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Contexts that Support Language Development in
a Kindergarten Classroom

Gramatiki Kastelorizios

A Thesis

in

The Department

of

Education

Presented in Partial Fulfilment of the Requirements
for the degree of Master of Arts at
Concordia University
Montreal, Quebec, Canada

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ABSTRACT

Contexts that Support Language Development
in Kindergarten

Gramatiki (Kiki) Kastelorizios

Although research claims that decontextualized language skills are related to literacy, limited research exists on the observation of such language in naturalistic settings.

In the present study the language of thirty-six children in kindergarten was observed during teacher-directed and peer activities. Language was also elicited from the children with a picture description task. In addition, a parent questionnaire was administered to the parents of the children, in order to collect information about the children's home environment. Results revealed that, a) children came from high literacy homes; b) the language that emerged during teacher-directed activities and peer activities was significantly different; c) teacher-directed activities promoted more decontextualized language than peer activities; c) elicited language can be classified as decontextualized and contextualized. However, this dichotomy of language does not always apply when observing naturalistic language.

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INTRODUCTION

The early school years represent a period of great potential for the development of language and for laying the foundations of literacy. Achievement in education primarily depends upon skills of reading and writing, which at later stages of education must draw on children's abilities to use language in comprehending texts, searching for information in books, displaying knowledge and understanding through writing (Tough, 1983). As children progress through the primary years, the content of the school curriculum becomes more focused on writing than on conversation (Wells, 1986).

A major problem in educational research is the differential effects of schooling on children. For example, why are some children better able than others to master the forms of competence taught in school? One explanation is that language in school has different characteristics from the language at home; it is considered to be more formal and decontextualized (Torrance & Olson, 1985). Bernstein (1971) claims that language in school is the same as "middle class" language, while other researchers indicate that the language of the home is continuous with the language in the school and that some children are just better prepared to deal with school. For example, Wells (1981) has found a relation between some oral language activities in the home (listening and discussing stories) and progress in reading ability.

Other research has confirmed that there is a close relationship between oral language, reading, (Wells, 1979,

1981, 1985; Torrance & Olson, 1984) and writing (Michaels & Collins, 1984; Cayer & Sacks 1979; Gumperz, Kaltman & O'Connor, 1984; Meier & Cazden, 1982; Wolf & Dickinson, 1984). However, studies have failed to distinguish clearly among the types of oral language skills required for literacy (Davidson, Kline, & Snow, 1986). Recently, Snow, Cancini, Gonzalez, & Shriberg (1989) claim that certain oral language skills are strongly related to literacy. Snow et al. (1989) define these language skills as "decontextualized" or one's ability to produce narratives, and talk about past and future events. Snow (1989) also reports that in order to achieve in school children need both literacy and decontextualized language skills, and that the reason some children are not succeeding in reading and writing may be that they have not acquired or are not producing decontextualized language. If these language skills are essential for school achievement, then it should be the responsibility of educators to promote them in school.

In this thesis, the literature introduces theoretical approaches to language proficiency, defines decontextualized language, and presents methods of assessing such language. Empirical research regarding the type of contexts that support decontextualized language is also examined. In particular, findings regarding the type of activities that promote the development of decontextualized language will be

presented.

Theories of Language Proficiency

In order to comprehend the nature of children's language literacy, it is important to determine what constitutes language proficiency. Although terminology varies, several theorists have identified distinctions in language proficiency. For example, Bruner (1975) makes a distinction between "communicative competence" and "analytic competence". He refers to communicative competence as the ability to make utterances that are appropriate to the context in which they are made; analytic competence involves the operations of thought processes on linguistic representations. Bruner (1975) indicates that analytic competence is promoted through formal schooling and is required for academic success.

Olson (1977) distinguishes between "utterance" and "text". During utterance (interpersonal oral situations) the listener has access to a wide range of contextual and paralinguistic information, and therefore meaning is not conveyed only by the linguistic forms used by the speaker. Written text "is an autonomous representation of meaning." (Olson, 1977, p.276). When reading the text, (without picture cues) the reader depends on no contextual cues other than linguistic ones. Olson (1977) points out that the processing of text requires comprehension and production strategies which are different from those used in everyday

speech and which may need to be acquired during the school years.

Donaldson (1978) characterizes a similar distinction in children's thinking. She distinguishes between "embedded" and "disembedded" thinking. She claims that young children's thinking is "embedded", as children make sense of the world around them in terms of their real-life experiences and familiar situations. Her description of children's comprehension and production of language in embedded contexts is important to current practices of assessment of language proficiency. She emphasizes that the "ease with which pre-school children often seem to understand what is said to them is misleading if we take it as an indication of skill with language per se. Certainly they commonly understand us, but surely it is not our words alone that they are understanding -for they may be shown to be relying on cues of other kinds." (Donaldson, 1978, p.72).

According to Donaldson (1978), children are required to use disembedded thinking in school, that is, the ability to think in reflective distant ways -reflective skills unsupported by immediate real-life experiences. For example, children are presented with information that may not be related to their own experiences. For Donaldson (1978) disembedded skills are valued in formal schooling and the child who succeeds in coping will be highly valued by teachers.

Bereiter and Scardamalia (1982) distinguish between conversation and composition, and argue that writing a text makes different information-processing demands on the individual compared with engaging in a casual conversation with a friend. The absence of normal conversational supports makes writing a totally different kind of task from conversation. To make the transition from oral language to a language system capable of functioning by itself, children need to acquire a different set of skills. According to Bereiter & Scardamalia (1982) children need to learn to continue to produce language without the prompting that comes from conversational partners; to search in memory instead of having memories triggered by what other people say; and to learn to function as both sender and receiver.

Although the terms have varied, these theories conclude that it is necessary to distinguish between the processing of language in informal everyday situations and the language processing required in school. These theories are also compatible with Cummins' theoretical framework.

