different classroom learning experiences as part of their everyday activities. For example, many of the discussions centered on the novel we were reading together. Others emerged from a science activity and another from an earlier lesson in social studies. The exploratory small group talk that went on during the students' discussions of these topics provided a rich source of data that I continued to think carefully about and to analyze and interpret in light of the established theories of language and learning, cognitive development and other studies of classroom discourse.

The Students Reflect on their Experiences in Small Group Discussions

As I read and reread the transcripts of the students' talk and recalled the conversations that went on during the research period, I was struck by the points and comments made by the students about their involvement as participants in this project. Many of the comments revealed their attitudes, observations and opinions about the benefits and challenges in being part of a

small group who were encouraged to talk and sort through ideas together. In order to hear more about their perceptions of this research experience and the meaning it held for them, I arranged a time to talk with each student individually.

I explained to the students that I wanted to hear from their perspective what it was like to be part of this project and whether they felt it had been worthwhile and enjoyable. I began the interviews with the words of Ellis' (2006) in mind when she commented about the process of interviewing "is not simply to get answers to the questions but to learn what the topic of the research is about for the participant" (p. 115). In keeping with the principles of an interpretive inquiry approach I avoided going into the interview with a set of standardized questions. Instead, I based the questions on the students' remarks in the discussions and on what I wanted to know more about for my own understanding of this research inquiry (Ellis, 2006). The questions I posed to the students were open-ended and were intended more as a guide to "[evoke] a variety of memoires, feelings, and categories of activity" (Ellis, 1998b, p. 37). The following are excerpts taken from our conversations.

Nicole: I asked Nicole to talk about some of the particular discussions that stood out for her as being especially interesting or enjoyable. She recalled the discussion about the notion of courage that stemmed from a reading of the novel *The True Confessions of Charlotte Doyle* where Charlotte was portrayed as a brave and courageous girl. However, it was not the character or the events in the story that grabbed Nicole's interest but rather the personal experience story told by Luke when he described his apprehension about showing up at school after dying his hair

pink. "I kind of liked the discussion we had about the courage. Like Luke said he had to have courage to come to school with his hair pink and when he was bald."

Nicole may have selected this discussion because she felt a part of it, having been a classmate during this event. She identified with Luke's feelings because she knew him and understood the meaning of the attitudes and social relationships among their peers at school. Nicole continued to explain another reason she found this particular session interesting was related to the nature of the talk itself.

> And that was pretty interesting because first we started with a conversation about something else and it just kept on going and going and it got into a whole new subject. I found that pretty interesting how after you start talking about something you can jump into something that's a little bit connected.

Nicole went on to explain how the talk had changed over time from a question/ answer format to a more dialogic mode of interaction.

> Yeah, like at the beginning when you would ask us something we would just give you a straight on answer but then after we got to know everyone better, sort of then, we would actually open ourselves and tell them about different things.

Nicole went on to say:

> But then after, we started to ask our own questions but without asking the questions. Like we would just talk about something and tell someone else and it would trigger something else and everyone would like keep on talking rather than just stop right there and have to ask something else.

Nicole described how the students learned to initiate the conversation and to keep the conversation open and flowing by asking questions and sharing their ideas. This observation illustrated Barnes' point about what makes a good discussion. Nicole was becoming aware of

the difference between classroom talk that is described in the literature as "recitation" and talk of a "dialogic" nature. Nicole was seeing herself and others as becoming more capable discussants.

In the first interview Nicole talked about how the group dealt with conflict when it arose in discussions, such as the issue of deciding whether something was "right or wrong." At that time she said they would just ask "Mrs. H. to help [them] figure out what's right and what's wrong." I asked her to tell me what she thought about this point now. Nicole responded:

> Well there's not really always a right or wrong answer it's just a person's opinion, sort of. Well there could be a right or wrong answer but it's never like completely wrong there could be something you didn't know and you could be like "oh that could be true too" right?

Nicole also noted:

> There's never a wrong answer for that really – well there can be it can be like if someone says "oh courage is when I (*I couldn't hear the word*) my parents" – well that's not really courage the same kind of courage we're talking about but it's kind of like true but not really the kind of courage we're talking about. It's not really wrong either but it's not right.

It was interesting to note that Nicole had given a great deal of thought to this question of "right and wrong." Even during our conversation she was still sorting through her thinking about this idea, she was coming to a clearer understanding of the need to stay open to new possibilities and to consider alternative perspectives.

I asked Nicole to tell me about some of the things she thought helped to make the discussions work well. She explained:

> Like having you here you were asking us questions and we would get to know more and we would keep on telling you stuff. But if we were in just a regular group we would probably just sit there. Let's say the teacher told us to discuss something and we would just talk about it a little bit and just stop and then just wait until she asks us to tell her what we were talking about. But this way it was kind of like you forced us to get it out of

us. Like if we were talking about something we would have to talk about something else rather than just sit there and wait.

Nicole's remarks revealed her perception of my role as facilitator as helpful and instrumental in creating and keeping the talk going by questioning and encouraging their contributions to the talk. She contrasted the level of group participation in situations with and without a facilitator.

As the interview went on I asked Nicole if she could tell me about some of the ways this experience of talking together in small groups had helped her with her learning.

Actually it helped me a lot because now I'm noticing if we're studying for a PAT (*Provincial Achievement Test*) and she (*the teacher*) gives us a sheet with a whole bunch of questions (*to discuss in small groups*). Like if you just have a text book in front of you and you're working it's really boring because you're just reading and it doesn't make that much sense. But if you're like talking out loud and discussing with someone it kind of like **sticks in your mind** rather than just sitting there and reading to yourself.

Then she added:

Because if you discuss it the discussion sort of comes back in your mind and you remember everything. Okay this is what happened. And you kind of get an idea of what is going to happen next like a prediction – it just helps you understand better too.

Nicole was making some important points about the benefits of talking through ideas as a way of working toward meaning and as a way of storing those ideas in memory. She explained her thinking about learning by providing comparative examples of reading a text book alone to the experience of talking and discussing ideas with others.

I also wondered if Nicole saw any advantage to staying with the same discussion group over a sustained period of time. Nicole responded to my question in this way:

Yeah, there is, because if it was more the beginning of the year it's better if we stay together because we get to know each other and kind of feel free to express our opinion.

> But if we kept changing with someone else you would be kind of shy and not want to express it because you might feel they are going to make fun of me if I say this. But if you're with the same group you're free to express it because you already know they're not going to do anything or make fun of you and then they are going to add on to your ideas rather than just stop there.

Clearly Nicole felt a sense of security in her stance toward staying with the same group of students.

At a later point in the interview we talked about the point that different people have a wide range of opinions and how important it was in a group discussion to encourage people to express these varying opinions. I commented on my observations that although this group had different opinions they were all very respectful of each other. Nicole confirmed:

> We wouldn't be like "oh that's wrong that's not what it's supposed to be like." That's what kind of builds the trust so if I went with another group and I say something wrong they would be like, "Oh no that's not right that's not the way it's supposed to be." But that group (our group) didn't do that – it sort of builds your trust.

Nicole went on to comment on the variation she saw in the attitudes of some students toward participating in group discussions.

> Yeah, say it was like people not to be mean but that were not that good at school and not go over the top and they would say okay this is good enough and I'm done. If they were supposed to talk about something and they would just say something and they were like okay that's enough I would be like no we're supposed to discuss about this and continue the conversation. Maybe I could maybe ask more questions or just continue it from where they started.

When I asked Nicole to tell me about anything she felt she had learned from this experience. She replied:

> We kind of learned how to ask questions or discuss things with people rather than just sitting there . . . . So we can discuss with an open mind rather than just saying something and stop there and say okay that's enough. To go over the top rather than just staying there.

Luke: In this final interview with Luke I asked him if there was one particular discussion topic that he found interesting. He responded:

> Probably actually - I would say all of them were really helpful just because all of them are very similar you could relate to them. Like Charlotte Doyle being courageous and stuff you could relate that to the Iroquois very easily because they were courageous to take on a new way of life with just having the way of consensus.

Luke went on to explain that he had enjoyed topics that he felt connected with what he already knew and had learned in his social studies lessons. He pointed out the connections he saw among the various topics. Luke was expressing his capacity to learn by building on his previous understanding and to use this knowledge for learning in another situation, which further illustrated the constructivist view of how meaning is created.

When I asked Luke to tell me about some of the things he found helpful about small group learning, he stated:

> I think it just works out better for everybody. . . . We honestly learn better as friends and connect better as friends and just as classmates. It's much easier for us because I don't know it almost seems easier to talk to your friends than it is to maybe your parents or an adult. It's just the way it is.

He went on to say:

> And just the way she (*the teacher*) put us into groups we are very diverse. We are all different in many ways so we just teach people the way we do things and we all adapt to the way we do things as a group.

Luke explained further:

> There are a couple of people in our group who are very well spoken and I believe that I am one of them. Like Amber she would always write all the stuff for us she's just good at that–everyone has things they are good at so we don't take advantage of them but we ask them to help us.

Luke's responses told me how much he valued the friendships of his other group

members who provided support and help for each other. He appreciated the diversity and

strengths within the group and felt more comfortable talking with friends than with adults. "Do

you think being able to talk together with your friends helped you to better understand some of

the topics and issues you discussed?" I asked. Luke responded:

> Just because of other people's opinions again and that . . . there's always that question if
> you don't know but if the other person knows it could put the whole puzzle together.
> There's always a missing piece.

Luke spoke very positively about the benefits of working in small groups and at one point

he exclaimed, "What's the point of us being in a classroom all together if we're not going to talk

to each other – there's no point."

The next question I asked Luke concerned his opinion about the benefits of these

discussions for his performance in test situations. "Do you think this experience will be helpful

in other situations such as writing a test?" Luke responded:

> I actually don't think it helps us [in test situations] because we are so used to getting
> other people's opinions. It almost feels like we depend on other people [during
> discussions] but at the end of the day it's hard because we can't ask them or refer to them
> maybe to get their opinion on a question like "What do you think?" . . . maybe explain it
> a different way that you haven't looked at yet. . . . I don't know it's just different.

It was interesting to note that in the above response offered by Luke, he talked about this

research experience in relation to standardized test situations from a different perspective than

Nicole did in her interview. Nicole's comments focused on the usefulness of the group talk in

terms of studying for and preparing for a test; "helped me a lot," "sticks in my mind," "like a

prediction," "helps you understand." Luke's response, on the other hand, pointed out the

distinction between a supportive interactive learning activity that he had experienced and the reality of performing on tests alone and without the help of his classmates. Luke's remarks are a reminder for teachers of the importance in recognizing the difference between setting up "patterns of interaction" for learning in the classroom and situations that are organized for testing and evaluation of the learning (Britton, 1970). I also saw the disparity in the comments offered by these two students as another illustration of the individual meaning of this experience that was created by each of the student participants in this study.

As the interview went on I asked Luke if he thought there was any advantage to working with the same group of students over a long period of time.

> Yeah, definitely because there are just some people you don't know lots about them and just - they're deceiving just like everything else "don't judge a book by its cover" everything's just deceiving. Like Joshua as another example he's deceiving he doesn't look like he'd be really interested in learning but he is.

He added that another advantage was to learn to "not to judge people by the way they look or the way their presence is because they're all different in different ways. . . . Just trusting people maybe a little more." In order to illustrate this point, Luke provided an example from his own experience at the beginning of the year when he was placed with a group of students that he didn't know. "I was with (*he named 4 people*) and . . . I didn't like the group I was in but that's because I wasn't open and I've learned how to be open minded." But Luke also added that switching groups at the beginning of the year might be an advantage in getting to know people.

> Just the way our class is and how big our class is it's hard for everyone to get to know everyone just like maybe I got to know my group. That (*switching groups*) would be okay at the beginning of the year just to get to know people.

Luke's comments prompted my next question, which concerned his move into junior high. "I know next year in Grade 7 you don't know what it is going to look like but if you were organized in small groups do you think this recent experience would be helpful?"

> I actually know in some of the classes we are put into small groups but others we're not but it's also going be hard just with the way the schedules are we aren't always with the same people. It's going to take us longer I'd say almost half the year just to get to know everyone and to be comfortable like the way we are right now.

I went on to ask Luke if he thought this experience might have prepared him to take on a leadership role in future discussion groups.

> It just depends who the group is. It's just hard to work with people who are different like far different from you. You have to have some resemblance – just being interested in maybe some of the things they are. I think that's why our group really connects because we're interested in school. We're not just here to maybe learn a couple of things we're actually trying to learn something and get something out of it. So I think it would really have to depend on who I was with. I guess maybe their personality. It's just hard you just don't know.

Although Luke felt he had benefited from the small group discussions during this period he was doubtful that this positive experience would continue into junior high. He had enjoyed the social relationships that had developed and felt comfortable with his classmates and he was unsure he would find such a group next year. Luke was able to stand back and reflect on the characteristics that helped this present group to work well together. This awareness led to his understanding that the makeup of a group influences the dynamics of the talk and can ultimately shape the direction of what is learned.

I asked Luke at the end of the interview to tell me about one of the most important things he had learned from this experience. He replied:

I'd say the biggest one is just being open about learning new things and working with new people. . . . I struggle with people who maybe don't relate to me as much as other people.

Amber: I began by asking Amber to think about some of the topics that she had enjoyed discussing with the small group. Amber recalled the excitement she felt during the reading of the novel about some of the action and suspenseful events on board the Seahawk. She remembered being caught up in the fast paced action, the conflict between the characters and her wanting to know what might happen next in the story.

I liked when we were talking about Charlotte Doyle and how people got killed on the ship and who could have um . . . (pause) like if the um . . . I know the word – captain actually is against her or for her and what was going to happen next.

Amber's response in this conversation clearly demonstrated the features of exploratory talk as she thinks out loud, hesitates, mulls over what she has said as a way of searching her memory for the correct name. Her focus at this point as she recalled the reading was on the text more than on the interpretation of the meaning behind the passage.

I asked Amber to tell me about some of the ways she felt this small group talk experience had been helpful to her. She explained how talking with friends had provided her with a sense of security and increased her trust in the other students. She talked about the friendships she had made. Amber said:

I think I gained more trust in them (*the group*) like because me and Joshua like from the beginning of the year and last year we were in the same class we would have never talked. But since he was in the same group we have kind of made ourselves as friends and the same with Luke and Nicole.

Then Amber added:

> I didn't really know [Nicole] and like Luke was in the other class and so I was like who are these people I don't know them. But then when I was talking with them it felt like I had known them for years and years.

I asked Amber if there was anything about the small group experience that she would

describe as helpful with her learning. Amber thought for a moment before replying:

> Yeah, for me it helped me understand things better and if I thought of it one way like if you were reading *Charlotte Doyle* I thought of it one way and another idea from another person in our group said something – it would pop up another idea it might sound better or be better.

Amber talked about the effect of the group interaction on her understanding by expanding

her thinking by building on the ideas of others. She expressed her realization that exchanging

ideas and talking together had increased her understanding of what she was reading. The

example Amber provided illustrated Britton's (1970) ideas about the effects on our thinking of

the contributions of others during a conversation. He described "what others contribute" in a

good conversation has an "enabling effect of each upon the others" which he suggested is "an

important mode of learning" (pp. 239–240).

During an earlier conversation with Amber I stressed that the intention of the talking

together sessions during this study was not necessarily to come up with the "right" answer but to

come to a better understanding of the topic. At that time Amber seemed fairly adamant about

ideas being either right or wrong. I raised this question again.

> You can't really say there is a wrong answer in a discussion. But to a question there has to be a wrong answer – a right one and a wrong one. But if it's a discussion like what kind of ice cream do you like say one person says I like strawberry ice cream and another person says "who eats strawberry that's not a good choice" well it's still an ice cream flavour it's still an answer.

Amber added:

> In the world there is no absolutely right 100% right answer if you are discussing something because nobody is perfect and nobody knows like everything. Like if what is the most popular ice cream flavour in the world and somebody says yeah, it's vanilla because it's the first one, it tastes good. It could be, and that's an answer.

I went on to ask Amber if there was anything about this small group experience that she thought might be beneficial when she moved into junior high next year. In answering this question Amber focused on what to her was an unthinkable idea. She anticipated a situation where she might not be working in small groups at all but working "by yourself." She expressed her trepidation at the thought of not having any group support.

> Yeah, but if they didn't (put you in small groups) it would be kind of hard because sometimes you're like more like when you're working by yourself you don't understand as many things as when you're working with a couple of people. So when you're in junior high you'll be like oh my god what do I do? What do I do?

I wondered if there was anything Amber didn't like about this year's small group experience and so I asked her if she had run into any problems. She did recall feeling impatient when someone was talking and she wanted to contribute before she lost her train of thought. She talked about the advantages of jotting her ideas down in writing.

> Yeah, I know because sometimes when you want to like talk you have to wait till somebody is done and there is another person that is waiting you might have lost a part of your idea . . . you can write down as much as you want as fast as you want. There's nobody stopping you saying "I think blab, blab . . . an idea."

> Because if I write something down first I like uh talk about it in my group then it would trigger another idea and then from that idea I would write that idea down. So it kind of gives me like another perspective of how they think it is.

At the end of the interview I asked Amber if she could think of something she had

learned through this small group experience:

> I think I would be saying like let's say I was doing math and we're in small groups
> because it helps us better understand different ways to answer a question and understand
> it better. We would know about it more so if we had a test we would get it better and do
> good on it.

Joshua: When Joshua and I met for the final interview I asked him if there were any

particular topics we discussed that he enjoyed or found interesting. He responded by explaining

why he liked the book *The True Confessions of Charlotte Doyle*. "Well I like books and movies

and shows like that where there is action in it - so I kind of really liked *Charlotte Doyle*." He

also talked about the changes he observed in the character of Charlotte. He described Charlotte

as "like her personality changed she was more brave than she was [because] like she wore

dresses and now she's in a sailor suit."

I asked Joshua if he had enjoyed not only reading the book but talking about it with the

other students. Joshua said that he liked talking with the others about the book because, as he

said, "we were learning new things." We talked about some of the connections between what he

was reading in the novel and what he had been learning in other subject areas such as social

studies. For example, we recalled the scene in the novel where Captain Jaggery was warning the

crew that he was the master of the ship when he said, "We shall have no democracy here. No

parliaments" Joshua made the connection between what he had learned about democracy in

social studies when he said, "Yeah, because democracy in social studies we're learning about

Ancient Athens and democracy . . ." (*his voice faded*).

I followed by asking, "Is there anything else that you think you might have learned through this small group experience?"

> Well yeah, like Nicole, Amber and Luke, I would be friends with them like I would be friends with them but not really close but now we're really good friends . . . .Yeah, now you feel like comfortable about talking to them about stuff, like school stuff and all that.

He added that if they had stayed in rows instead of moving into a small group "it wouldn't be the same." I asked Joshua why he thought his teacher had organized the students into small groups for activities. He responded by telling me that:

> Probably the teacher wanted us to share each other's ideas because like before we had only rows of two and she probably put us together with other people . . . she wanted us to share our ideas together . . . that's what Mrs. H. probably wanted us to do. . . . Instead of having one person help you, you could have three.

Joshua went on to point out that although working in groups provided more opportunities for talking over ideas with others, this arrangement could create a problem when there were a number of different ideas to consider. He said:

> Yeah, (*and paused*) it might trouble them (*the other students*) because you have to pick one answer. Cause you have four different ideas right, well there could be three and then you have to pick one and so you have to have a group discussion about it. Which one seems the best, which one sounds the best and which one is the right answer?

I wondered how Joshua might see this experience of talking together in small groups helping him with his learning as he moved into the next grade. Joshua replied by stating very emphatically, "Well it's going to be very different in Grade 7 because you have more than one teacher." I suggested that there would likely be opportunities with some of those teachers to continue to work in small groups. Joshua agreed:

> Oh yeah you will like for art projects you'll have time and for math you can pick a partner and talk with them about it. Like some people in Grade 7 like my cousin is in

Grade 7 they say you can pick if you want a group of like 3 or 4 but he goes in 2's. He goes with his best friend. I'd go with the person I know best because if there are lots of new people . . . (*voice faded*) I would get to know the new people and probably be friends with them - but if Luke and Nicole and Amber were in my class I'd probably still . . . (*voice faded out*).

Joshua had recognized the social nature of the group activity as an event which had the capacity to create strong friendships.

Based on Joshua's earlier remarks about the classroom organization of small groups, I asked him if there was anything about the way the discussion groups were organized that he would like to see done differently.

I would find it better if like two people discuss their ideas and the other two people discuss their ideas and then they would say to each other and then they come together and like talk about it. Like you discuss the idea with 2 people and so you only have 2 ideas left and then you discuss them with the other 4. Say like me and Luke were talking and I had one idea and Luke had one idea we would talk about our own ideas and see which one would be the best so we'd pick one and then Amber and Nicole they both have one idea and they come together and pick one and then we like come together.

Even though Joshua had indicated earlier that he enjoyed the conversational mode of group discussions and he had actively contributed his ideas, his comments indicated that at this point he had a strong preference for a far more structured approach.

Reflecting on the Interviews

The purpose of this final interview with the students, toward the end of the research period, was to learn more about how they saw and thought about their experiences talking together in their small group discussions. As the students shared their reflections I discovered how individual and varied the memories and storied accounts of each student's common experience turned out to be. They showed me through their comments and responses that the

meaning they gave to this experience was individually created out of their personal interpretation and understanding. Throughout our conversations the students expressed their own ideas and opinions about the topics they had discussed and the ways this experience had helped them academically and socially. They also shared what they felt they had learned.

Each student's story or narrative was unique in its focus and expression. Each concentrated on particular memories of the experiences of group talk that had been particularly meaningful. For example, Nicole's responses focused mainly on the interaction itself during the discussions. She seemed to be intrigued with the way the talk flowed and how they asked questions of each other. Luke on the other hand kept coming back in the conversation to the realization that he was part of a very diverse group and that his classmates had very strong communicative skills, which he hadn't known or appreciated until this experience. Amber concentrated on the idea of collaboration among the group and talked about the ongoing support from her peers she hadn't realized was there before. Joshua's comments throughout the interview centered on the different ways that small group discussions can be structured. He made several suggestions for alternative ways to talk with other classmates and to share ideas and information. Although the focus of each of the students' narratives was different, they all expressed a common perspective that through the experience of talking in their small group they had bonded with each other in relationships that had created strong and lasting friendships among them.

As the students and I talked together I became increasingly aware of how our relationship as researcher and participants had developed during this study over the past few months. I

realized how comfortable we had become in talking with each other since we first met earlier in

the year. Ellis (1998b), in commenting on the approach to interviewing in an interpretive

inquiry, said "we respond to people on the basis of how we have already 'read' or 'interpreted'

them" (p. 35). I had come to know each student individually and personally during the group

discussions, which I now know had an influence on the way we interacted and responded to each

other during the interview. Talking and listening with the students as they expressed their

reflections on this small group experience provided me with an opportunity to see their

experience from their point of view and in the words of Ellis (1998b) "to develop [my]

understanding of the other person beyond what it was" (p. 35).

The Teacher Reflects on the Research Experience

Throughout the entire research period Adette and I engaged in informal conversations on

a daily basis. Our talking together was an integral part of my learning more about the classroom

environment and about some of the students' earlier experiences in learning at school. We

covered a wide range of topics related to her classroom practice and the research study which

often centered around our observations and perceptions of the student's interactions during their

discussions. We also discussed various modes of talk in the classroom, the point I was at in the

research process, as well as some of the current reading we shared. All of these topics kept

resurfacing in terms of the meaning they held for each of us in teaching, researching and

learning. At the end of the study I asked Adette to share her thoughts about any of the ways this

research experience may have influenced the students learning and ways my presence in the

classroom had affected her practice as the teacher. The following are excerpts from our fairly

lengthy conversation.

Adette described the benefits of the project in strengthening the social relationships

among the group and how working together as friends had led to their learning that being a

discussant meant listening as well as talking.

> They are friends now . . . they found trust with one another. They now have more conversation with one another socially . . . they still have their own little group of friends but they have a new respect for one another that they didn't have before. I think because of this process . . . they will definitely listen now to what someone else is saying.

That students listen attentively to each other in group discussions was very important to Adette

who went on to point out that before this project, some of the students had a tendency to get

caught up in what they wanted to say next rather than listening to what was being said.

I asked Adette to think about the participating students individually in terms of any

changes or growth in their attitudes or learning that she might have observed. The following are

excerpts from her comments:

> **Joshua** is more confident. He believes more in himself and the fact that what he has to say does have importance. I also think that Joshua is more interested in other things around him now – he has developed more of an interest in worldwide types of events – what is going on out there. And I think that is really good growth for Joshua.

> **Nicole,** I think she has learned to listen to others and really find value in what others have to say. I think she . . . found it an advantage and enjoyed listening to what other people had to say.

> **Luke** has learned more patience in terms of listening to other people . . . not only being patient with other ways but being patient in a way that it's helping him. It's benefiting him to be patient and listen to what these people are saying - to really listen helps him to understand and it opens things up for him.

Amber is so reflective . . . she always was reflective and I think she really still is. I think she really valued getting to know these people and getting to know what they think and getting to know who they are. I think she just gleaned information from them and she put in a little of her own too – she's very pragmatic.

Our conversation led into Adette's sharing some of her own pedagogical thinking and parts of her practice that she felt had been influenced by this research experience. She spoke of the students' use of questioning and explained that one of the ways she helped students to prepare for the Provincial Achievement Tests (PATs) each year was to have them work with questions from previous tests as discussion topics. But now she wanted to expand this use of questioning by asking the students to think carefully about the material and based on their present understanding to work together in developing their own questions to review.

Adette explained that for many years she had organized students into small discussion groups for a variety of different purposes and had found this arrangement worked well. She now however had become far more aware of the untapped potential in the talk that went on in these groups for students to sort through ideas, to develop thinking and reasoning skills and to move on from gathering information to understanding. Adette went on to point out how students could use discussions to make connections between concepts and ideas found in one subject area and another. "Ethics comes into science and that of course leads into democracy and leads into the ideas of what we expect from our society." "So questioning could lead them to a more integrated understanding, not just within one subject area but how subject areas are integrated."

Over the months we discussed the many opportunities that small group discussions provided teachers for monitoring and assessing students' learning by listening to what students had to say and "tuning into" not only the "right answers" but the strategies they were using to

figure things out. Adette was very interested in knowing more about listening to and

understanding children's talk. She was now thinking more about what to look for in children's

talk and what it meant in terms of their learning, which was a concern she had heard from other

teachers. Adette mentioned that one of the school initiatives was to explore alternative modes of

assessment, which could include students' oral expression of their learning. She now expressed

her interest in sharing with the rest of the staff her own learning experiences related to this topic.

And finally, in response to my question – "What was it like to have a researcher in your

classroom over these past months?" Adette replied:

> I think all of the other students in the class were really comfortable - maybe a little
> jealous at first (*laughs*). It would be nice to have a researcher in the classroom every day!
> I loved it because it was not just an extra person in the classroom, it was someone else
> who was seeing things I didn't see. It was somebody who was seeing things that I could
> learn from.
>
> I'm glad you did this, not as an objective process but as a researcher within the group . . .
> I think that really helped the growth, I think it was very positive. And the benefit for me
> was that because now I have an objective look at what you did with the kids, I can take
> that and move it more deeply than I had thought about in the past. Because in the past I
> have known what I want but I just didn't know how to get there. So this gives me more
> ways to get there.

My conversation with Adette revealed her very positive thoughts and feelings about a

number of aspects of this research study I carried out in her classroom. It was very important to

Adette that her students had not only enjoyed the experience of being participants in the group

but that they had worked well together as a team and grown in their respect and trust for each

other. She felt their participation in the discussions had contributed to deepening their

interpersonal relationships and had helped the students to become more knowledgeable and

capable in their ability to communicate effectively in a group conversation.

Adette was a teacher who was very attuned to each of her students. She knew them as individual children who had their own identity, interests and personality traits and whose ways of participating and contributing to group discussions varied from one to the other. She spoke with great sensitivity about each of the student participants in relation to how they had benefited from their engagement in dialogic talk together. For example, she described Joshua's growth in self - confidence and Luke's learning to be more patient with his peers. She pointed out how Nicole had learned to listen to others and to value and to pay attention to what they had to say. As Adette thought about Amber she was reminded of her reflective and thoughtful approach to learning and could see her genuine appreciation for her classmates.

Through Adette's observations of the students' engagement in thinking collaboratively, exploring and sorting out ideas and making connections by talking together in these group discussions, she explained how this experience had increased her own understanding and interest in pursuing new ways of using "talk for learning" in the classroom. Our conversation concluded with Adette's very favourable remarks about my presence as an active and participating researcher in her classroom during the research period. She enjoyed the experience and appreciated having had another set of eyes to help her to "see" and to learn along with her.

The Parents Reflect

At the end of the study I talked individually with three of the four students' parents as a way to gain further insights into the children's conversational experiences at home. As Ellis (2006) suggested "Interviews with parents can supplement those conducted with the child to provide a sense of the child's everyday life" (p. 121). I was interested to hear from the parents'

perspectives about some of their children's out of school happenings that may have influenced

their contributions in the collaborative group discussions at school. (Nicole's parents chose not

to participate in the conversation).

Joshua's Mother

My conversation with Joshua's mother centered around Joshua's interest in taking part in

the group talks and his growth in confidence and risk taking. Joshua's mother commented:

> It would sound like Joshua to be quiet at first until he gets to know the person he is
> around. He didn't talk about the project (*research experience*) at home, it was pretty
> much another day at school . . . he didn't have a lot to say but I would say he has changed
> in behaviour a bit. He is more open.

I asked Joshua's mother if she meant he was more open in talking with her. She explained:

> What he shares with me personally is the same, I think he is on the same level but if we
> have company over he is more confident and less shy if he walks in the room with new
> people at a social gathering.

An interesting part of our conversation was about some of the topics the students

discussed in their groups. When I mentioned that they had been talking about the principles of

democracy in social studies, Joshua's mother remarked:

> That kind of explains why he's always asking about who is the leader here and who is the
> leader there and who runs this country, so maybe that's where his interest is triggered
> from.

Joshua's mother went to explain that:

> We listen to a lot of international news . . . because we're Lebanese and so we're
> interested in what is going on in Lebanon and Syria now. Joshua asks a lot of questions -
> he never had an interest before.

I commented on the importance for students to ask questions in relation to their growth as

learners. Joshua's mother explained:

> A lot of stuff I tended to shield . . . I'm thinking maybe I shouldn't. If he doesn't need to worry about it . . . like when it comes to war, so if he asks I'm "oh don't worry about it, it's no big deal." I don't really answer a lot of his questions. . . . I think different parents from different backgrounds would deal with it differently. . . . I don't know if it's shielding or protecting him and if that's the right thing or should I just sit him down and explain . . . .I don't know a lot of things, we don't have answers.

I asked Joshua's mother, "Is there any way you feel that Joshua has benefited from the experience of being part of the group discussions at school?" Joshua's mother responded:

> He's definitely more confident, more sure of himself. He will speak up whether he is sure of his opinion or not. He'll speak out and take whatever opinions he's going to get back, or feedback. It did him very well.

Joshua's mother described the positive kinds of changes she had observed in Joshua over the period of this research project. She saw her child as having grown in his self-awareness, his confidence and in his interest in talking with other people about world events and his own experiences. According to Joshua's mother he was now asking more questions, trying out ideas and dealing more effectively with unexpected responses that might arise. These observations of changes in Joshua's level of self-assurance were consistent with the teacher's remarks and with my own perceptions which I had noted earlier.