Cummins' theory on language proficiency

Cummins (1980) makes a distinction between two aspects of the linguistic ability of children. The first aspect is called BICS (basic interpersonal communicative skills) or context-embedded language. An example of such language use would be a conversation between two individuals who know one another and who are discussing a familiar topic. Speaking in

a cognitively less demanding situation about everyday things is a main characteristic of context-embedded language (BICS). This aspect of language proficiency is not directly related to cognitive and literacy skills. With the exception of severely retarded and autistic children, everybody acquires BICS in a first language regardless of IQ or academic achievement (Cummins, 1980). Individual differences do exist in the way children manifest BICS. For example, there are differences in oral fluency. However, Cummins (1980) finds these differences are not related to academic performance.

In contrast, the second aspect which is called CALP (cognitive academic language proficiency), and is also referred to by Cummins as context-reduced communication, has been found to be strongly related to literacy skills. Conversations about unfamiliar topics fall into this category: the individual who is conveying the new information needs to provide a detailed account of what he/she means. Other examples of such language use are writing or reading an academic article; or giving or listening to a lecture (Genesee, 1986). Much of the language in school during academic instruction represents this type of language. For example, teachers try to provide information or to teach skills to the learner that are not already known.

CALP has also been found to show high correlations with

verbal parts of intelligence tests, with tests of vocabulary, synonyms and analogies as well as syntactic maturity (Oller, 1979). For example, Genesee (1976) found that performance on reading and language tests correlates with IQ level.

There are many differences between CALP and BICS. One major difference is that CALP is related to academic success whereas BICS is not related to school achievement. However, the development of CALP is not independent of BICS. For example, it is possible to engage in an interpersonal communicative task which is cognitively demanding and requires the use of CALP (Cummins, 1980). Wells (1979) has reported that the quality of communication between adults and children both in school and in the home is a primary determinant of CALP.

Presently, research suggests that CALP peaks around mid-adolescence while BICS reaches a plateau earlier, at about five or six years of age (Cummins, 1980). This implies that children acquire basic interpersonal skills (context-embedded language) by the age of six, whereas academic language skills (context-reduced language) continue to develop throughout the school years.

Application of Cummins' Theory

Cummins' distinction of context-embedded and context-reduced is significant for language educators for a number of reasons. First, it requires that language not be thought

of as a single, undifferentiated proficiency, but rather as many different kinds of communicative competencies (Genesee, 1986). Second, it suggests that students who may be proficient in one domain of language use, for instance context-embedded that is characteristic of everyday social communication, may not be proficient in other skills which may be more important for academic work. Third, it raises the question of what types of proficiency are being promoted in school. For example, in many language classrooms students are being trained on interpersonal communication skills, but then assessed on whether they have acquired academic skills. In other classrooms, children are trained and assessed on one type of skills and then promoted to other academic settings where an alternative set of skills is a prerequisite for success (Snow, 1984). Although proficiency in the interpersonal use of language is important, it seems unlikely that this kind of language proficiency is the fundamental goal of education (Genesee, 1986). The development of language skills for academic and higher order cognitive processes has and should continue to be the main responsibility of schools.

Snow's reconceptualization of BICS and CALP

Snow (1984) applies different terms to identify BICS and CALP. She identifies BICS as contextualized language skills and CALP as decontextualized language skills. Like Cummins, she claims that oral language ability lies on a

continuum with the endpoints contextualized and decontextualized (Davidson, Kline, & Snow, 1986). According to Snow (1984), the mastery of both contextualized and decontextualized skills constitutes full success in the acquisition of a language. Contextualized language is the language of conversation in which verbal interaction is supported by a shared physical context. Contextualized language consists of expressing or conveying a message with the help of extralinguistic information such as gestures, intonation, and shared knowledge (Foley, 1991). Fully decontextualized language differs from fully contextualized in the following ways: (a) it is removed from the face-to-face setting, and (b) the topic is not one about shared knowledge, therefore, explicit presentation of information is required (Davidson, et al., 1986). Decontextualized language skills can also be observed in oral language contexts, for example, giving or comprehending formal speeches or formal lectures, debates, and oral storytelling (Snow, 1984). While written language is often thought of as decontextualized, much use of writing can be contextualized, for example, notes to oneself, letters to close friends, and diaries.

According to Snow et al. (1989) and Dickinson (1987) the following features characterize the speech of decontextualized language:

1. This type of discourse consists of producing

narratives which have "a single, explicitly, identified topic" (Dickinson, 1987, p. 172).

2. Decontextualized language relies minimally on shared knowledge; the speaker has no right to assume shared background knowledge with the audience.

3. Decontextualized language requires the use of elaborate, explicit lexical resources and syntax to signal shift in perspective; it is more carefully planned; "it can be understood out of the context in which it is produced" (Dickinson, 1987, p. 153).

4. Decontextualized language consists of telling stories, providing descriptions, explanations, and talk about past and future events.

According to Davidson et al. (1986) children's language shifts from more highly contextualized to decontextualized in many ways: (a) children move from depending on conversational partners to completing their single word utterances to producing multiword utterances; (b) they begin to talk about absent objects or persons; (c) they start to refer to past or future events, which requires using linguistic means to ensure the conversational partner's attention to the same event; (d) they begin to talk to individuals who have not shared experience of their topics, so presentation must be clear and explicit; (e) they start to produce personal narratives and to create fantasy narratives which require linguistic strategies to maintain

cohesion and coherence. Although no specific ages have been reported in which these shifts in language do occur, by the age of five or six, children do control many elements of decontextualized language skills (Davidson, et.al., 1986). According to Snow (1983; 1984; in press), children who produce decontextualized language are using many skills, such as analysing their own knowledge, monitoring their own verbal productions, taking into account the listener's perspective, and planning.

In order to better understand the terms contextualized and decontextualized, and to determine whether children do in fact respond differently on tasks demanding decontextualized language versus those that do not, the following tasks were designed to elicit these types of language skills.