Amber's Mother

I asked Amber's mother to tell me about the kinds of conversations she enjoyed at home with family members and with others.

> She's pretty vocal now . . . with her sister I see the two of them back and forth with one another . . . they both have strong opinions about things. She does (*talk at home*) I find for her the evening or right before bed she will just lay there and she will either talk to herself or she will want to talk to me about "this has happened, or that has happened" or ask, "what should I do about this?" She does talk through things and it's almost systematically . . . it's almost like she is going through her head with a checklist. She's a very articulate kid that way.

I shared with Amber's mother how much we enjoyed hearing her stories about family times and her participation in sports. Amber's mother responded:

> She has always been a busy kid, she's been involved in activities whether its sports or anything along that line but I think too she has always had a lot of involvement with her father. He's always been one of these big storytellers. At night it's always been a routine with the kids . . . together they would come up with a story and they would talk about it or he would create one or talk a bit about his family history.

The comments offered by Amber's mother presented a portrait of her daughter that illustrated a child who was comfortable with her own thoughts and opinions. She did engage in conversations with her sister and with her mother as a way of sorting things out but she also enjoyed her own space for thinking out loud and reflecting on her experiences. When I heard about Amber's experiences with her father in telling fictional and family stories I understood more clearly why Amber often inserted anecdotes into her conversations.

Luke's Mother

I asked Luke's mother to tell me about the kinds of conversations Luke enjoyed at home with family members and with others.

> He's very interactive. . . . He's really good at coming home and telling me about his day. Over the years he's very chatty with everything. Luke has always been the type when he is talking to you, he thinks he knows more than you, so he always has something to say about it. I don't know if it is argumentative but he has his "two cents" to throw in about it.

I asked Luke's mother to tell me more about the kinds of things about school that he liked to share.

> I'm just trying to think of some examples that happened recently and it was to do with the elections. He was talking about that completely on his own. He will sit and watch the news with us and say "oh we learned about that in school today." He's really good that

way and even the shows he watches on TV are like discovery channel . . . . I do find that he is always talking about different things, and when I ask "where did you learn that?" At school he would say.

I shared with Luke's mother my awareness of the potential for leadership that Luke so often demonstrated with his classmates. She explained:

He was chosen to be the assistant captain on his hockey team last year. . . . He knows you are always going to lose a game . . . you're not always not going to win. He always tries to find the positive . . . in front of his teammates, in front of me not necessarily.

Luke's identity as a learner and active participant in the discussions held as part of this study was affirmed through the positive comments made by his mother in relation to his talking at home: "interactive," "always has something to say," "has his two cents to throw in." She described his enthusiasm for learning and recognized the knowledge he had acquired from watching television and from school. In response to my comments about Luke's strong potential in a leadership role, Luke's mother supported this image when she let me know that he had been chosen as the assistant captain on his hockey team. Embedded within her comments was her astute awareness of Luke's qualities of fairness, common sense and a positive outlook.

My conversations with the parents provided me with further insights into the "everyday lives" of the student participants. What I learned enriched my knowledge of the children in this study and informed my interpretation of the meanings they created through the talk in the group discussions. Listening to the parents' descriptions of their own child allowed me to "gain an appreciation of the child in terms of what is important to him or her - values, motivations, . . . interests, pastimes, preoccupations, . . . aspirations, significant others - and how he or she makes sense of his or her own and others' experience" (Ellis, 2006, p. 121).

In addition to my learning more from the parents about their children at home, these conversations also provided the parents with an opportunity to learn more about their child as a capable participant and learner at school. Unfortunately these kinds of important opportunities are often overlooked when the communication between home and school only focuses on achievement or lack of achievement in terms of test scores.

Chapter Summary

Within this chapter I have presented examples of students talking and thinking together to construct new meanings during a number of small group discussions. I described how the students were developing the skills of communication and learning to work together constructively and collaboratively as meaning makers.

The topics the students discussed during this series of small group interactions were curriculum related and so similar discussions surrounding these topics might be heard in other classrooms where students worked together in small groups to solve a problem or complete a task as part of a collaborative assignment. However, what was of particular interest and importance to this research study were the examples of the talk itself that displayed the recognized characteristics found in exploratory talk that made it a process of interpretation and meaning making in students' learning and understanding.

This chapter also included the students' final reflections on the research experience. I also presented the teacher's reflections and comments on her participation in this study and comments made by the parents of the student participants at the end of the research.

In the next chapter I will present the meaning I constructed from the data and my interpretation of the insights and meanings the students' constructed through their talk.

Chapter Five: Interpretation

We know the world in different ways, from different stances, and
each of the ways in which we know it produces different structures
or representations, or, indeed, "realities." (Bruner, 1986, p. 109)

This chapter presents my interpretation of the research data along with my current

understanding of the power of exploratory talk as a process in students' meaning making. The

purpose of this study was rooted in my strong desire to know more about how this informal and

dialogical use of language for learning helped students to sort out and interpret ideas, develop

thinking that is creative, critical and logical and to "learn ways of making new meanings"

(Barnes, 1976, p. 13).

In Chapter 4, I presented eight episodes of recorded student talk followed by my

comments on the interaction within each episode. The data also included transcripts of the

students' final reflections as participants in this research study. All of these transcriptions, now

shaped in written form, became a concrete means for my reflection and interpretation of the

power of exploratory talk in relation to the process of meaning making. I also explored and

reflected on these passages of talk in light of the theoretical framework and the research

questions that supported and guided this study.

Through my reading, analyzing and poring over all of the collected data I began to see

interwoven threads and reoccurring patterns in the way the students interactively engaged in

discussions. These patterns suggested a number of influencing features that strongly affected the

efficacy of the talk in the process of meaning construction. I saw how the students' interpersonal

relationships were strengthened by the way they related to each other socially and how their

ability to think and reason collaboratively all played a key role in their individual and shared understanding. The data also indicated the students' use of particular features of language that served as verbal and cognitive strategies in their search for meaning. As I reflected on my participation as facilitator, it became clearer that the stance I adopted was more dialogic than instructive. When I read the transcriptions of my own contributions to the talk I interpreted them as supportive statements and questions to help the students to keep going toward reaching their fullest potential in understanding. This approach meant allowing the students to stay "in control of the language and the experience while the adult operates effectively in response" (Searle, 1984, p. 480).

Within this chapter, for purposes of discussion I have organized my discussion of these influencing features around three interrelated thematic areas – all of which strongly influenced the students' construction of meaning: (1) The social context of the talk, (2) The verbal and cognitive strategies used by the students, and (3) The teacher's role in mediating the talk through intervention.

Although I will discuss these three thematic areas separately, it is important to emphasize the interrelationship of each area and to view the students' making of meaning from a holistic perspective. Or in the words of Wells (1999) "we should not forget that all the modes of knowing are interrelated" (p. 130). And all must work together.

This chapter will also present the insights and meanings the students' acquired through their use of exploratory talk as revealed in the data.

The Social Context

>Social realities are not bricks we trip over or bruise ourselves on when we kick them, but the meanings that we achieve by the sharing of human cognitions. (Bruner, 1986, p. 122)

Bruner (1986) believed that realities do not already exist but rather rest in the meaning we create through social and interpersonal interaction and negotiation of the meaning of the "concept at hand" that surrounds us (p. 122).

Within this theme of the influencing feature of *The Social Context* on the students' construction of meaning I will discuss the influence of the interpersonal relationships on the advancement of the students' learning. Secondly I will describe the students' use of the social practices that affected the flow and quality of the conversations. Finally I will discuss the effect of the collaborative activity on the group members' individual and joint reasoning and meaning construction within a social context.

Interpersonal Relationships

>It is above all by what we say and do in face-to-face groups that each of us declares his identity, his difference from others; and on the basis of these declared identities we go on to establish relationships. (Britton, 1970, p. 222)

Throughout this research study, the students' participation in the small group discussions provided rich opportunities to declare their identities, to bond together and to form personal and meaningful relationships with each other. In this way, the students each became "a significant part of the official learning environment for all the others" (Cazden, 2001, p. 131). Britton (1970) suggested that coming together in conversations is not only a means "to know other people, but by reflection from others, to know ourselves, and by interaction with other observers, to know the world" (p. 222).

Over the period of this study, it became clear that the students had established strong relationships of trust and confidence in each other. They felt safe to express their opinions, ideas, and feelings and to freely question or to disagree during their conversations. Within most of the research I have encountered on classroom discourse, and particularly in the area of collaboration and social interaction, there is a strong emphasis on the relationship between the quality of the social relationships among the students and the efficacy of small group learning. In the words of Barnes and Todd (1995), "The social context in which group work takes place is an important determinant of its success" (p. 82). Faulkner and Miell (2004), whose work focused on different types of interpersonal relationships, also found that "children's ability to participate in collaborative activity is profoundly influenced by the nature of the social relationship that exists between themselves and their partner" (p. 25). These findings, and those of Barnes and Todd (1995), resonated with the students' experiences in group work in this study.

Littleton, Wood, and Chera (2004) maintained "that when learners work together on a school task the business of building and sustaining mutually satisfying social relationships occurs in tandem with classrooms activities" (p. 41). My analysis of the talk among the students while they engaged in group discussions revealed the ways in which their mode of interaction strengthened their relationships. For example, the students frequently responded to each other's statements in ways that suggested their agreement and appreciation for their ideas. In my final interview with Luke he expressed his appreciation for other members in the group when he stated "everyone has things they are good at."

An important part of the interaction that brought the group together was the sharing of personal experiences in the form of anecdotes, which I will discuss later in the chapter. These storied accounts helped the students to learn more about each other and about their lives outside of school. Some of the experiences they shared conveyed far more than the daily events or the happenings they recounted and described. By sharing tales of their family members and details of their different backgrounds and cultural diversity, the students demonstrated a strong element of trust in each other (see Episode 4 in Chapter 4). Parker (2010) pointed out that within discussions "There is a cognitive dimension to trust: One believes that one's own vulnerabilities won't be exploited" (p. 2824). He added "There is an emotional dimension, too: One feels unafraid though vulnerable" (p. 2824). This element of trust was also present in the high degree of interest in someone else's story that was shown through their attentiveness and their questions and responses.

The level of security and safety the students felt, and the trust they had in each other, allowed them to take risks in not only exchanging ideas and expressing opinions but in sharing their feelings of uncertainty. For example, during the science activity in Episode 7, Luke did not hesitate to let the group know that he was confused about parts of the science activity. Barnes (1992) reminded educators that when a group of children are talking together "Equal status and mutual trust encourages thinking aloud: one can risk inexplicitness, confusion and dead-ends because one trusts in the tolerance of the others" (p. 109). For Luke, this kind of risk taking might not have been made as easily within a group that had not established a relationship of trust.

I noted that without the close relationships that developed among the group members it was unlikely that the students would have taken risks to experiment with language by trying out new words in different ways. Dudley-Marling and Searle (1991) wrote that "Experimentation with language isn't limited to preschool children" and "All children, and even adults, experiment with language in order to make sense of it" (p. 12). I observed students choosing and using words to express the meaning they wanted to convey but at times these words might have been confusing to a listener who did not have the familiarity or relationship with the person speaking. For example, in Episode 1, Luke described the needles as "look[ing] deceiving, they don't look nice." Then within the context of one fairly lengthy comment in Episode 6, Luke used the term "vice versa" several times to bridge a number of different ideas. Even though Luke used these words in unconventional ways, the students understood each other because they had come to know one another through their interpersonal relationships and so meaning, which otherwise might have been confused, was understood. Mercer (2000) explained that, "We always make sense of language by taking account of the circumstances in which we find it, and by drawing on any past experience that seems relevant" (p. 20). The students in this case drew on not only relevant past experience but on the intimate personal relationships they had developed. Barnes (1976) commented that "Without a close relationship one cannot be sure of shared assumptions, or whether what one says is earning acceptance and agreement" (p. 195).

The fact the students understood each other also suggested they were developing a stronger sense of "intersubjectivity," or knowing something of another person's way of thinking and the meaning of what they intended to convey. Wells (1989) explained that when working

collaboratively on a task, it is important that students "know the other's understanding and intentions, and both must take the appropriate steps to ensure that mutual understanding is maintained" (p. 260). Wells' argument is important in relation to this study where the students' understanding of each other's words and intentions were necessary in order to grasp and negotiate new meanings through their interaction with each other.

During the students' final interview I became even more mindful of the cohesiveness of the group and how very aware they were of the trust, mutual respect and friendships that had been established throughout the period of the study. Barnes and Todd (1977) in their research with "children and their talk" described "confidence in oneself and trust of others" as a necessary condition for those participating in exploratory talk (p. 49). It was interesting to note that they also "found such confidence and trust more commonly in those groups who worked together for some months . . . than in those whom [they] brought together only once" (p. 49). Although Barnes and Todd pointed out this finding was not surprising, it is relevant to my study because the four participating students stayed together as a group throughout the research period of 6 months. Nicole, in her final interview, commented on the benefits of staying with the same group in terms of feeling respected and free to express her ideas without fear of rejection by her peers. "But if we kept changing with someone else you would be kind of shy . . . but if you're with the same group you're free to express it (*opinions)* because you already know they are not going to . . . make fun of you."

The relationships of confidence and trust the students described within this group did not happen automatically but gradually evolved over the period of this research study. Moreover it

was apparent that within the context of these interpersonal social relationships, the students moved toward further understanding of themselves, others and the content of what they were learning.

The Use of Social Practices

I knew from my own experience as a classroom teacher, as well as from the writings of many other researchers who have studied classroom discourse and small group learning, that productive exploratory talk will not simply happen by putting students into groups and expecting them to engage in meaningful discussion. The notion of appropriate ground rules is addressed in most of the literature I encountered in the area of collaboration and classroom discourse to ensure that the students had equal opportunities to speak and to have their ideas received with tolerance and respect (Corden, 2000; Littleton, Miell, & Faulkner, 2004; Mercer & Dawes, 2008; Mercer & Littleton, 2007; Wells, 1999).

Within the context of social relationships I discovered that effective and productive talk for learning depended on the establishment and use of a set of social practices. These practices often begin at home and then are further developed at school through the teaching and establishment of a set of "ground rules" to guide the interaction within group discussions. These rules served as a foundation for the students to ultimately learn and practice the social skills necessary for a productive discussion to take place. Mercer (2000) described "conversational ground rules" as a way "we lay the foundation for joint intellectual activity" (p. 28). Then later he pointed out that "[ground rules] consist of the knowledge that may not be explicit but speakers know how to 'do' certain kinds of talking" (p. 28). Such ground rules usually included: (l) one

person speaking at a time (2) listening and acknowledging the viewpoints of others, and (3) building on perspectives presented by others in order to ensure that productive talk happens in their classroom context (Mercer & Littleton, 2007). Within the classroom in which this study took place ground rules were already well established before I arrived, which created a set of helpful expectations for discussions and cooperative learning. Specific ground rules may vary depending on the nature and purpose of the discussion and at some point may need to be revisited. This was the case when I began this study. After reviewing the existing ground rules I explained to the students that in discussions that were of an exploratory nature where we were trying out new ideas, not all these discussions would result in a specific conclusion. Nor would all questions asked involve a "right or wrong" answer. These points were important for the students to keep in mind in order to ensure the conversations maintained an open and exploratory direction. Throughout the episodes of talk, the students frequently demonstrated the kind of social skills that experienced discussants implicitly use to tactfully phrase questions, challenge an idea, identify with someone else's experience, acknowledge what another person has said or change direction in the talk.

There was evidence of the students' use of social skills as a means of maintaining the exploratory nature in the talk. The talk indicated signs of disagreement that could have changed the direction of the talk from exploratory into what Mercer (2000) called "disputational." When talk becomes disputational in a competitive, angry and aggressive way and "neither [person] actively seeks information nor offers explicit explanations" (p. 148) then Mercer suggests they become unwilling to listen to another's perspective. Whereas in exploratory talk, "Proposals

may be challenged and counter-challenged, but if so reasons are given and alternatives are offered" (p. 153). The group successfully moved through many of the discussions and maintained the exploratory nature in their talk, which reflected their ability to integrate social skills into their interaction.

In this study, the students frequently demonstrated their disposition to listen carefully to each other and to make their comments or responses based on what someone else had said, which is also an important social skill to learn. Listening and responding by acknowledging something that was specifically stated by another person was evident in the exchange between Amber and Luke in Episode 8. Luke acknowledged comments made by Amber and then extended her ideas by providing an explanation of his own. Within this interaction Luke credited Amber with her ideas and in so doing, used her name in the process. Barnes and Todd (1995) suggested "The importance of naming . . . is that to address a remark to someone by name implies an interest in his or her opinion, which is likely to encourage a reply" (p. 48). I noted that this use of a person's name within the interaction was frequently used by the students and usually did result in a response. In further discussions about this particular strategy it was suggested that even though group members in a conversation often do refer back to something that was said earlier it is less common for students to acknowledge and to name the person who contributed the initial idea.

I examined these communicative techniques that were an integral part of the way the students talked with each other but like Barnes and Todd (1995) I was concerned "not with social skills for their own sake but only with the extent to which they contribute to [the] group's"

learning (p. 50). Without a number of these social skills present and knowing when to use them, the flow of conversation, the nature of the interaction, and the working through of ideas to construct meaning for all concerned would have been hindered and less evident in the talk (Barnes & Todd, 1995).

The social skills the students used contributed not only to their individual learning but also helped to develop their ability to work together collaboratively in the construction of joint meaning.

Collaborative Reasoning

> In a good conversation, the participants profit from their own talking . . . from what others contribute, and above all from the interaction - that is to say from the enabling effect of each upon the others. It is for these reasons an important mode of learning. (Britton, 1970, pp. 239–240)

The collaborative nature of the students' interactions is a focus for discussion in this chapter because of the Vygotskian sociocultural framework upon which this study was based. Mercer et al. (1999) reminded me of the extensive body of research based on the work of Vygotsky that explored "how children's thinking is shaped by social experience amongst peers" (p. 96). This sociocultural and theoretical framework included the current body of research on collaboration and reflected the recent paradigmatic shift "away from considering just the outcomes and products of collaborative work, towards analyzing the interactions themselves" (Littleton & Miell, 2004, p. 1). This shift in the philosophical thinking that supported the research in collaboration resonated very strongly with the purpose of my study. For example, within much of this research on collaboration the emphasis has become much stronger in looking at the students as active participants in their own learning: "Learning to Collaborate,

Collaborating to Learn" (Littleton & Miell, 2004, p. 1). This move toward a view of

collaboration as more than a way of organizing students for group work is also supported by

Cazden (2008), who explained:

> Collaborative activities are advocated today for various reasons: to motivate engagement, to stimulate civic responsibility, to develop discourse skills of explaining and group problem solving as well as listening closely to others. We may not normally think about their possible additional effect on more internal cognition: only when you have to explain an idea to someone else successfully do you realise just what you do and do not understand. (p. 163)

In the students' use of exploratory talk the data revealed many examples of the students'

explaining ideas among each other. In Episode 8 Amber illustrated this point when she

explained how talking to another person triggered ideas and helped her to recall past events that

were meaningful to her.

Bachmann and Grossen (2004) in their research on collaborative activity reported that the

subject of exploratory talk, because of its qualities of "reciprocity and mutuality, together with

divergences" (p. 112), has been cited as one example of "the type of dialogue that best accounts

for learning in collaborative situations" (p. 112). "In Exploratory talk, children are able to justify

their own reasoning and are also able to take their partner's perspective into consideration when

making their own contributions" (p. 112). From a meaning making perspective the students in

this study demonstrated the qualities of "reciprocity and mutuality" which allowed them to

reflect on and to rearrange their thinking and open up possibilities to see things differently

(Barnes, 1976). In Episode 5, the discussion flowed back and forth with students sharing ideas

and offering suggestions of how Charlotte might solve the dilemma she had created. Luke

picked up on one of Amber's suggestions (*I'd like to add to that)* and after taking Amber's idea

into consideration he offered another possibility to explain the actions of the crew.

Mercer and Littleton (2007) viewed collaboration as "something more than children

working together in a tolerant and compatible manner." They explained: "we mean that

participants are engaged in a coordinated, continuing attempt to solve a problem or in some other

way construct common knowledge" (p. 25). They saw collaboration as a "joint commitment to a

shared goal, reciprocity, mutuality, and the continual (re) negotiation of meaning" (p. 25). In this

situation partners in a collaborative activity will "not only be interacting, as they might in

cooperative activity, but interthinking" (p. 25). It was this notion of students' interthinking,

interpreting and reasoning collaboratively within a social context to make sense of their learning

that became an important finding in this study.

In this section of the construction of meaning within a social context I have explained

how the students' collaborative participation in discussions attributed to the strong positive

interpersonal relationships and the effective use of social skills that they had developed with one

another. I observed the growth in their comfort level at expressing their opinions, showing an

interest in what someone else had said, questioning or challenging an idea, and sharing personal

experiences which are all characteristic of the nature of exploratory talk. Mercer and Littleton

(2007) in their description of the qualities of exploratory talk stress the importance of students

developing this *social mode of thinking* in order to successfully participate responsibly

throughout their lives.

The kind of discussion we call 'exploratory talk' represents a *distinctive social mode of thinking* - a way of using language which is not only the embodiment of critical thinking, but which is also essential for successful participation in 'educated' communities of discourse. (p. 66)

The Verbal and Cognitive Strategies

The more a learner controls his own language strategies, and the more he is enabled to think aloud, the more he can take responsibility for formulating explanatory hypotheses and evaluating them. (Barnes, 1976, p. 29)

The students in this study demonstrated a variety of ways they used their own language to learn and to communicate with others. The natural ways they expressed themselves, sought out information or asked questions was their responsibility and reflected their individual style and manner of talking with each other. Within the many examples of recorded talk I noted patterns of specific features of language that the students had intuitively used in their interaction. Numerous examples of talk revealed the students' engaged in hypothesizing, questioning in different forms, and inserting narrative accounts of personal anecdotes into their conversations. Upon closer examination, I saw how this use of language acted as verbal and cognitive strategies that became important functions in the students' meaning making process (Barnes & Todd, 1977).

Hypothesizing

Hypothesizing as a meaning making strategy is often described in the research literature on the nature of "exploratory talk" within the context of studies in language discourse and language for learning (Barnes, 1976; Britton, 1993; Lindfors, 1999; Mercer, 2000).

Barnes (1976) looked at a number of different language strategies that groups of students used as part of their interaction during small group tasks. He identified the hypothetical mode as

one of the strategies that students adopted to explore and interpret ideas in an attempt to make sense of what they were learning. Hypothesizing is characterized by the tentativeness and the sense of wonder found in exploratory talk.

Barnes (1976) stressed some of the characteristics of this hypothetical mode when he explained that students "ask ruminative questions of themselves, and their statements are tentative, exploratory, inviting elaboration by others" (p. 67). Similarly Lindfors (1999) described this mode of language in terms of "wondering utterances" which are used to express uncertainty, ideas still under consideration or possible interpretations (p. 41). These "wondering utterances" can become invitations to engage others with "playing with possibilities, reflecting, considering, exploring" (p. 41). It is this kind of engagement with language that opens possibilities for creating new meanings by modifying, reshaping and elaborating on opinions and ideas that were expressed earlier.

These hypothetical characteristics are similar to those I found in samples of the students' talk in this study, "I think, I wonder, It probably" " well maybe" were phrases that often led to students' going beyond the present situation and looking at other possibilities of *what might be rather than what is*. When students adopted this "what if frame of mind" (Barnes, 1976, p. 50) and went on to consider other possibilities I discovered they sometimes changed their initial interpretation. Barnes and Todd (1995) pointed out that in the strategy of "setting up hypotheses" students are looking at new information by drawing on what they already know from previous experience and "in discussing these relationships, the students will be carrying out

precisely those processes of monitoring and re-shaping understanding that are at the center of learning" (p. 63).

Barnes (1976) also viewed the hypothetical mode as a way of maintaining an open approach to discussion when students "make frequent use of one another's contributions by extending or modifying them" (p. 67). In this way they are keeping the conversation open and flowing. Barnes described this stance as "an open approach," which he suggested is one of the most important features of a successful discussion. Later Barnes explained that when an open approach is taken students are "willing to stay with it long enough to construct a meaning for themselves" (p. 51). It is through this hypothetical stance that the students kept the conversation going and kept it open-ended. Lindfors (1999), like Barnes, agreed that among the positive features of a wondering stance is "the attempt to hold the discourse *open*" (p. 40).

When the students used hypothetical language in this study and maintained an open approach, the conversations tended to flow in directions that were not always predictable. Martin et al. (1976) in speaking about the notion of conversation suggested, "No one knows at the beginning where it will go or where it will end" (p. 14). This point was demonstrated repeatedly throughout the episodes of students' free flowing, open ended and sometimes circular discussions.

Questioning and Responding

I discovered that language in the form of questioning and responding as an important exploratory meaning making strategy permeated throughout all the episodes of talk. These questions and responses stemmed from their curiosity and played an important role in their

search for meaning. Barnes and Todd (1977) pointed out that exploratory talk can take many verbal forms and so "Questioning, then, can be seen as yet another form of exploratory behaviour, with curiosity as its underlying motive" (p. 120). The kinds of questions students asked took many different forms depending mainly on the purpose for asking. But no matter what the purpose was, the act of questioning was, according to Barnes (1976), also an act of "focusing, and all the more powerful as a means of learning" (p. 194).

The kind of questions the students asked were real and genuine, ones that you would find surfacing in talk within any informal conversational setting. They were authentic and suggested a genuine interest in hearing a response. They were questions described by Rogers, Green and Nussbaum (1990) as "need to know" which are more commonly found in out of school settings rather than "pseudo" questions where the person asking already knows the answer (p. 76).

In the words of Nystrand (1997) "Authentic questions are questions for which the asker has not prespecified an answer and include requests for information as well as open-ended questions with indeterminate answers" (p. 38). Later Nystrand pointed out that "Authentic questions invite students to contribute something new to the discussion that can change or modify it in some way" (p. 38). In this sense authentic questioning is an important verbal strategy in creating meaning.

I observed another form of questioning described by Lindfors (1999) and Mercer (2000) as "tag questions" which suggested their reaching out for confirmation or validation of their ideas. Lindfors and Mercer described these "tag questions" as a statement with a question tagged on at the end (i.e., isn't it, wouldn't it?). Mercer (2000) described these kinds of questions as an

"everyday kind of joint thinking" which often served as a "common technique" used in conversation "to invite partners to check the accuracy of their recall" (p. 49). For example, when talking in science Joshua made a statement and then raised his voice as he added his words of inquiry at the end. "Well an owl is an omnivore too though **isn't it?"** Barnes and Todd (1977) pointed out that "Information about the precise function a tag-question is performing is thought to be carried formally by its intonational features, that is, by its tune" (p. 111).

Barnes and Todd (1977) in their study of verbal strategies found that sometimes, "When someone asks a question he offers an implicit definition of the boundaries of the subject discussed" (p. 114). In other words the way a question is worded and presented may shape the way a person answers. This can happen even though it may not be the intention of the person asking the question. Barnes and Todd went on to explain that the way a question is worded and asked can sometimes set up what they call a "content frame" which implicitly suggests an anticipated response. Unless this "frame" is ignored when the response is given it is more likely that the participants' reply will be limited or constrained.

On the other hand, Barnes and Todd (1977) went on to explain that in a discussion some members of the group may choose to "ignore the Frame presented in the question" (p. 114) and go beyond any suggestions of limitations in their response. They may intuitively choose to respond by elaborating and continuing on in the conversation in a direction of their own. Even though a question might be structured to invite a limited response, how the participants' respond can shape and influence the flow of interaction continuing or coming to a halt. For example, in Episode 1 during the discussion about the administering of needles, Nicole was asked the

questions "Don't you have to give them to yourself?" and "Does he take them all at the same time or at different times?" These questions were framed in a way that might have invited a limited response. However, Nicole chose to "ignore the frame" that had been set up and to elaborate by providing more details and anecdotes. It was through Nicole's unlimited response that the conversation remained open and the interaction continued in an exploratory way, which also allowed for extended opportunities for students to construct further meaning and understandings.

During this research study, I observed examples of the students' approach to asking and responding to questions as adhering to the content frame that was set up. I also saw other examples in the talk where they chose to ignore the frame and to go off in their own direction. In relation to the students' meaning making, the latter approach was more closely aligned to the theories of how meaning is constructed (Britton, 1970; Bruner, 1986; Corden, 2000; Goodman, 1984).

Exchanging Anecdotal Narratives

I observed the students' active participation in telling and listening to a wide range of personal experience narratives as another verbal and cognitive language strategy they used in the process of creating meaning through the talk. The narrative accounts the students exchanged were in the form of anecdotes of personal experiences. Like hypothesizing and questioning, they were shared as a natural part of the way they communicated. As I listened I was reminded that, "Nothing is too trivial to be recounted if the teller sees it as significant" (Martin et al., 1976, p. 15).

Rosen's (1985) studies reminded me that among the huge diversity of different forms that narrative can take, there are what he called "tales-in-the head" (p. 26). It was these kinds of tales that students brought into their discussion in a variety of forms such as small anecdotes, analogies and personal experience stories. Rosen (1985) commented on the place of personal stories within conversational discourse when he said, "Stories are not an optional extra of everyday conversation but rather conversation is inconceivable without them" (p. 25). Rosen was referring to the wide range of narratives that are spontaneously constructed and interwoven into everyday conversations. He emphasized the universality of storied accounts and how "We must expect then that narrative will always be there . . . surfacing in the daily business of living" (p. 12). He also pointed out that "Story telling may be discovery learning" and that "in the very process of story-telling the teller can make surprising even shocking discoveries" (p. 35).

Polkinghorne (1988) commented on the place of narrative in understanding and learning: "Narrative meaning is a cognitive process that organizes human experiences into temporally meaningful episodes" (p. 1). The students were unaware that they were "telling stories" to each other during the discussions. Rather as they talked together in conversation, they drew on whatever form of expression seemed to be appropriate at the time to share an experience about themselves or someone else, or to make a point in support of another's point of view.

Sometimes a personal narrative was used to provide a specific example or to make a point. In Episode 1, Nicole presented an anecdote about her cousin who became diabetic and because he had to take needles everyday he demonstrated bravery and courage. The telling of

this incident in story form sparked the interest of the other students and triggered other story narratives. It also acted as another way of ensuring the talk continued.

In the same episode, Luke introduced a narrative into the conversation when he prefaced his small story with an announcement that "I have different experiences." Luke's announcement to the others that he was about to share a new story about courage acted as a bridge or a transition from what was happening in the talk at this point to an event taken from his own life. Polanyi (1985) referred to this transitional talk as "Entrance talk," which, he explained, "often includes an explicit or implicit announcement that a story is about to be told" (p. 187). Bruner (1986) described this kind of "speech act" as "giving some indication to a listener or reader, first, that a story is to be recounted" (p. 25). Luke's narrative telling was a verbal strategy that shifted the initial focus of the talk of courage and bravery and placed it within a new context.

Stahl (1983) described personal experience stories as "first-person narratives usually composed orally by the tellers and based on real incidents in their lives; the stories *belong* to the tellers" (p. 268). I discovered that the way the students constructed even the brief stories they told helped to shape the kind of meaning and the way this meaning was created.