Assessment of contextualized and decontextualized language skills

According to Snow (1984), giving good definitions is a highly decontextualized task. In school settings, definitions are often requested of children, and giving definitions or having children look them up in dictionaries is a standard and frequent technique for vocabulary training.

Children of four and five years of age have rather well-developed conceptual taxonomies for relating words to their superordinates and subordinates. For example, children

can correctly answer questions such as "Is a dog an animal?" (Watson, 1985). However, the information underlying these taxonomies seems not to be available for use in particular kind of decontextualized tasks such as giving definitions. Children primarily give definitions containing functional or descriptive information. For example, "A dog is to pet" or "Dogs are furry and my friend has one" rather than using their knowledge of the taxonomy to provide more adultlike definitions such as "a dog is an animal with four legs, and is often domesticated".

Snow (1984) has designed and used this task to assess children's oral decontextualized skills. The procedure of the task is set out below:

The definition task

Ten nouns are presented to the children from the Wechsler Intelligence Scale for Children (WISC). The WISC instructions are used. For example, "What is x?" or "What does x mean?" If the child does not give much information, a follow up question is asked like "Can you tell me more". In addition, children are asked to use the same ten words in sentences to ensure their familiarity with the words (Snow, 1984).

The picture description task

Another task designed by Snow to assess decontextualized language skills is the picture description task which can be administered in four conditions:

1. Contextualized and oral. Children are asked to describe a picture while sitting next to the interviewer. The positioning of the child and the interviewer, and the presence of the picture make it appropriate to assume shared knowledge and to contextualize the description offered.

2. Decontextualized and oral. The child is given a similar picture in complexity to that used in the above exercise and is told the following: "Describe this picture so that another child listening to your description could draw a picture that looks just like this one".

3. Contextualized and written. The child is given a piece of paper with a picture on it and told: "Write under the picture about what you see in the picture".

4. Decontextualized and written. The child is given a picture and a separate piece of paper and told, "Write a description of this picture so that another child who has never seen the picture could draw a picture that would look like this one".

Both the picture description task and the definition task have been used in a number of studies described below with children of various ages. Such studies have attempted to demonstrate the value of distinguishing decontextualized from contextualized language skills, and have aimed to establish a relationship between oral language performance

and literacy.

Research using the definition and picture description task

Davidson et al. (1986) examined the performance of bilingual children on two decontextualized language tasks: the word definition task and the picture description task. The study consisted of a relatively small sample (20 children) from kindergarten through grade five classes. Children were assessed on both tasks in French and in English. The results showed that there was a cross-task decontextualized language skill. For example, children who responded to the picture task in a decontextualized way also responded to the definition task in the same manner.

However, a study conducted by Dickinson and Snow (1987) found that decontextualized skills correlated within task, but did not correlate across tasks. Performance on the definition task did not predict performance on the picture-description task. The purpose of this study was to determine whether there were any relationships between oral language tasks and literacy related tasks. The decontextualized language skills of 33 children in kindergarten were assessed with the definition and the word description task, and they were also tested on a series of prereading tasks. Prereading skills such as print decoding, print production, and literacy (a subscore of Clay's concept of print test) were found to be highly intercorrelated and related to the ability to provide decontextualized definitions for words.

This finding provides evidence that specific literacy skills were related to decontextualized oral language. However, the procedure used in this study has been reported as being lengthy and stressful for the children (Dickinson & Snow, 1987), who did not enjoy completing the series of prereading tests: this may have affected the results.

Snow, Cancino, Gonzalez and Shrieberg (1987) looked at a larger sample of children (137 second to fifth grade children). The tendency to give formal definitions appeared to increase from second to fifth grade and was found to correlate highly with children's scores on tests of school literacy (e.g., The California Achievement Test). An analysis of the subtests from the CAT (reading, language and math) indicated that children who performed well on the definition task showed higher achievement scores in reading. This study also provides support that decontextualized language skills are related to school literacy tasks.

A more recent study (Foley, 1991) found that children's scores on the definition task were positively correlated with reading measures. Foley's (1991) research involved giving eight children whose first language was Spanish, decontextualized tasks such as the picture description task, the definition task and storytelling tasks. In her study, Foley (1991) only reported that the definition task was correlated to the reading tasks.

Although some of these findings (Dickinson & Snow

1987; Snow et al., 1987; Snow et al., 1989; Foley, 1991) provide evidence that giving good formal definitions and descriptions is related to literacy, it is important that other empirical studies be reviewed which have used different methods to elicit decontextualized language.

Storytelling

Norris and Bruning (1988) examined the decontextualized use of language by children at the beginning stages of formal reading instruction. To elicit decontextualized language, a storytelling task was selected. Two measures were related to the internal cohesion of stories and were used as indexes of decontextualized language: unity (a continuity between ideas expressed so that the text holds together around some recognizable topic) and coherence (the frequency and accuracy of cohesive ties produced within the storytelling).

Oral stories were obtained from 150 children, half in kindergarten and the other half in grade one. Each child viewed a series of seven pictures presented in a book format, which represented a story sequence consistent with a simple story structure. Prior to viewing the pictures, the children were informed that they would be required to tell a story about the pictures to a listener (e.g., a puppet) who had not been paying attention and who needed to know the entire story so that he could tell it to someone else. The children would then produce a story from the pictures to the

interviewer and then recount it to the puppet without the support of the pictures. The results indicated that high achievers displayed more cohesion in their use of decontextualized language, whereas poor achievers showed more difficulty. Differences were apparent in both the ability to develop a theme (unity) and to maintain orderly relationships between the elements of the text (coherence). The children with high ability in reading were able to exhibit greater cohesion in their stories.

This study (Norris & Bruning, 1988) suggested that it may be relevant to examine children's contextual use of language when academic difficulties are experienced, and that cohesion is one descriptive measure that can be used to assess difficulties. However, one major flaw of this study is the measurement of decontextualized information. The procedure of first telling the story to the experimenter with the pictures and then informing the puppet without the pictures could have produced a practice effect. The children had already practiced telling the story once to the experimenter with the use of the pictures. Having the children retell the same story without the pictures does not classify this as a truly decontextualized task.

Bookreading

Bookreading discourse between parent and child reflects some of the characteristics of decontextualized language (Snow, 1983). A study conducted by Watson and Shapiro (1988)

explored the relations between parent-child discourse during bookreading and the child's performance on a range of pre-literacy skills and school related tasks.

Twenty parent-child dyads were videotaped reading books with their children (two- and three-year-olds). Three books were available for each child: a favorite book from home; a standard picture book; and a book with cut-out profile pages. The most interactive dialogue was selected to be analyzed. The feature of discourse to be analyzed was lexical choice. For example, cognitive verbs (know, remember, think, understand), affect words (like, love and want), and verbs of speech (call, tell, say and read) were to be analyzed on the transcripts. Level of labels was also examined, for example, whether children used a basic level (dog) or a superordinate level (animal). The children were tested in the subsequent year on a number of school-related tasks such as the superordinate category word definition task (similar to the definition task devised by Snow), receptive language, identification of written language, non-verbal superordinate category, oral-written word discrimination task and the Concepts About Print test (Watson & Shapiro, 1988).

A relation was found between the parent's and child's lexical choice in bookreading discourse and the child's subsequent performance on a range of pre-literacy skills (Watson & Shapiro, 1988). The parents' and children's use of

superordinate category labels in bookreading was strongly related to the child's performance on school tasks (superordinate category word definition task, receptive language category, and the non-verbal superordinate category). This study provides some evidence that the child's introduction to the language of schooling may begin long before school and bookreading discourse with the parent appears to be related to measures of skills associated with school.

Wells (1985) also provides support that bookreading is important for school success. Thirty-two children between the ages of one and a half to three-and-a-half years of age were observed during the following activities: looking at a picture book and talking about it; drawing and coloring; writing; and listening to a story. Recordings of the children's language were made in the home with no observer being present and contextual details for every recording were obtained from the parents. The results showed that listening to stories was significantly associated with knowledge of literacy at age 5 years, and reading comprehension at 7 years of age. In sum, the study concluded that reading and talking about books is an excellent way for children to begin to develop some of the essential characteristics of the spoken language used in school.

However, Wells (1985) and Snow (1983) believe that the interaction that occurs while books are being read is the

most crucial factor. For example, parents adopt different styles of book reading which may not be equally successful in preparing children for reading. A parent's questions and comments during the reading episode may be more important than the story itself. Observational research studies (e.g., Anderson, Teale & Estrada, 1980; Ninio, 1980, 1983, Ninio & Bruner, 1978; Snow & Ninio, 1986) have examined storyreading and have determined what children gain from the experience. They report that children acquire vocabulary, concepts about print, the mechanics of reading and speaking in a decontextualized way. Conversing in a decontextualized way is achieved during the bookreading episode as the child becomes acquainted with the features of written language and then eventually begins to use written language (Heath, 1982, 1983; Snow, 1983; Teale, 1984; Wells, 1981, 1985, 1986).

Shin (1989) found that parents of children who performed better on a decontextualized task produced more statements and questions related to real-life experiences, and engaged in more turntaking. For example, they elicited talk from their children. The importance of repeated reading was also determined in this study, as children took over storybook reading more frequently in the fourth reading of a book. As children read, they shifted their role from that of listener to that of reader and treated their speech in a decontextualized way, as though it was written.

Sharing-Time

Michaels and Collins (1984) conducted an ethnographic study and found that sharing-time (also identified as "news" or "show and tell" in some classrooms) was an activity that prepared children for literacy, because children were called upon to provide a formal description of an object or to produce a narrative account about some past event. In this activity, the teacher seemed to expect a literate style, or a decontextualized account centering on a specific topic: the objects had to be named and described; and talk was to be explicitly grounded temporally and spatially. The activity was considered to be decontextualized because minimal shared background knowledge or context was to be assumed on the part of the audience. Children were audiotaped and videotaped during sharing-time episodes. The discourse of some children centered on a single, identifiable topic. This discourse style was labeled topic-centered and closely matched the teacher's notions of what constituted good sharing (Michaels & Cook-Gumperz, 1979). However, there were many children who used a topic-associating style which consisted of a series of associated topics. This was very difficult to follow, and did not match the teacher's sharing-time expectations. The teacher thought that children using the topic-associating style were not taking the time to plan their discourse whereas the children felt they were being interrupted by the teacher. This study

determined that teachers must take into account that children from various ethnic backgrounds display different discourse styles.

In order to understand the differences in discourse style that became apparent in studying sharing-time episodes, Michaels and Collins (1984) analyzed the children's oral and written narratives in which they recounted the events of a film. Analysis was based on whether children's oral and written narratives were thematically cohesive (e.g, referring to the process by which a text, whether spoken or written is tied together). The results showed that children used different strategies to establish cohesion in their discourse and written work. For example, it was found that children who relied on using prosodic cues (intonation) and paralinguistic cues in speaking, displayed written narratives that contained weakly signaled transitions. These children were the same children who used the topic-associating style during sharing-time.

It was concluded that children who rely heavily on prosodic cues in oral discourse may be at a great disadvantage in making the transition to literacy (Michaels & Collins, 1984). When shifting from oral to written language, prosodic cues are lost and children who rely on them for signaling cohesion will experience difficulties in school.