Stahl (1983) explained how the teller shapes the story in a way that could be described as "self-oriented" or "other-oriented." "The 'self-oriented' tellers delight in weaving fairly elaborate tales that build upon their own self-images and emphasize their own actions as either humorous or exemplary" (p. 270). Whereas the "other oriented" teller presents other people as "the primary participants" and "They underplay their personal role in the story to emphasize the extraordinary nature of things that happen in the tale" (p. 270).

I discovered there were personal anecdotes embedded in the talk that illustrated the characteristics and qualities that created these distinctions of "self-oriented" and "other oriented" as described by Stahl. For example, the first narrative told by Nicole about her cousin's diabetic experiences' suggested an "other oriented" story about someone other than herself, whereas the narrative presented in the same episode by Luke, about his dying his hair, fits the description of "self-oriented" in which Luke focused on his own actions and self-image. Stahl (1983) pointed out that among the many reasons that "we tell such stories is that through personal experience stories we articulate and then test the values that identify ourselves" (p. 275). Further to this point Bruner (1986) wrote "it is conceivable that our sensitivity to narrative provides the major link between our own sense of self and our sense of others in the social world around us" (p. 69). As I reflected on the significance of these two kinds of "storytellers" I discovered that in my study each one served a different but equally important purpose in the students' meaning making process. The "other-oriented" type of story provided students with an opportunity to take on another person's perspective. Whereas the "self-oriented" story allowed them to draw on their past experience of what they already knew and to bring it into the present situation. Barnes (1976) explained the importance of this strategy in the construction of meaning when he said "To learn is to develop relationships between them, and this can only be done by the learner himself" (p. 81). I found looking at the students' narratives from Stahl's perspective provided a further dimension to my interpretation of the students' use of personal experience anecdotes as verbal and cognitive strategies.

The brief stories the students brought into the flow of their conversations within each

episode were narratives about people and events in their daily lives at school and outside of

school. These narratives were shared with each other from various perspectives, which served

many different intentions and purposes for the telling. Apart from the tellers' implicit or explicit

intention to tell a story in the midst of the conversation, the narratives also served as an important

strategy within the process of creating individual and joint meaning.

The verbal and cognitive strategies I have discussed in this section were revealed as an

integral part of the language process of meaning making. As Britton (1993) pointed out, "We

cannot afford to underestimate the value of language as a means of organizing and consolidating

our accumulated experience, or its value as a means of interacting with people and objects to

create experience" (p. 320). Moreover, it is important to avoid seeing these language strategies

separately or in isolation but rather to recognize them as inextricably linked together as a whole.

Like Barnes and Todd (1977) "[My] interest was not to find out how all dialogue is structured,

but to recognise structures in dialogue which contribute to learning" (p. 16).

The Teacher's Role in Mediating the Talk Through Intervention

> Vygotsky stressed the crucial role of more expert members of the culture in providing the
> guidance and assistance that enable the learner to become an increasingly competent and
> autonomous participant in the activities in which he or she engages. (Wells, 1999, p.
> 295)

Wells (1999) pointed to the Vygotskian belief in the essential role of the more expert

members of society in helping the student to grow toward a higher level in their development.

Vgotsky's view of the student learning through interaction with an adult and more experienced

others is rooted in his sociocultural perspectives and in his well-established notion of the Zone of

Proximal Development (ZPD). Vygotsky (1978) explained the ZPD as "the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). And later he described how "the ZPD defines those functions that have not yet matured" and "could be termed the 'buds' or 'flowers' of development rather than the 'fruits' of development" (p. 86). When this research study first began I observed the wide range of levels of development among the four students and I saw some of the various functions that were still in the process of development. Through our ongoing experiences of engaging together in dialogue and using exploratory talk I observed evidence of the growth and development in their thinking and in their ability to interpret meaning which I will discuss later in this chapter.

As I pursued this study of exploratory talk in relation to dialogue and meaning and reflected on the findings, I became increasingly aware of how my role as facilitator and mentor within the social context of the group interaction became another important enabling feature in the students' meaning making process. Through my analysis of the transcripts of talk it became clear that the nature of my interactions with the students displayed the features of a dialogic approach to teaching and learning. I now believe that this approach had a positive influence that shaped the nature of the interaction and the quality of the dialogue. This approach also influenced the way I orchestrated the talk and how I presented the collaborative tasks for discussion, which encouraged their willingness to engage in conversation.

My Dialogic Stance

My intention was to establish a relationship with the students that instilled their trust in me and in the others to be open to their ideas, opinions and to respect their own ways of saying what they wanted to say. I wanted to avoid as much as possible the idea that my presence as another teacher/authority would inhibit the students' full engagement in the use of exploratory talk. Rather I wanted my presence to encourage them to fully explore their thinking and to remain in control of their own language.

As researcher and participant observer, I introduced the tasks, facilitated and participated in the discussions and audio-recorded the talk that was going on among the students. I adopted the task of orchestrating and facilitating the group talk from Alexander's (2008a) dialogic approach, which he claimed "demands both pupil engagement *and* teacher intervention" (p. 12). He went on to explain that, "the principal means by which pupils actively engage and teachers constructively intervene is through talk" (p. 12).

I intervened in the conversations by participating interactively in the dialogue and engaging in the co- construction of meaning along with the students. At the same time I was mindful of my role in the Vygotskian sense "in providing the guidance and assistance that enables the learner to become an increasingly competent and autonomous participant" (Wells, 1999, p. 295). My purpose in interacting with the students as facilitator and participant was "not as a way to see whether students know the right answers, but rather as a way of instructing and rehearsing students in processes of interpretation" (Nystrand, 1997, p. 24).

Examples of Dialogic Strategies I Used

The following section provides examples of the kind of support and guidance I provided to the students during the episodes of exploratory talk. These examples demonstrated my intervention through questioning, confirming, supporting and hypothesizing and illustrated the nature and impact on the students' learning.

The data revealed how my use of questioning served as a strategy to encourage the students to recall, provide information, clarify or expand on their ideas and to sustain the dialogue as a way of keeping the conversation open. These are the purposes for questioning that are emphasized in the literature on dialogic teaching (Alexander 2008a; Barnes, 1976; Mercer, 2000; Nystrand, 1997). Alexander (2008a) pointed out that "there's little point in framing a well-conceived question and giving children ample 'wait time' to answer it, if we fail to engage with the answer they give and hence with the understanding" (p. 25).

My following use of questioning encouraged Luke to elaborate further on his opinions about the captain's relationship with Charlotte. In the midst of talking about the possible reasons for the captain's feelings about Charlotte, Luke suggested that the captain needed someone to relate to. As a way of ensuring Luke's engagement I encouraged him to elaborate on this idea by asking, "How do you think he relates to her?" This question prompted Luke to reveal his understanding by providing a detailed and elaborated account.

During the discussions, I sometimes addressed a question to a particular student in order to bring him/her back into the conversation. My interaction with Joshua illustrated this point. During the talk in science Joshua made a brief statement giving his opinion about which category

a mushroom belonged. Nicole and Luke both disagreed and took over the conversation by expressing strong opinions as to why Joshua's statement was incorrect. At one point Joshua attempted to contribute but was unsuccessful because he was interrupted when he began to speak. In order to provide Joshua with a space to talk or to restate and support his own opinion with reasons for his argument I intervened with the question "Joshua why do you think it is a producer?" This question not only re-established Joshua's engagement in the conversation but evoked a very focused response and provided reasons for his thinking. As I examined the nature of my interaction and the questioning strategies that I used, like Nystrand (1997) I saw that my "questions and comments frequently depend[ed], moreover, on student responses and vice versa" (p. 25).

Many of the examples I noted of my contribution to the dialogue suggested a strong emphasis on providing support by confirming and validating what the students had said. This support was particularly important throughout the study but was essential at the beginning stages of our working together I needed to establish a relationship of trust that would invite the students to express their ideas without fear of evaluation or judgement. For example, in Luke's account of his coming to school to school with pink hair in support of a fundraising for cancer research, I could see this was a very meaningful event in his life. So I acknowledged and validated his actions in my response: "That was a very courageous thing you did." My statement validated Luke's point but it also encouraged him to think beyond his efforts in connection to his own feelings of courage and to justify and confirm for himself why he had taken part in this event.

In Episode 6 my intervention involved confirming and supporting the students understanding of the role that compromising played in the Iroquois confederacy model of consensus. My intervention at this point supported and confirmed Nicole's present understanding and my comments also encouraged her to consider some of the complexities and implications when engaging in situations that call for a compromise. In my response I avoided a message that suggested an evaluation of their understanding of the concept of "compromise" and simply repeated the word "compromise" to indicate my confirmation of their ideas. This confirmation encouraged the students to continue the dialogue by building on each other's ideas and extending this concept of compromise by taking it into other contexts.

Earlier in this chapter I described the students' use of language in the hypothetical mode in relation to their meaning making as they engaged in conversations. Episode 5 revealed a number of examples where their adoption and use of this mode was encouraged and strengthened by my triggering their thinking through the use of my hypothetical statements. My use of this mode set the tone for the interaction to go beyond the present situation and allowed the students to consider and explore other possibilities. My intervention in hypothesizing demonstrated this use of language as a means for the students to rearticulate and to reinterpret their present thinking. Barnes (1976) stressed the significance of this reinterpretation as "an essential part of learning" (p. 55).

As facilitator, it was a challenging but rewarding task to orchestrate and to support the flow of talk as a "more expert member" of the group and at the same time to encourage the diverse group of students to engage in conversation naturally and, using their own words, to lead

them to new insights and to deeper understandings. One of the challenges was in alleviating the

concerns of others that are often raised when students are allowed to determine their own

direction of the talk and the flow of interaction during collaborative activities. This concern is

expressed in the fears that talk in these situations can become unfocused and "off task."

Exploratory talk can be perceived as tentative, with the sharing of personal experiences being

trivial or unimportant, especially in the context of the "real learning" that goes on in classrooms.

Yet as I have found through my research and the current research of others on classroom

discourse, it is partly this "off task" nature of exploratory talk that enables the students to make

"knowledge and thought processes readily available to introspection and revision" (Barnes,

1976, p. 19).

This challenge was overcome by my growing understanding of the meaning of a dialogic

approach in working with students and my commitment to the belief in exploratory talk as an

integral part of dialogic teaching and a valid mode of learning. These beliefs stem from my

knowing that "no knowledge passes explicitly to the novice from the more expert participants, as

they move together with increasing synchrony" (Wells, 1999, p. 323).

Insights and Meanings the Students Constructed Through the Talk

The focus of this study was more on the process in meaning making than on the content

of what the students learned through the talk. Throughout this dissertation I frequently referred

to the process as meaning making and the product as content learning. This distinction was not

to suggest a dichotomy between the two because they are interrelated and inseparable. As Well's

(1999) explained "discourse is inevitably always both process and product . . . . the one is not

independent of the other, for they are related in the same way as 'saying' and 'what is said.'" (p. 107). As my fourth research question suggested, it was important to me to know the nature of the insights and the kind of learning the students had acquired by thinking, reasoning and talking together. The following is a summary of what I discovered.

Through the students' interactions and spontaneous responses to the novel *The True Confessions of Charlotte Doyle,* and in their discussions in science and social studies, they gained a deeper understanding of many curriculum related concepts. In the literature discussions, they moved through the novel itself and went beyond the text to a deeper knowledge of each other and of themselves. Their comments also touched on some of the broader social and economic issues found in society. My observations related to learning through literature are supported in the work of Klassen (1993), Lindfors (1999), and Pierce and Gilles (1993).

Learning About Literary Elements

The episodes of talk about the novel I analyzed (transcripts # 3 and 4) revealed the students' increased awareness of life in an earlier period of history as lived by the sailors and other crew members on the ship "Seahawk "during the mid-1800's. As their talk took them back and forth from this setting to their own life experiences they experienced the hardships and the brutal actions of the crew, the dangers of the sea and the feelings of loneliness and fear that were part of life at sea during that historical time. Barnes' (1976) observation that "Children of this age do not find it easy to think realistically about a way of life other than their own" (p. 53) affirmed for me the importance in finding ways, such as the use of exploratory discussions, to help students understand the text by entering into the life worlds of others.

Through their verbal exchanges the students also demonstrated their awareness of some of the literary devices used by the author. Luke reminded me of the captain's omnipotent role when he pointed out that even though he did not appear in the story at the beginning "He still sees everything probably" which suggested he also knew everything. Later, in Episode 5, Luke expressed his frustration at how the author had manipulated the where and when the characters appeared and what they were privileged to see and know.

The students gained an understanding of how characters in a well written novel develop and change. Their discussion revealed their thinking about the characters, not only as portrayed in the present scene but as people who had lived through other experiences at different times in their lives. During the writing of the ship's log in Episode 2, Luke suggested how Charlotte's life was before coming aboard the ship – "going to private school and being at the top of her class." In Episode 3 Luke suggested that captain's kindness toward Charlotte as the story progressed was based on his affection for his own daughter. "She (*Charlotte*) reminds him of his daughter . . . he loves her but he can't see her very often." Amber similarly came to see the captain as a "lonely man," alienated from his crew because of his cruel and unfeeling characteristics and behaviours.

The students not only learned more about some of the literary elements and the character development in the novel, but the talk revealed how they also incorporated their understanding of the fictional characters into "reading" some of the characters they met in real life. They compared the personality traits and actions of the storied characters to those of friends, family

and their hockey coaches. In conclusion, Luke added his own insights about human behaviour.

"The way you think about things and the way you act toward things tells a lot about a person"

Learning About the Reading and Writing processes

The students demonstrated their enjoyment and growth as writers during the writing task of creating a ships log in connection with the novel. Episode 2 provided several examples of their active and collaborative engagement in the writing process. They began by talking about the purpose for the writing, gathering information, selecting certain points to discuss, and exchanging ideas with each other. They shared their questions and insights about the stance they would assume and discussed the most appropriate voice and point of view to take for this assignment. They argued choices of "first person and third person" in their attempt to sort out how this task might be done. They also affirmed the need to get their ideas down before editing for spelling.

The questions asked and responses given to each other indicated what they had learned about the connection between the purpose for the writing and the appropriate form. "Can we do like the journal part but put it all in point form?" and in reply, "That's what you do when you write a report," and "Yeah, this is journal writing."

The students demonstrated their knowledge of a variety of meaning making strategies that are intrinsic to the reading process. The talk about the novel revealed their engagement with the text and their thinking deeply and personally about what they were reading. Analysis also showed that the strategies the students used in the approach they took toward the reading and in their interpretation and understanding of the text all contributed to the process of meaning

construction in reading. For example many of the episodes of talk revealed their entering into

the story, identifying with people and events in the text and making connections with own lives.

Examples of inference making were revealed as they hypothesized and questioned the reasons

for the captain's actions and attitudes. Students frequently returned to the text as a way of

recalling information and relating what they remembered to other incidents in the story, as

Joshua's remarks illustrated "I remember at the beginning of the story, the crew did something

like that." Joshua had learned to use what he had already read to help him interpret what he was

newly encountering.

Learning About Themselves and Others

Talking together strengthened the students' social relationships and provided insights into

each other's lives outside of school. They gained understandings of other members of their own

families as shown in the dialogue in Episode 1 which featured stories about family medical

conditions such as diabetes and what it meant to live within the constraints this condition created.

They also learned more about their own fears, attitudes and responses to illness, which taught

them more about themselves. Through Luke's retelling the part he played in fundraising by

colouring his hair pink to support a good cause, he came to a clearer understanding of his own

motives and his own actions. At the same time his example served as a reminder to the other

students of some of the ways they can take responsibility for helping others by supporting

charitable organizations. The students learned more about my interests in listening to audio

tapes and my preferences in tape recording over note taking in order to hear their voices during

this research period. In the same episode Joshua expressed his preference for learning through

experience rather than being told. "And you've experienced it instead of someone's telling you what happened, you've experienced it." Joshua was rearticulating knowledge of himself that he may already possess but in so doing he was creating a further understanding of his own style of learning (Barnes, 1976).