Symbolic Play

In symbolic play, children use explicit oral language to transform the identities of objects, actions and people, and use language to represent physically absent props and players. These characteristics of symbolic play are representative of the decontextualized language required in school settings (Pellegrini, 1985). The mental processes that occur during this type of play are very similar to the mental processes required to produce decontextualized language (Pellegrini, 1985). For example, imaginative language which is a characteristic of symbolic play permits speakers to not have to rely on context. Children's play may also be narrative-like in which fictional characters and problems are resolved in imaginary settings. According to Pellegrini (1985), this behavior is also required in school as children talk, read and write in specific ways about narratives that include information about settings, characters' actions, and problem resolutions.

A study conducted by Pellegrini (1982) on a small sample of four children found that children's imaginative language which characterizes symbolic play was decontextualized or what he calls cohesive. Children were videotaped in two play areas: blocks and the housekeeping corner. The children's language was coded in terms of cohesiveness. For example, children's use of explicit verbal reference, and the process by which new topics were

introduced, were examined. The results demonstrated that children's language in the housekeeping area was more cohesive than the language in the block area. Specifically, in the dramatic play setting, children's topic introductory utterances were more dependent upon defining and negotiating roles and play themes which represented the bases for cohesive ties. In addition, children frequently used questions to clarify themes and roles, defining their referents and relying less on context to convey meaning.

A follow-up study by Pellegrini (1984) was designed in which children from kindergarten, grade one and two were read a story and then trained in one of three story reconstruction conditions: adult-directed thematic fantasy play, adult-directed discussion or solitary drawing. In the thematic fantasy play condition, children were assigned a role from the story they had heard and were told to reconstruct the same story through play. The experimenter also had a play role which helped facilitate the children's play. In the discussion group, children were asked to reconstruct the story verbally and were asked what they thought of the story. In the drawing condition, children drew pictures about the story.

After engaging in these conditions, the children were asked to retell the final story to one of two listeners: an informed listener and a naive listener. The informed listener had already read the child the story, and as a

result shared knowledge about it, whereas the naive listener lacked such knowledge. The results indicated that retellings to naive listeners were more decontextualized than retellings to informed listeners. Children's retellings in the thematic fantasy play condition were more cohesive than children's stories from the discussion and drawing conditions. However, the younger children did not perform well in the play condition due to the fact that it may have been too difficult.

Cooperative Play

Torrance and Olson (1985) were interested in examining which aspects of oral competence were relevant to the formal requirements of school language. The study focused primarily on the pragmatic aspects of language, in particular, how children go about engaging in conversation, how they create discourse, episodes, topics, turns, respond to the turns of others, change topics, and the type of expressions they use. Language from 29 children who came from English-speaking homes was analyzed. The children were tested midway through each of the three years on the following tests: a reading test (Durrell Analysis of Reading Difficulty), verbal and nonverbal IQ tests (WPPSI and WISC Block Design and Vocabulary subtests), some formal language tasks such as storytelling, and writing tasks. The children were also assigned tasks designed to elicit free speech in a cooperative play setting and were paired in a room to

discuss what they were going to build with the toy (legos). The results indicated that children skilled in handling the semantic and syntactic structures of language (in particular the use of cognitive verbs) were better able to cope with early reading. However, skill in turntaking and holding up one's end of a conversation did not relate to success in learning to read. Although these skills were considered important, it was concluded that they did not prepare children for the formal language in school.

Computer

Although research is limited on the potential of the computer as a stimulus or a generator of discussion, it has been established that the computer can contribute significantly to language across the curriculum. According to a study conducted by Cummings (1985), a high proportion of conversation on the computer, from children aged ten to sixteen years, was related to logical reasoning. For example, children engaged in talk that required them to explain, recognize problems and solutions, hypothesize, predict and reflect on events. These same skills have been found to be characteristics of decontextualized language (Snow, in press). When given the opportunity to work in groups on the computer without the teacher's presence, children treated each other as resources and seem "inspired by the freedom to use expressive and spontaneous speech" (Cummings, 1985, p. 154).

In a study by Dickinson (1985), younger children (first and second graders), who wrote cooperatively at a computer, produced language which required monitoring, planning and evaluating. It was concluded by Dickinson (1985) that writing cooperatively with peers with the use of the computer may help children develop a sense of planning and audience. According to Snow (in press) these skills are also required to produce decontextualized language.

Summary of research findings of decontextualized tasks and activities

In summary, the research indicates that there is a link between decontextualized language skills and literacy-related tasks (Dickinson et al., 1987; Snow et al., 1987; Foley, 1991) and that it can be acquired when producing narratives or storytelling (Norris et al., 1988), during bookreading discourse (Snow, 1983; Wells, 1985; Watson et al., 1988; Shin, 1989), sharing-time (Michaels et al., 1979; Michaels et al., 1984), symbolic play (Pellegrini, 1982; Pellegrini, 1984, Pellegrini, 1985) and when using the computer (Dickinson, 1985; Cummings, 1985).

Although these findings suggest that decontextualized language can be displayed during various activities, it is essential to review other empirical research on whether children have the opportunity to acquire this type of discourse.

Environmental support of decontextualized language

Bloom (1970) reports that children talk about events that are perceptually available in the immediate nonlinguistic context. Specifically, children's utterances depend directly on the support of nonlinguistic context, whereas adult utterances do not. For example, adults do not talk about what they see and what they are doing when a listener is there to see for himself/herself. It seems likely that decontextualized language can be facilitated by enabling children to first use language in contextualized ways. Dyshon and Genishi (1983) suggested that teachers can allow children to use language in the present with objects and actions to perceive and act upon. By talking to children in these situations and helping them to reflect about present, past and future experiences, children will gradually become competent in decontextualized language.

However, Barnes (1976) claims that the way interaction is structured in the school classroom makes it difficult for children to reflect on their own experiences. The school context often limits children in expanding their oral language skills. Researchers have reported a three-part interaction structure often found in classroom settings: 1) the teacher initiates a conversation or topic, 2) a child replies and, 3) a teacher evaluates. This type of interaction does not encourage children to provide elaborations and clarifications of their reasoning.

Opportunities for the development of extended language skills provided in preschool settings are limited (Dickinson in press; Tizard & Hughes, 1984). For example, Tizard and Hughes (1984) reported that extended interactions between teacher and child in the preschool are uncommon. Dickinson (1991) analyzed conversations in a high quality preschool and found that there were very few occasions when children engaged in talk that required decontextualized strategies such as recounting personal narratives, planning future events and explaining ideas.

Tizard et al. (1984) suggest that homes may provide a richer context for children to engage in decontextualized talk. For example, dinner table conversations can be rich with opportunities to develop extended discourse (Snow & Dickinson, 1990). Recently, Snow et al. (1990) indicated that there was great variability in both homes and schools in the degree to which children engaged in decontextualized language. However, they did report that there was a relationship between preschool teachers who provided efforts to encourage the development of extended language (e.g., writing stories, verbal sharing) and children's engagement in decontextualized talk.

Foley (1991) examined the home and the classroom of good readers by observing their interactions. The home differed from the classroom interactions and contained more contextualized language. It was also observed that children

were more equal conversational partners with their parents and siblings than with their teacher. The findings regarding the classroom indicated that the teacher dominated the discourse and that most of the topics in the classroom were decontextualized. For example, the teacher participated in using flash cards for reading, discussing words and predicting what would happen in a story.

Children arrive at school with different levels of readiness to learn to read and write (Dickinson et al., 1987). The home environment may be preparing children for literacy by providing literate features in oral discourse (Watson et al., 1988; Snow, 1983). However, not all children may be exposed to experiences that promote decontextualized language in the home (such as being told stories, being read to, and constructing descriptions of past events). For this reason, it is important to investigate those classroom activities which encourage the development of extended discourse.

"Understanding the reasons why children succeed and why they fail in school is crucial" if educators are to promote success and prevent failure (Snow et al., 1989, p. 248). Decontextualized language skills have been found to predict literacy and school achievement. Therefore, it is essential that educators be aware of what conversational opportunities children have in school that might support the skills needed to understand and produce this type of discourse. Knowledge

about how children acquire these oral discourse skills will give "insights into the process by which all children might acquire school literacy" (Snow et al., 1989, p. 249).

The present study

It is important to consider the problems associated with the concepts "contextualized" and "decontextualized" language. As reported earlier, researchers have concluded that decontextualized language is of higher order than other types of language use, and that possessing such language ability leads to success in school. However, most of the research studies described in the present thesis were correlational studies. Gray, Saski, McEntire & Larsen (1980) claim that it would be incorrect to assume that a cause and effect relationship has been established between oral language and literacy. They argue that correlational studies dealing with preschool and kindergarten children report no significant connection, while research (Corson, 1984) with older children and adolescents find that competence in oral language is necessary for academic success.

Correlations cannot be taken as evidence that decontextualized language exists. Although the literature review has provided several terms and definitions of decontextualized language, definitions have not been operationalized in a natural setting (Flashner, 1987), except for Dickinson (1991) who did so, and found a few occurrences of what he called "decontextualized language".

It is apparently difficult to examine a classroom transcript and describe language according to whether it is contextualized or decontextualized.

The criteria for measuring and testing the language dichotomies: contextualized and decontextualized language, have been based on correlational studies using elicited tasks, e.g., definitions and picture-descriptions. The results of these tasks could be related more to training than to knowledge of decontextualized language. Dickinson and Snow (1987) have also found that performance on the definition task did not predict performance on the picture description task, suggesting perhaps that the tasks were measuring different skills. For example, Snow (1983) indicates that children who produce decontextualized language are using many skills, such as analysing their own knowledge, monitoring their own verbal productions, taking into account the listener's perspective, and planning language which may also be related to developmental differences.

Given the lack of knowledge about the type of exposure to decontextualized language in schools, the present study was also designed to investigate which activities might facilitate such language, and in particular, to examine what type of activities in the classroom might provide a rich context for decontextualized language.

Thirty-six children (five-year-olds) were observed in

two kindergarten classrooms. The kindergarten classroom was chosen for investigation because young children are more dependent on oral language experience for constructing knowledge structures (Dickinson, 1987).

Naturalistic data were gathered about the children's oral language experiences in the classroom by audiotaping their conversations during various activities. Dickinson's categories (1991) were used to analyze the classroom observations. Additional data were also collected with the use of field notes, open-ended interviewing with the teacher and children, use of a picture-description task with children, and a questionnaire which was administered to the parents. The data included both spontaneously produced and elicited samples of conversation.

The picture-description task was used as a means to evaluate the following hypotheses:

1. Decontextualized descriptions were expected to contain more words, adjectives, locatives and clarificatory markers.
2. Contextualized descriptions were expected to contain more pronouns.

The following hypotheses were made regarding the classroom observations:

1. Activities in which the children interacted with each other (peer activities) were expected to promote decontextualized speech.

2. Activities directed by the teacher (teacher-directed activities) were expected to promote more decontextualized speech than peer activities.

METHOD

The present study investigated the language used in different activities in a kindergarten classroom. The research instruments included a questionnaire which was administered to the parents, open-ended interviewing with the teacher, a picture-description task to elicit language from the children, and observations of classroom activities which were supported by audio recordings and field notes. This section describes the sample, the measures and materials, the data collection procedures, the coding system devised to analyze the language data collected, and the data analysis procedures.

Sample

Thirty-six children attending two kindergarten classes in suburban Montreal participated in this study. Twenty-one children were enrolled in the morning class and fifteen children attended the afternoon class. The same teacher taught both groups of children.

The a.m. class included 10 boys and 11 girls with ages ranging between 5,9 (years, months) and 9,6, and a mean age of 6,3. Eight boys and seven girls were observed in the p.m. class with ages ranging between 5,11 and 6,8 and a mean age of 6,2. The total mean age of the children in both classrooms was 6,2 with an age range from 5,9 months to 6,8. There was a total of 36 children in both classes (18 males and 18 females). All the children were native speakers of

English except for one child. The distribution of children according to classroom and age can be seen in Table 1.