For the students in this study culture and socioeconomic diversity was a lived experience at home and at school. They were aware of the range of multiethnic and socioeconomic backgrounds of each other but through their talk they revealed a further understanding of how their values and traditions and ways of doing things were influenced by their family cultural histories. They came to a clearer understanding of the reasons behind their parents' attitudes and took into consideration the generation gap, "that was the olden days," and the diverse cultural differences in their parents' childhood. Through the talk, the students developed a greater understanding of the individual differences within and among their families, which heightened their awareness of their own identity and cultural legacy.

Learning About Curriculum Related Concepts and Topics

Embedded within the episodes of talk were indicators of what they had learned about a number of curriculum related topics and concepts. For example, the students expanded their understanding of the terms "courage" and "bravery" by talking about these terms in situations other than the novel. As they shared narrative accounts of incidents of courage and bravery within several different contexts (insulin injections, hospital procedures, dying hair) they were, through the talk, changing their existing understanding of word meanings by recoding and verbalizing these terms in other ways (Barnes, 1976). The students also acquired further

insights about the relationship of word meanings and context. By placing the concepts of courage and bravery into several different contexts for discussion, they learned more about the possibilities of multiple meanings of the same words.

The notions of inequality and injustice embedded throughout the novel, *The True Confessions of Charlotte Doyle*, permeated many of the episodes of student talk. The issue of inequality was discussed in the context of social status and was central in some of the literary discussions about the differentiation in the living conditions and privileges provided for the character of Charlotte as the daughter of the ship's owner. These terms became more real for the students when they discussed situations in their own lives that from their perspective demonstrated, inequality and injustice such as unrealistic expectations for chores and favouritism of hockey coaches with penalties given.

I also found evidence of the students' increased understanding of concepts and issues within the science and social studies subject areas of the curriculum. In science, the students acquired further insights into the concept of the food chain within the natural environment through their discussion and use of scientific terms surrounding the task of categorizing plants, animals and other living things. This was a pencil and paper task that in many classrooms might have been done by individual students working alone at their desks. But because in this case the task was carried out interactively with other students as they engaged in exploratory talk, the discussion allowed them to go beyond the naming of the food categories to an understanding of the meaning of these concepts within the discipline and their own lives (See Luke's reference to his family dog in Episode 7).

The students gained further insights into the topic of decision making within the social structure of the consensus model in the Iroquois Confederacy. This discussion in social studies (Episode 6) helped the students to become more familiar with the terms "consensus" and "compromise" that they had encountered in their earlier studies of how people participated in this negotiating process. As was the case with the science concepts the students talked about these ideas in terms of their own experiences in coming to an agreement with other people. As a result they went beyond identifying the terms and demonstrated their more personal understanding of what these terms meant in practice. Through their own negotiation, the group had reached a consensus of their own in the way they viewed the characteristics of this model of decision-making.

One of the most important insights the students acquired was revealed in the transcriptions of their final interviews and in the last episode of the series of discussions. Here, students expressed their appreciation and their own meta understanding of the value of talk as a viable tool for their own learning. They shared their views on the reasons why learning through group interaction was beneficial – reasons such as having access to other perspectives, opportunities to explain your own thinking, having ideas and memories triggered by the dialogue, and developing friendships. More importantly, what I saw in these comments was an increased awareness on the part of the students of **how** they were learning and a sense of empowerment as they assumed ownership and control of their own learning.

It has been long agreed among researchers and educators that some of the most valuable learning in school comes about in ways other than direct teaching. This point was once again

revealed to me when I reflected on the nature of the insights and understandings the students had

achieved through their interactive exploration of the literature and in their discussions in other

subjects. The examples of the insights and learning the students demonstrated in this study also

strengthened my belief that the ability to think and to talk about concepts and issues that relate to

the broader community can begin even at an early age if children are allowed to work through

these ideas by placing them in the context of their own familiar everyday experiences.

Chapter Summary

In this chapter I have attempted to provide my interpretation of the data and the meaning

I created from the students' experiences as they engaged in conversations using exploratory talk

as a meaning making process. I have shown how the students worked collaboratively in their

small group inquiries and how they used language as verbal and cognitive strategies for

reasoning and thinking together. I have also described how the students' use of exploratory talk

to enhance their understanding was encouraged and furthered by my dialogic approach in

supporting their learning. I examined these aspects of the students' meaning making process

within three thematic areas: The Social Context; Language as Verbal Strategies; and Dialogic

Intervention.

As I reflected on the Social Context of talk from the sociocultural perspective of

Vygotsky, Bruner and Britton, I was reminded of the essential nature of learning language and

learning through language as an individual and social activity. As part of this perspective, I

described the notion of how we arrive at meaning and that meaning is not something out there

"ready to trip over," but only exists when we make sense of it and only "[achieved] by the sharing of human cognitions" (Bruner, 1986, p. 122).

The notion of collaboration was a key element within the social context of this research study. I observed how the strong interpersonal relationships that the students developed among one another influenced their ability to work collaboratively. Clearly they worked "as a group" rather than "in a group" (Alexander, 2008a, p. 14). These relationships were also evident in the ease in which they practiced the social skills so necessary for becoming capable conversational discussants. Through the use of examples from the episodes of the students' thinking and reasoning together, I stressed the view of collaboration in this study as going beyond a way of organizing for small group learning activities. This view of collaborative activity reflected the strong emphasis on the interaction among the students, which is evident in the more recent research on collaborative learning (Bachmann & Grossen, 2004; Cazden, 2008; Littleton & Miell, 2004).

I looked at how the students' use of language within the form of exploratory talk revealed the characteristics of the nature of this form of language as described in the literature. I discovered how the students' use of different features of language became verbal strategies that led to their understanding and new insights. In this area I focused mainly on their use of questioning and hypothesizing as inquiry strategies and described some of the particular insights that they acquired through their use. I provided examples of personal narratives and anecdotes that the students weaved into the flow of dialogue and I explained how these exchanges of

narrative accounts acted as verbal and cognitive strategies in the process of meaning making and their ultimate effect on the students' individual and shared understanding.

I addressed the mediating features of my role as facilitator and explained how my dialogic approach contributed to the students' effective use of exploratory talk as a process for inquiry and understanding. I provided illustrative examples of talk that highlighted the nature and the effect of my participation and intervention in the discussion sessions.

I concluded this chapter with a description of the insights and meanings the students constructed through the talk.

In the next and final chapter I will discuss the findings that emerged from this study of exploratory talk and the students' construction of meaning and what these findings suggest in relation to a dialogical approach to classroom practice and further research. I will end this dissertation with my personal reflections on my research journey and my conclusions about the significance of this study in the enhancement of students' learning within a sociocultural view of classroom practice.

Chapter Six: Moving the Discussion Forward

> In order to figure and refigure our thinking about the data, we need
> to listen, attune, and grow familiar again with what brought us to
> our interest in the topic in the first place. (Ely et al., 1997, p. 20)

Many forms of talk are heard in classrooms throughout the school day but as Barnes' reminded us earlier, not all talk is the same or serves the same purpose in the process of students' learning. The kind of talk that I have concentrated on throughout this dissertation has been described as exploratory and dialogic in nature and which functions as a medium for thinking, understanding and creating meaning. One of my original concerns, when I began this research into exploratory talk as a form of classroom discourse, was my awareness of how little evidence there was in teachers or students using this form of talk as a tool for advancing learning and understanding in the curriculum related subjects they were studying. Yet through my reading of research and other academic works along with my own classroom experience, I had a strong sense that this type of talk was an important way in which we make sense of our thinking and experiences, at school and in our everyday lives. This concern led me to the purpose of this study, which was to explore the notion of exploratory talk as a powerful and viable meaning making process within the social and dialogic context of a series of small group classroom discussions. The approach I undertook was shaped as an interpretive inquiry into the meaning of students' experiences using language in this exploratory form of talk and how this process helped them to take control of their own thinking and learning in ways that enabled them to see themselves and their worlds in different ways.

I began this research with several interrelated questions that guided me along the way in pursuit of understanding exploratory talk as a mediating process for meaning making. (1) How do children use language within the framework of exploratory talk to construct meaning while engaged in small group learning? (2) What is the influence of peer social interaction on children's construction of meaning? (3) What is the role of the teacher in orchestrating opportunities for students' exploratory talk? (4) What meanings and insights do the students demonstrate through their use of exploratory talk? The first three questions were intended to explore how the process was enacted, enabled, and how it functioned within a social setting as a tool for learning. The fourth question was designed more with content in mind; to uncover some of the insights, understandings and skills the students had acquired through this process that had advanced their personal and curriculum learning. All four questions flowed from the broader question, "How does exploratory talk serve as an essential tool for children's learning and construction of meaning in small group discussions within curriculum subject areas?" I viewed these questions not as individual inquiries that required specific answers but as a context in which I could explore and consider the interrelated parts of the issue in relation to the study as a whole. As the research unfolded, I saw the individual questions as overlapping and intertwining as they worked together simultaneously.

This final chapter brings together some of the important and cumulative findings that evolved from the research questions, combined with the theoretical foundation of the study, and my earlier interpretation of the data. It is my attempt to "figure and refigure" my thinking about what I have learned throughout this study; about the meaning and the power that learning

through talk can hold for students and teachers within a dialogic approach to pedagogy. I have also included implications and suggestions for future directions in curriculum design and educational policy making. The following section is a synthesis of some of the major findings that emerged throughout this interpretive inquiry.

Findings and Implications of the Study

Finding # 1. *Through the use of exploratory talk the students developed insights and understandings that went beyond the classroom and became knowledge that was used as an integral part of their everyday lives.*

An important finding in this study was the extent to which the students were able to use the knowledge they had acquired through their discussions and to incorporate this new knowledge into situations that involved their own families and their social lives outside of school.

Barnes (1976) emphasized that "all knowledge has to be actively incorporated into the way [a child] interprets the world or it will be of little value" (p. 81). He stressed the point that if knowledge is never used, it may very well remain dormant and very likely forgotten. For this reason Barnes made a distinction between "school knowledge" and "action knowledge." He explained that, "school knowledge is the knowledge that someone else presents to us." And that we only "partly grasp it, enough to answer the teacher's questions, to do exercises, or to answer examination questions" (p. 81). Whereas "action knowledge" comes through the use of "knowledge for our own purposes . . . we begin to incorporate it into our view of the world, and

to use parts of it to cope with the exigencies of living" (p. 81). This knowledge then becomes part of who we are and how we act toward others in our everyday lives.

Illustrations of Barnes' theories about the active use of knowledge in the context of everyday life were revealed in episodes of talk that surrounded the novel the students were studying. As they talked about the discriminatory attitudes and actions of the captain and the crew, for example, on their own they incorporated this knowledge into their own experiences outside of school as members of a hockey team. The discussion points could have stayed within the context of the novel, whereas in the midst of their conversations the students related the fictional events to situations in their own lives. Other examples were revealed in the science and in the social studies activities. In science, Luke discussed the relevance of the categories within the food chain and then related this knowledge to his life outside of school when he referred to his family dog. In the social studies discussion of the consensus model of decision making the students took the notions of "negotiation" and "compromise" and incorporated these ideas into their own life situations.

As students progress through the school system the expectations across the grades and in various subject disciplines increases in the scope and depth of knowledge they are expected to possess. The term "knowledge" is difficult to define for pedagogical purposes because there are different kinds of knowledge that exist and that we create. Not all knowledge comes from the personal construction of individual meaning, which is the kind of knowledge I explored in this research study. The term "knowledge" is frequently used in school to refer to knowledge of specific facts and information, knowledge of strategies and methods to use in problem solving,

and knowledge of the social norms expected at school. These examples suggest knowledge that comes from someone else or from other sources and make up an important and necessary part of the school knowledge that students need to possess. Less often do we hear a reference in school to students' personal knowledge, which they themselves have constructed and incorporated into their everyday lives. The concern that is evident in the literature and that emerged in my own study is expressed by Wells (1999):

> such knowledge, however carefully sequenced and authoritatively presented, remains at the level of information that has little or no impact on students' understanding until they actively engage in collaborative knowledge building to test its relevance in relation to their personal models of the world and, where possible, its practical application in action. (p. 90)

Well's words strongly speak to the use of exploratory talk as an engaging way for students to assess and validate their own thinking of the ideas that are presented to them and to integrate this new understanding into their world outside of school.

Barnes (1976) pointed out that one of the complexities in the nature of knowledge is that "it is both 'out there' in the world and 'in here' in ourselves" (p. 79). The difficulty for teachers "teaching" is to help students go beyond the "school knowledge" and to find ways to help students to use the knowledge given by someone else and to make it their own. "Getting the knowledge from 'out there' to 'in here' is something for the child himself to do: the art of teaching is knowing how to help him to do it" (Barnes, 1976, p. 79).

Finding # 2: *The efficacy of exploratory talk as meaning making depends on the nature and the quality of the talk and the extent of the interaction that takes place.*

While the students in this study engaged in the practice of exploratory talk, their use of language included a range of verbal and cognitive strategies such as expressing feelings, questioning, predicting, hypothesizing, explaining, describing, confirming, and providing narrative examples in the form of anecdotes. All of these verbal exchanges among the students worked together in the negotiation of meaning. What was revealed in my close examination of the talk was the way the verbal strategies were interrelated with the cognitive strategies we use for rethinking and reshaping what we already know. The verbal strategies the students used acted as a means of mediating the cognitive processes of meaning making such as, analyzing, synthesizing, and thinking critically (Barnes & Todd, 1977, 1995; Paul & Elder, 2005). These relationships between the verbal and cognitive strategies are rooted in the Vygotskian beliefs of interdependence of language and thought. This finding is also supported in the work of Barnes (1976), Barnes and Todd (1977), Britton (1993), and Bruner (1986), who all stressed the importance of social interaction; of talking with others as a means of reinterpreting or reordering, and of modifying our interpretive systems as a way of changing our interpretations and seeing things differently.

Through the use of these verbal strategies the students talked and listened to each other as they established connections and relationships, which allowed for sustained interaction to flow in a continuous stream of conversation. Because the conversation stayed open, the students took more time to concentrate and to think about a particular idea, which in turn improved the quality of talk in relation to meaning making. Barnes (1976) pointed out that "unless [students] can be

encouraged to stay and 'talk their way in' in an open fashion they are hardly likely to reach new understanding" (p. 51).

This point has important implications for teachers, who often have the opportunity to improve the quality of interaction in their responses by extending students' contributions during lessons, especially when posing questions to them. Rather than accepting or rejecting a student's response the teacher's suggestion of "tell me more" could help students to expand on what is said and what is thought.

Finding # 3. *There was a direct connection between the way the topics for discussion were presented by the facilitator and the nature of the talk and the kind of learning that took place.*

The topics for group discussions were selected on the basis of the students' interest and familiarity with the content. The way the topics were introduced and explained to the students influenced the direction and the flow of the conversation and the kind of strategies and the nature of the interaction. These connections were made explicit as I examined my notes of the introductions to the transcripts of the episodes of exploratory talk presented in Chapter 4. For example, when I presented the task as an invitation to respond personally to an event in the novel, the dialogue revealed more examples of their drawing on their personal experiences and making connections with what they already knew. Whereas, when the topic was predetermined in relation to an assignment in a specific subject area, the dialogue revealed more emphasis on the verbal strategies to seek, interpret and reinterpret specific information.

Barnes and Todd (1977) suggested that, "the nature and value of a discussion will be influenced not only by the content of the task, but also by the tightness or looseness with which the directions are framed" (p. 82). In situations where the point of the discussion is to complete a specific task that results in a predetermined conclusion, if the intention of the teacher is to encourage the students to follow a specific "sequence of thought" in their destination, then the task will be presented with a "tight series of questions" to follow. If, on the other hand, the intention of the teacher is not to "predetermine the route" but allow the students to find their own path to understanding, then they need to be encouraged to engage in the topic using exploratory talk and to let the conversation flow as it may in many different directions.