The Hollingshead Four Factor Index of Social Status (1975) was administered to determine the socioeconomic status of the children and parents. The range and mean for SES is shown in Table 2. Means for the morning and afternoon class are similar. The families of the children in this study represent a range of 27-61. The classification scheme of the Hollingshead scale consists of low, low-middle, middle high, and high socioeconomic strata. With a mean of 49.2, the children in this study fall into the middle class strata. The scale indicated that the families of the children held medium business, minor professional and technical jobs.

School

The school was located in a western suburb of Montreal, in a middle class neighborhood of predominantly English-speaking families. The school, whose enrollment was approximately 500 pupils, consisted of classrooms for grades one to six, two kindergarten classrooms and a prekindergarten class.

The atmosphere of the school was very friendly and supportive of language and reading. For example, the corridors displayed children's work, such as books, written stories or news. The janitor of the school was very sociable and frequently engaged in conversations with the children.

Table 1

Distribution of Sample According to Kindergarten Class,
Gender and Age

Children				
Kindergarten	N	Males	Females	Mean Age (years, months)
AM Class	21	10	11	6,3
PM Class	15	8	7	6,2
Total	36	18	18	6,2

Table 2

Socioeconomic Status (SES) of Parents, of the Sample
According to Kindergarten Class

Variable	Class	Range	Mean
SES	Morning (n=20)	34-56	49.4
	Afternoon (n=11)	27-61	49.0
	Morning/Afternoon (n=31)	27-61	49.2

Children from other grade levels often entered the kindergarten classroom to share their stories and to tutor the younger children. Parents were also welcome to be a part of their children's program. They participated in shared reading programs, and frequently assisted the kindergarten teacher in creating a variety of activities for the children. For example, they created constructive play materials, made crowns for the children's play and helped set up the activities for the children.

Classroom setting. The classroom observed for this study was large and included a wall-to-wall carpet, which gave it a warm and cozy feeling. A child-sized cushion in the shape of a turtle was available in the book corner to promote relaxation and comfort when reading. Child-sized tables were arranged for children to work in groups. Many items were displayed at a child's eye level, such as a calendar, books, and toys. Several centres were available to provide a variety of learning experiences. The computer centre, the listening centre, the science centre, the arts and crafts centre, the book corner, the sandbox, constructive materials such as the magnetic castle, and legos, and the dramatic play area were available for free play. Since the theme of the month during which the study took place was fairy tales, a story sequencing activity, and a matching letter game with words such as giant, unicorn, dragon and fairy were written on index cards and were also

set up on tables. Additional material was organized and available to add to or to change the centres on a daily basis.

While the classroom was unoccupied, photographs were taken of the various activity centres. The photographs aided the researcher in describing the activities and the classroom setting. A diagram of the classroom is found in Appendix A.

Classroom Routines. The children attended the kindergarten class five days a week. The morning class lasted three hours, and the children began at 8:30 and ended their day at 11:30 am. Each morning, the children participated in a structured group activity such as news, Dr. Wizard, or storyreading. From 9:45 to 10:15 the children engaged in free play activities at the centres which had been set up by the teacher. At 10:15, the children had outdoor recess for fifteen minutes. The class usually ended with a storyreading activity.

The afternoon class began at 13:00 and lasted for two and a half hours until 15:30. The teacher began the class in the same fashion as with the morning class by introducing a structured or group activity. Similar freeplay activities were set up for the children at 1:45 p.m. The afternoon classroom also ended with a story activity. Appendix B provides a timetable for the classroom routines and the curriculum of both classes.

Procedure

Permission to record the children's conversations was sought from the principal and the teacher. (See Appendix C). Letters were also written to inform the parents of the purpose, the procedure of the study and to obtain consent for their child's participation (See Appendix D). Prior to distributing the parent consent forms, the researcher asked one parent who frequently visited the classroom to verify its contents. This parent expressed a concern about having the children photographed. The reason for photographing the children had been to enable the researcher to become familiar with the children and their names. Since this appeared to be a problem for the parent, no photographs were taken of the children and therefore no mention of photographing them was made in the consent letters. The parents were directed to return the consent forms as soon as possible. All of the consent forms (100%) were returned promptly within one week (36 out of 36).

A parent questionnaire was also distributed to the children who were asked to give it to their parents. Most of the questionnaires (86%) were returned to the researcher (31 out of 36). In addition, the researcher also interviewed the teacher in order to determine her pedagogical orientations, in particular her attitudes and practices related to fostering oral language and literacy.

The picture-description task, designed by Snow (1984),

was administered to elicit contextualized and decontextualized language from the children and to determine whether there is a difference between the two. The task was administered by the researcher during recess and lunchtime when the classroom was unoccupied. The researcher also ensured that a rapport was developed with the children prior to administering the task.

Classroom observations were also conducted in the classroom. In particular, teacher-directed activities (news, Dr. Wizard, and storyreading) and peer activities (computer, dramatic and constructive play) were observed. The classroom data was collected by tape-recording children's conversations and taking field notes to capture context.

Measures and Materials

Parent Questionnaire. In order to determine socioeconomic status and to collect information about the children's home environment, the researcher developed a questionnaire. According to Snow and Dickinson (1990) and Watson and Shapiro (1988), homes which are preparing children for literacy may help children acquire decontextualized language. The questionnaire also requested demographic information such as the parents' occupation (both mother and father), and the number of years of schooling for both parents. This information was analyzed using the Hollingshead Four Factor Index of Social Status (1975) to determine the socioeconomic status of the sample

as mentioned earlier.

The questionnaire was adapted from an instrument entitled "The Preschool Parent Questionnaire" originally developed by Burns and Ratliff (1985) and used in their study to examine the relationship between intelligence and high literacy homes. To date however, the researchers do not report any reliability or validity measures for the questionnaire. This will be taken into account when interpreting the findings of the present investigation.