It was important in this study to frame the directions for a task in such a way that students were provided with opportunities to generate ideas, to open up other possibilities for consideration and to merge their everyday knowledge into what they already knew and brought to the discussion. In this way opportunities for students to engage in joint meaning making thinking and reasoning were increased.

It is important for teachers to be aware of the relationship between the way an assignment or task is presented and the kind of learning that is created.

Finding # 4. *The use of exploratory talk is one of the essential meaning making features of dialogic teaching.*

In Chapter 2, I described the social constructivist theories and principles that support the pedagogical approach to teaching and learning called "Dialogic Teaching," as presented through the research and writing of Robin Alexander (2008a). Within this "empowering" pedagogical

approach, the use of talk is central to learning and understanding (p. 37). The following are some of the important features of the dialogic teaching approach described by Alexander that were revealed throughout my study: the theoretical underpinnings; the beliefs about the power of talk; the roles of the teacher, and the students and the various repertoires of talk for teaching and learning.

Alexander (2008a) explained that the research basis for this dialogic approach was rooted in the Vygotskian view of spoken language, with others and across the wider culture, as the medium for cognitive development. This social constructivist perspective also included the construct of meaning making through the interplay of what is already known and the meeting of new ideas and experiences. The rationale provided by Alexander that supports talk as central to dialogic teaching is consistent with current ideas about the social and cultural nature of talk for learning (Barnes, 1976; Britton, 1993; Bruner, 1986; Wells, 1999). The major beliefs about the contribution of talk in learning that Alexander (2008a) put forward include the following:

> social: talk builds relationships, confidence and a sense of self;
> cultural: talk creates and sustains individual and collective identities;
> communicative: talk is humankind's principal means of communication, especially in an era when children are becoming more familiar with visual images than the written word. (p. 37)

The characteristics of dialogic teaching that Alexander (2008b) described in the five supporting principles presented in Chapter 2 (that it is collective, reciprocal, supportive, cumulative and purposeful), were strongly reflected in Barnes' (1976) and Mercer's (2000) definitions of "exploratory talk" as well as in the findings of my own research. My study showed how these principles were evidenced in the way I, as the facilitator, worked together

with the children on the task of coming to further understandings through talk (collective) and

how we supported each other by listening respectfully, sharing ideas and considering alternative

viewpoints (supportive and reciprocal). The data also revealed numerous examples of the

participants' contributing ideas and building on and integrating the ideas of others into their own

thinking (cumulative). The fifth principle (purposeful) that Alexander described relates to the

teacher: "teachers plan and steer classroom talk with specific educational goals in view" (p. 105).

This principle was demonstrated in the context of the group discussions in which every session

was planned to encourage the use of exploratory talk for understanding curriculum related topics

of interest.

In Alexander's (2008a) description of various modes of classroom talk, he acknowledged

the need for teachers and students to engage in a variety of different kinds of talk for different

purposes, such as memorizing facts, answering test questions, imparting information. However,

he stressed the point that although talk for instrumental purposes was a necessary part of

teaching, it would not likely lead students to further "cognitive challenges which children need"

(p. 31). Nor would this kind of talk be found in the criteria for dialogic teaching. Alexander

argued that the kind of talk that would hold the greatest potential for cognitive development, and

meet the criteria for dialogic teaching, was talk used in "discussion and scaffolded dialogue" (p.

31). This became my argument as well, as I engaged in dialogue with students in small group

discussions using exploratory talk. In terms of the classroom conditions that promote the use of

exploratory talk, Wells (1999), like Barnes and Alexander, emphasized the importance of tasks

that are sufficiently open ended that students want to "engage with and share the perspectives of others in order to understand them" (p. 126).

Within the practice of dialogic teaching, when students are engaged in discussion, they develop a repertoire of talk for learning, as they use language to "narrate, explain, ask different kinds of questions, explore and evaluate ideas, discuss, negotiate and to listen to others and be receptive to alternative viewpoints" (Alexander, 2008a, pp. 39–40). It was in the students' use of exploratory talk in all the dialogic episodes in my study that very similar strategies for thinking, reasoning and creating meaning were revealed. This finding illustrates the complementary ways language is used in exploratory talk and in a dialogic inquiry approach. It points to the need for teachers to become more aware of the rich potential for learning intrinsic to the dialogic model.

Finding # 5. *Within the dialogic teaching framework the role of the teacher is fundamental.*

The importance of the role of the teacher in an approach to teaching and learning that is based on inquiry and dialogic interaction, and on scaffolded intervention with students, cannot be overstated. Alexander (2008a) stressed the point that although among the various kinds of talk "discussion and scaffold dialogue have by far the greatest cognitive potential . . . . they also, without doubt, demand most of teachers' skill and subject knowledge" (p. 31).

One of the pedagogical benefits of a dialogic inquiry approach to teaching and learning, I discovered, is in the area of assessment. When teachers and students are talking and learning together there are rich opportunities for the teacher to observe and listen and to find out what the students know and understand and what assistance they need in order to move forward. To

recognize what children know in this way requires strong interpretive skills because what children might literally say in conversation may not fully express their thinking or understanding. In order to interpret the significance of what children say in this context, teachers need to have a sufficient theoretical knowledge of the strategies involved in children's meaning construction. It also requires teachers to follow up with probing questions and appropriate responses to students' contributions and to encourage students to expand on their views and opinions. These findings are reinforced by those of Wells (1999) and Alexander (2008a) in their studies of the role of the teacher in classroom discourse.

The teacher also has the responsibility for planning and organizing learning opportunities that allow students to engage in the exploratory and dialogic use of talk. I agree with Barnes (1976), who posited that it is the teacher who "sets up these patterns of communication in the classroom" (p. 9) and that opportunities for learning through talking are not limited to small group situations. Rather "it is the *quality* of the interaction, regardless of the organisational context, which matters most" (Alexander, 2008a, p. 40). Barnes and Alexander agree that dialogue and the exploration of ideas through interaction can take place in one-to-one (teacher and pupil or pupil pairs), collaborative group work or in whole class teaching. This claim became a reality for me during my research period in the classroom, when I observed the teacher in a dialogic stance as she interacted with the whole class of students while sharing a piece of literature. During the book reading, the teacher involved the students in responding to the text by pausing periodically to pose a question or to draw their attention to a particular feature in the book. At different points she asked the students to imagine other possibilities, to share their

opinions, and she asked questions to prompt them to make connections with their own experiences. I noted in some of her questioning techniques when a student responded she accepted their answer but then followed up with another question, which pushed their thinking a little further. The teacher also asked the students to share their ideas within each of their small groups and then to come back with their viewpoints to the whole group setting.

Through her interaction with the whole class she not only encouraged the use of exploratory talk in this dialogic setting but she modelled the strategies of sharing, questioning, hypothesizing, considering other viewpoints, and building on the contributions of others as a way of making sense of the literature experience. The importance of modelling and facilitating the verbal strategies that students use for making meaning and understanding text is an important element for teachers to incorporate when sharing books and stories with students as they are learning through literature.

It is the teacher who has the responsibility to encourage every students' involvement in all aspects of curriculum learning in subject areas, which means addressing the individual needs of students within a diverse population and assessing students' progress in meeting these needs. When teachers provide opportunities for students to talk together, which I have described in this study, they need to be aware that not all students engage in discussions or contribute in the same way. As in any group conversation, people will bring their own way of communicating and their own approach to the interaction. Among the voices heard within my group the transcribed episodes of talk revealed that Nicole and Luke were much more vocal than Amber and Joshua. It is important for teachers and students to be aware of these differences in the way people engage

in conversations and to be sensitive and thoughtful in their responses to children's questions or comments. This point is particularly important in order to encourage the "quiet child" who may feel hesitant or less confident in entering into a group discussion.

Recommendations for Practice

At the beginning of this dissertation I referred to the existing gap between the theoretical understanding of teaching, learning and curriculum and what is happening in the reality of the classroom. The following recommendations direct attention to "the need to bridge what often seems like a vast conceptual gulf between practitioners and researchers" (Mercer & Hodgkinson, 2008, p. xii).

Curriculum Designers. The findings of my study support and enrich the currently mandated Alberta Language Arts Program of Study (Alberta Learning, 2000) and will, I believe, support even more strongly the directions curriculum redesign initiatives are proposed to take in the near future. The Alberta curriculum review, which is currently underway, is part of a broad ministerial initiative to strengthen the future of education in Alberta to meet the needs of a growing and diverse population in a changing world. The vision is "to inspire and enable students to achieve success and fulfillment as engaged thinkers and ethical citizens with an entrepreneurial spirit within an inclusive education system" (Alberta Education, 2010, p. 7). Like previous documents, this new curriculum will be designed around a series of learning outcomes specific to each subject area at each grade level. At the core of this new curriculum, in addition to numeracy and literacy, the following are the competencies that will be foundational and more visible in the goals for student learning across all subject areas in order to achieve what

is needed for a 21ˢᵗ century learner: **"Critical Thinking and Problem Solving; Creativity and Innovation; Social Responsibility and Cultural, Global and Environmental Awareness; Communication; Digital Literacy; Lifelong Learning, Self-Direction and Personal Management; Collaboration and Leadership"** (Alberta Education, 2010, p. 9).

My own research study supports the timeliness of the emphasis on these competencies. They are essential qualities students must develop in order to help them learn to engage in society as thinking, creative and communicative citizens. My study demonstrated the capacity for these competencies to be accomplished within a dialogic pedagogical practice. However, I also recognize the challenges that lie ahead for curriculum writers and curriculum designers in fitting a social constructivist and holistic view of language learning into documents designed to accommodate individual grade levels. I believe that, wherever speaking and listening are addressed within curriculum documents at all grade levels, every effort needs to be made to ensure that talk is presented not only for instrumental purposes but as an essential tool for understanding. If the use of exploratory talk is only mentioned in statements of philosophy, it is unlikely that this mode of learning will be used in practice. Every student from kindergarten to Grade 12 needs to have meaningful opportunities to use talk in its exploratory form for the purpose of constructing their own understandings.

Teachers' Inservice Education. Inservice education needs to include a change in the way we view classroom discourse in all its forms and particularly in our traditional understanding of talk as an exploratory meaning making tool for learning. If the notion of talk is still considered and discussed under the rubric of speaking and listening and only in the language

arts subject area then the emphasis will likely remain on presentational talk, which is used in answering questions or giving oral reports. Teachers need to examine the role of talk for understanding across the curriculum in the context of dialogue, discussion groups and scaffolded discussions in which the teacher can model strategies to promote collaboration, interaction and the use of exploratory talk.

The newly proposed programs of study will call for more authentic and classroom based modes of assessment. This is an area that will require special attention in sessions designed for teachers' learning and professional development. Alternative modes of assessment, such as ways of recognizing how children use exploratory language that I described in my own study, may be useful for assessing exploratory talk across the curriculum.

Teacher Resources. Changes in curriculum bring possibilities for new teaching materials and resources to support and aid teachers in their planning and administering programs in the classroom. The resources need to be closely examined and selected for their practical value but also for the research and theoretical framework reflected in the content and the approach to teaching and learning. They need to include ways to address the use of language in all its forms to achieve the competencies of thinking critically and creatively, problem solving, collaborating and developing multiple modes of literacy. In addition, when resources are developed and recommended by Ministries of Education and by publishers and school districts they need to address the diversity of students in today's inclusive classrooms and be specifically designed for teachers as planners and choreographers of the learning environment.

Pre-service Teacher Education. During their years in teacher preparation programs, university students are introduced to the theories and practices of teaching and learning. At this time they are beginning to build a body of pedagogical knowledge and understanding of children's learning and development within their academic course work and in their field experiences in schools. Like the children they will encounter, these pre-service teachers bring a wealth of experiences and established ideas about what it means to be a teacher, how teachers teach, and how children learn. Pre-service teachers need opportunities, in addition to language arts curriculum and pedagogy courses, to learn about and experience the power of talk as a meaning making process. The student teachers' participation in their own group work in all their classes that involves learning collaboratively through interaction in discussions, and dialogue can provide these experiences. Through these kinds of experiences preservice teachers can begin to grasp the notion of talk as a tool for the construction of meaning and to understand the fluid and dynamic nature of language and the multiple ways we use language in different forms and for different purposes. The use of talk, as in other forms of language, is not a linear or step-by-step technique that can be directly taught but is a continuous and recursive process that goes on throughout all the years of schooling.

Administrators and Policy Makers. As educational leaders, administrators at all levels are responsible for ensuring that the best quality teaching and learning for children's success is taking place within classrooms and throughout the schools. Experienced and beginning teachers draw on the knowledge, the guidance and support provided by administrators to carry out their responsibilities in the classroom. In order to provide these kinds of supports, administrators need

to stay informed about changes in research, theories and curriculum and to understand what these changes mean for all aspects of classroom practice. Part of this support includes helping teachers to plan for their own professional development through wise choices of inservices, workshops, conferences and other means for them to stay at the forefront of current research and best practices. Administrators may want to consider the model of "teachers as researchers" in their own classrooms to supplement the traditional inservice models. Studies such as the one I participated in as teacher as researcher during my early teaching years, as well as the work of the TALK Project that I described in Chapter 2 are examples of valuable ways in which teachers can continue to learn.

Suggestions for Continuing Research

The insights I acquired from this study, from the body of established research in language as a tool for learning and from inquiry based pedagogical approaches, open up specific areas of concern that might be addressed more fully in ongoing research.

- **How does the type of talk students engage in affect or shape the kind of learning and knowledge that is created?**

Although the understanding of the role of talk in classrooms by educators and curriculum designers has been advanced over the years from talk as only a means of communication to talk as a tool for learning in curriculum areas, there is a need for further examination into the process of talking for understanding. Studies could include an exploration of all forms of classroom discourse, which would inform researchers about the distinctions among the various kinds of talk and their purposes, and the kind of knowledge that is created through the use of each form. Such

studies could provide guidance in setting up meaningful opportunities for interaction in the classroom that would ensure a balanced approach to the use of talk for learning.

- **How can students' participation in collaborative learning situations help to develop the necessary skills needed to become capable discussants?**

Group work is an integral part of learning in most of today's classrooms. More attention is needed to find meaningful ways to help students to work collaboratively to develop skills in thinking, reasoning and decision-making and communicating effectively. Educators also need to explore how these skills are advanced through the teaching and practice of the social norms that are required for constructive interaction in school, and throughout their adult lives as responsible citizens.

- **How might the pedagogical approach of dialogic inquiry help to increase the use of exploratory talk in classroom practice?**

The value of exploratory talk has been shown in the literature and in my own findings as an important part of dialogic teaching. These findings suggest a need to examine the kind of teaching and learning strategies and activities found within this approach that would stimulate and increase the use of exploratory talk.

- **How can the tool of questioning be strengthened in a dialogic approach to learning?**

Within dialogic teaching and inquiry based learning and exploratory talk, questioning plays a fundamental role in the search for meaning and in the process of that meaning construction. Questioning is an important verbal strategy that students and teachers draw on in their interaction in small group learning and in dialogue in whole class settings. More

knowledge about questioning strategies is needed in order to help students and teachers to generate their own questions in ways that will extend their thinking and further their understanding.

- **How can the use of exploratory talk as a tool for understanding shape and enhance students' learning through technology and the development of digital literacy?**

The use of technology in students' lives at home and at school has long been established as a tool for entertainment and school learning in skill development and content in all subject areas of the curriculum. Students and teachers use multiple technologies in a variety of digital forms to access and share a wealth of information among each other. They use a variety of software to inform and practice their skills in reading, writing, researching and problem solving. Students are expected to do these digital tasks creatively and competently and to work individually and collaboratively with their peers. Ongoing inquiry is needed in the use of technology to provide rich opportunities for students to talk together and to engage interactively. We need to see technology as interaction and as a means of extending the use of exploratory talk. For example, students can connect with other students to share information and to exchange ideas in the context of social media. Further research could reveal the contributions that exploratory talk can make in the use of digital literacy and in turn, the ways in which students' participation in different kinds of technology can advance the use of exploratory talk for learning.

In addition to the above suggestions for future research other areas of possibilities for investigation might include:

- An exploration into the potential for exploratory talk in students' learning disciplinary language in various subject areas.

- An investigation into how exploratory talk could address the learning needs of students in junior high and high school (Grades 6 – 12).

- An exploration into how exploratory talk can serve as a valuable tool for teachers' to use in assessment practices for students.

My Reflections on the Research Experience

> Sometimes we write for ourselves, to record what we have seen or felt or thought. . . . Many times we write just to find out what it all means, for by writing we can stand back from ourselves and see significance in what is close to us. (Murray, 1987, p. 3)

When I began the writing of this dissertation, my primary intention was to communicate to others as accurately as possible what I had done in this research study and why, and what I had learned about exploratory talk as a process for learning and understanding through small group social interaction. I was mindful of the expectations of qualitative research writing as described by Ely et al. (1997), "Good qualitative research writing is the communication of how someone comes to understand various perspectives on the field, and that exist in the field and within the self" (p. 38). I continued with this goal of communicating clearly with others in mind, but I also discovered during the process that the act of writing itself had become a journey in discovery that allowed me in Murray's words to "stand back" from myself and see the significance in what I had come to know. In this way while I was writing for others I was also writing for myself as a process of discovery in the construction of my own understanding.

From the constructivist perspective, the writing provided me with opportunities to reflect, to negotiate and create meaning from what I had observed, recorded, and thought about in relation to the students' talk in discussions, in interviews, my conversations with the teacher and parents and my reading of the work of other researchers. Along with the students' experiences in constructing meaning through the talk, I too was continually creating and recreating meaning through reflection, and through the ongoing interaction with my thoughts and the writing. In the words of Britton (1982b), I assumed the "role of spectator" as I contemplated the meaning of the research data and evaluated its significance within a broader picture.

Throughout this lived experience of negotiating meaning with the students, the teacher, and the parents, I also increased my awareness of the many complexities involved in the notion of the constructivist philosophy. I gained a deeper understanding of the interrelatedness of the constructivist view of knowledge and the pedagogical approach of dialogic teaching. I also saw more clearly that, in the constructivist view, the meanings we create are diverse and individual and are the outcome of the coming together of what we already know and what we have experienced socially and culturally. As the research unfolded, the important place that engagement in exploratory talk holds for creating meaning gradually became clearer.

My journey as a researcher and learner in this study has been a very powerful experience in which I made discoveries that I had not anticipated. I had not imagined how well these young students would, without any prompting, articulate their perceptions of each other as communicators and discussants. They appreciated qualities they had observed in their peers that until this experience they had not even considered. Joshua was now seen by his peers as a

learner, someone who "really wanted to learn" and others were described as "well spoken." They also saw themselves as stronger discussants.

As I conversed with each student after the research was completed, I listened as they shared their views on the value of talk in their own learning. They commented on the constructive nature of the dynamics within the group, about the unique strengths they saw in their peers, and they showed me how much they had learned, not only *through* the process of talking together, but *about* the process itself.

My reflections now return to my own childhood experiences in school. I remember the stillness of the silent classroom and mostly my working alone at my desk with very little interaction with other students. Thankfully, this scene is in sharp contrast to today's classrooms where children's voices are heard throughout the day and talk is used in a variety of ways as an important part of their learning. However, as my journey throughout this research endeavour has shown, there is still a strong need to explore all aspects of talk in order to ensure that opportunities for children to use talk as a process to probe their understanding and to create their own meanings are provided. Alexander (2008a) reminded me of the reasons this pursuit is so necessary:

> By this process children come to know by their own unique means and in their own unique way what others may well already know, though each of us knows the same things differently; and the dialogic process reminds us that the quest never ends, and there is always more to be discovered. (p. 32)

Alexander's words contain important insights for those who live and work with children in all the various ways. I now realize these insights are also important reminders of the unique

ways we as educators and researchers give meaning to our experiences along this never-ending journey.

In Conclusion

Through this interpretive inquiry research study it was evident that students' engagement in exploratory talk played a crucial role in building their own knowledge and deepening their understanding of themselves, others and the world around them. I saw the power in this form of talk as a dialogic tool that advanced the students' learning of curriculum related topics and concepts across various subject areas. Moreover the students demonstrated their ability to work collaboratively in the development of their thinking and reasoning skills as they became more confident and capable participants in discussions. By developing this mode of learning and the skills required for effective communication and problem solving, the students will be more capable and confident in future learning in school settings and in their everyday lives.

During the episodes of talk, the students interactively engaged in the process of using exploratory language as verbal and cognitive strategies to share and to try out their thoughts and ideas, to listen and consider the perspectives of others and to recall and rethink what they already knew in light of new information. Within the group, they each found their own voice as they negotiated their individual meaning of the subjects they were exploring. At the same time, through their collaborative efforts and joint activity of thinking together and sharing ideas, they also created a joint understanding that became part of the body of common knowledge among them. The knowledge they created through the talk was knowledge that often went beyond a teacher's expectations of curriculum learning to a level of understanding where the knowledge

was formulated by the students themselves and so became their own (Barnes, 1976). As the

study unfolded it became evident that the students were actively using the knowledge they

acquired in school by incorporating it into meaningful situations in their everyday lives. This

finding addressed Barnes' (1976) concern that "if school knowledge never becomes action

knowledge, it is no more than a ticket to higher status-and for many adolescents a ticket which

they will soon find to be invalid" (p. 84).

I situated this study in the context of small group discussions because it provided the

most likely setting for conversational kinds of talk to take place. However, as the research

unfolded I realized, as Alexander (2008a) pointed out, that the power in the talk was in the

dialogic approach and was just as possible in one-on-one or in whole class teaching. These

conclusions were reinforced by Wells (1999) in his comments about studies "in talk among

students" within the body of existing research, in which he described the major points of

agreement among these researchers:

> In particular, we are all in general agreement about the importance of three features: the
> essentially dialogic nature of the discourse in which knowledge is co-constructed; the
> significance of the kind of activity in which the knowing is embedded; and the important
> role played by the artifacts that mediate the knowing. (p. 127)

Moving Forward

The role of exploratory talk for learning among students in school has been widely

researched from a Vygotskian social constructivist perspective over the past number of years and

has varied considerably in the purpose, the focus and the context in which a particular study has

been situated and explored. These related research studies provided me with a rich and

substantive foundation for my own research, which strengthened my understanding of the

complexities and diverse nature of exploratory talk as a process for students' construction of meaning. Many of these related studies concentrated on exploratory talk as a way of achieving the outcomes of a specific curriculum area or on teacher-student interaction, which may or may not have included the mediating role of the teacher. Other studies looked mainly at student-to-student interaction in the development of cognition or the building of social relationships among peers. Fewer studies demonstrated the interrelationship and interdependence between exploratory talk and dialogic teaching. Although some studies referred to the link between classroom discourse and dialogic teaching, the crucial part that exploratory talk played in my study as a contribution to a dialogic inquiry approach to learning was less emphasized. It is this area of my research study that I consider to be the most relevant contribution to the established body of research on classroom talk, to curriculum design and to support a pedagogical practice of dialogic teaching in the classroom.

This study of exploratory talk and meaning making is offered at a time when teachers, students and schools are facing increasing demands to ensure that students perform and achieve results that will reflect the educational goals of the province. Pressures to attain these goals often drive the methods of teaching, shape the kinds of activities students are involved in, and determine the kinds of resources that teachers use. And what can be affected most from these pressures is the way teachers interact with students and the students' participation in their own learning. In order to meet these governmental demands, the tendency is for teachers to rely far too heavily on transmission models of teaching and to adopt rather than adapt specific programs that are offered and sometimes presented as "the silver bullet" to success.

Unfortunately, in this urgency to reach the end goals in the educational curriculum, students are often not given enough time to talk through ideas, to think about what they already know and to use this knowledge to make sense of what they are learning. Rather they are asked to come to answers before they have come to an understanding. Or in Barnes' words (1976), students are "asked to arrive without having travelled" (p. 118). What happens then, according to Barnes, is "they are likely to undervalue their own ability to think, since they have been shown that what they know already is valueless in school" (p. 118).

Through this research study, the students, the teacher, and I as researcher and participant observer, each created our own meanings of the notion of exploratory talk as a means of learning and creating our own knowledge. As individuals, the insights we acquired through this research experience and the ways in which these insights were made known through the data varied significantly. But what was revealed along the way through this experience was that each one of us was now seeing more clearly that talk, when used interactively in its exploratory and dialogic way, is indeed a powerful social and cultural pedagogical tool in the construction of meaning. However, it is only if this knowledge of talk in its role of meaning making is lived out in the classroom with teachers and students engaging in meaningful dialogue, will the potential for learning and understanding through exploratory talk be realized. It is my hope that this research study will encourage teachers and other educators in this direction.

In the words of Paulo Freire: "The teacher has to be *free* to say to students 'You convinced me.' Dialogue is not an empty instructional tactic, but a natural part of the process of knowing" (Freire, 1985, p. 15).

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Appendix A: Meaning Making Strategies

Theorist	Meaning Making Strategy
Barnes (1976)	Exchanging Ideas
	Going beyond the present situation
	Making inferences
	Rearticulating
	Rethinking
	Thinking out loud
	Recalling
	Hypothesizing
	Elaborating
	Reflecting
	Restructuring perceptions
	Relating it to own experience
	Referring
	Contrasting and comparing
	Setting up polar opposites
	Seeing another perspective
Barnes and Todd (1977, 1995)	Accepting ideas
	Challenging ideas
	Expressing feelings
	Ordering and reordering experience
	Confirming another's ideas
	Completing unfinished utterances
	Encouraging others to contribute
	Qualifying another's contribution
Britton (1970)	Creating representations
Bruner (1966)	Recoding in new forms
	Referencing
Martin et al. (1976)	Associating one idea with another
Mercer (2000)	Interpreting what is said
	Presenting an idea
	Coordinating own thinking with others

	Making suggestions
	Remembering collectively
	Thinking collectively
	Adapting what has been said
	Building on another's ideas
	Using Common Knowledge
	Putting into a familiar context
Mishler (1986)	Telling/Retelling personal anecdotes
Polkinghorne (1988)	Ordering experience through narrative

Appendix B: Sample Interview Questions for the Student Participants

Getting to Know You Activities

1. Draw a picture/diagram of yourself while you are involved in your favourite activities. You can include words to label or describe the different activities.

2. Draw a picture/diagram of your favourite places to spend time or to visit. You can include words to label or describe the different places.

Interview Questions

(beginning of the study)

Begin with having the students share their pre-interview activity.

1. I know I had asked this question at one point to the whole class. Have you ever had a time when you have talked to a friend, family member or teacher that made you feel better – because it helped you to understand something better?

2. I see your desks are organized in small groups – can you tell me about your experience working in groups. Do you enjoy working in small groups?

3. Have you ever encountered any problems and if so how did you work through them?

4. Do you work in small groups at times other than at your desks?

5. Why do you think your teacher might put you into groups to discuss things?

6. How do you think your experience of working in small groups might help you with this experience – with working with me? What do you hope to gain from this experience?

Interview Questions

(end of the study)

1. At the beginning of the study I asked you to tell me about your experiences talking with other people about your ideas, problems etc. Can you think of a time since then that you have

experienced talking to someone to help you work through a problem, ideas etc. (think about times outside of school, in your family, friends or in classes in school).

2. When you think about the times you have been in situations of talking with others, is there a particular place that this happened. Was this a good place to talk?

3. Remind the students of certain topics that were discussed in their groups. Give examples. (Look at transcripts) courage, style of leadership, ground rules, competition, social studies – confederacy, democracy – the novel, science.

    Tell me about the topics you found most interesting, most helpful for you to talk about, most worthwhile - Did any other topics or discussions make you think about other times and topics you had talked about earlier in other subject areas?

4. If you were asked to explain to someone who looked into the classroom when we were in our discussion groups and they asked why we were in small groups and what we were doing, what would you say?

5. Now we are coming to a close in this project together tell me why you think the teacher often asks you to form discussion groups? What are some of the things that have been enjoyable and helpful for your learning through this experience?

6. Tell me how you think we could have made the discussion times better.

7. How do you think talking together helps you to understand things more clearly?

8. If you were given a choice of a way to learn more about a particular topic in class which way would you choose? i.e., writing about it, reading about it, talking about it in small group discussions or listening to someone telling you about it and why?

9. Now that you have had more time to talk in small groups – do you think there is always a right or wrong answer to a question or issue? At the beginning of the study one of you commented if you weren't sure of the answer you would ask Ms. Henderson. Is it okay to have different opinions?

Appendix C: Sample Interview Questions for the Classroom Teacher

Pre-Interview Activities

1. Make a drawing/picture or diagram showing examples of when your students are engaged in using talk in the classroom/school.

2. Recall (through picture/diagram/words) a specific activity you had the students do this year where you observed the students engaged in talking with each other.

3.   Make a timeline showing any turning points that created changes in your approach to teaching.

4. Make a timeline that includes specific events that led to your interest in using "talk" with your students.

Interview Questions

(beginning of the study)

Begin with having Adette share the pre-interview activity she selected.

These questions were used as a guide to follow the pre-interview activity.

1. Classroom Organization – Can you tell me about your classroom organization/routines?

2. How do you organize/set up the classroom at the beginning of the year? Do you begin with small groups in September?

3. What would you share about classroom organization with a beginning teacher?

4. Would you tell me a bit about your philosophy of teaching – your pedagogy?

5. Would you share with me your views on children's learning?

6. How do you see the role of talk with children in your classroom?

7. How do you see the role of language for learning?

8. How do you get your students collaborating? Is it hard to implement in the classroom?

9. Tell me about your experience using literature in teaching and learning.

10. Do you see using literature as a valuable resource for learning?

11. What do you hope your students will gain from this research experience?

12. What do you hope to gain from this experience?

Interview Questions

(end of the study)

1. Earlier on when we together selected the children to be profiled we had certain qualities in mind. Now that the project is coming to a close have you any different thoughts about the selection?

2. Have you been surprised by any of the happenings surrounding the participation of the students?

3. Do you feel the group of participants working with me were able to continue without disruption to the rest of the class?

4. How would you describe the experience of having a researcher in the classroom for this period of time?

5. We talked earlier about your interest in the topic of the role of talk in learning. Has anything happened during this period that has changed that interest or helped to further it?

6. Has this experience made you want to learn more about the role of talk in learning?

7. Has this experience made you want to continue discussion groups as part of your teaching? Would you do anything differently?

8. What do you think the most beneficial aspect of the small group discussions has been?

9. Have you seen any disadvantages?

10. Are there any points that you might stress when encouraging a new teacher who is wanting to organize small group discussions for learning?

11. Have you observed any changes in the participating students since the beginning of the study?

12. How would you describe the effect of this research project on the participating students, other students in the class when talking with parents?

13. How would you describe the experience of having a researcher in the classroom for this 6-month period of time?

Appendix D: Sample Interview Questions for the Parents of the Student Participants

Interview Questions

(end of the study)

1. Does * seem to enjoy taking part in conversations with family members or family friends?

2. Tell me about some of * experiences outside of school that you think might have contributed to his/her success and interest in discussing things, expressing ideas etc.

3. Do you notice that * interest in taking part in discussions or talking about things depends on the particular place or on his/her mood, or what kinds of things do you see affect this?

4. Does * ever talk with you about what is going on at school, or what he/she is learning about?

5. Has * shared with you any of his/her impressions or feelings about participating in the discussion groups for this research project?