Since the "Preschool Parent Questionnaire" was lengthy, a condensed version was developed for this study by selecting items which described experiences that may be important to the development of language and literacy. The questions concerned such categories as frequency/composition of storyreading episodes, environmental print, concepts about print, parent-directed questioning behaviors, child-initiated questioning behaviors/activities, and parent-teaching activities. These items were measured on a three point Likert scale (1=Never, 2=Sometimes, 3=Often). A copy of the questionnaire can be found in Appendix E.

Four Factor Index of Social Status. The Hollingshead Four Factor Index of Social Status (1975) was used to compute the SES score for the parents of all the children. The Hollingshead is a scale which describes social class as a multidimensional concept. The four factors used to calculate socioeconomic status are: occupation (scored on a

nine point scale), education (scored on a seven point scale, sex and marital status. A description of the seven-point scale for educational factor, a sample of the nine-point scale for occupational factor, and the equation used to compute socioeconomic status are found in Appendix F.

Teacher Interview. Since previous studies (e.g., Dickinson & Snow, 1990) report a relationship between preschool teachers who provided extended language opportunities and children's engagement in decontextualized talk, a teacher interview was conducted. The teacher interview contained open-ended questions about activities in the classroom which extend children's language, and how children learn language from adults and their peers. The questions used in the interview are found in Appendix G. The teacher's responses to the questions were recorded in the form of notes and the interview lasted approximately one hour.

Picture Description Task. The picture-description task designed by Snow (1984) was administered to elicit contextualized and decontextualized language from the children and to determine whether there was a difference between the two. The task can be administered in two conditions:

1. Contextualized Condition. Contextualized descriptions are for a physically present listener who can see the picture. Children are asked to

describe a picture while sitting next to the interviewer. Gestures and pointing can assist these oral descriptions.

2. Decontextualized Condition. In the decontextualized condition, the child is given a picture similar in complexity to that used in the contextualized condition and is told the following: "Describe this picture so that another child listening to your description could draw a picture that looks just like this one". Thus, decontextualized descriptions are for a listener who cannot see the picture and can be provided only with the use of linguistic cues.

A number of studies (Dickinson & Snow, 1986; 1987; Snow et al., 1987) have used the picture description task in order to classify contextualized and decontextualized language skills. The picture description task has also been used to establish a relationship between oral language performance and literacy. In this study, the picture description task was given to determine whether there was a difference between children's ability of use contextualized and decontextualized language. The procedure of the task was adapted from Snow et al. (1991) and slightly changed with more recent procedures used to assess decontextualized talk.

The children were presented with two different pictures; both pictures consisted of the same number of

elements (See Appendix H). The pictures were presented one at a time but using instructions adapted from Snow (1984). Appendix I provides a detailed account of the instructions presented to the children. In the oral contextualized condition, the researcher who could see the picture asked the child to describe it. In the oral decontextualized condition, each child was asked to describe another picture viewed through a mini-projector (view master) raised to her/his eyes. In this case, the researcher could not see the picture. To avoid a test-like situation, the children's narrations were maintained by the following prompts: Huh huh", "Yes, go on, I'm listening", "And then what happens?". Repetitions were also made of the child's last utterance to reassure the child of the researcher's interest, to clarify soft speech and to help the child attend to the task at hand.

The contextualized description was always presented first. Each child's description was tape-recorded. The picture descriptions were coded, transcribed, and analyzed according to the following variables originally used by Ricard & Snow (in press).

Coding of the picture descriptions. Four variables were coded from the picture descriptions: 1) total number of words, 2) use of locative markers, 3) use of clarificatory markers, and 4) adjectives. These linguistic devices represent variables that would identify an optimal response

to the task demands of the decontextualized condition.

1. Length. The total number of words used by a child in each condition was computed.

2. Locative markers. Locative markers are phrases that specify the location of a particular referent, either in terms of the picture e.g., IN THE UPPER CORNER there is a house, or in terms of the space depicted, e.g., The boy ON THE BIKE. More locatives were expected in the decontextualized condition.

3. Clarificatory markers. Clarificatory markers provide additional information about the referent, e.g., The boy THE ONE WITH BLOND HAIR, he's sliding down. Children sensitive to task demands will be expected to provide more of these in the decontextualized condition.

4. Adjectives. Adjectives also provide additional information about the referent, e.g. THE RED HAT. More adjectives were expected in the decontextualized condition.

In terms of the contextualized condition, it was expected that children would provide: fewer number of words, locatives, clarificatory markers, and adjectives. However, more pronouns were expected to result in this condition.

Preliminary Classroom Observations

Three initial visits were made by the researcher prior to collecting classroom data. The purpose of these visits

was to establish rapport and become familiar with the children, the teacher, the classroom setting and the types of activities which took place. These included teacher-directed centres such as news time, storyreading, and Dr. Wizard; and freeplay activities (e.g., dramatic play, constructive play, and computer). The researcher used a pen and a notebook to record a description of the activity and a sample of verbal behaviors that occurred during each activity.

Description of Classroom Activities. Given that the literature reviewed earlier suggests that storyreading, news (also called sharing time), Dr. Wizard (also known as show and tell), and dramatic play are relevant activities for the development of decontextualized language, these activities were selected for observation. The preliminary notes taken by the researcher indicated that the computer and the constructive play activity would also be worthwhile investigating. Therefore, a total of six different activities were observed. Three of the activities represented teacher-directed interactions (storyreading, news, Dr. Wizard) and the other three activities consisted of peer interactions (computer, dramatic play, constructive play).

The activities that were available to the children during free play were the computer, constructive play and dramatic play. The computer centre was located between the

book corner and the arts and crafts activity. The centre consisted of an Apple computer situated on a child-sized table with two child-sized chairs placed in front of it to permit a pair of children to play. A sign stating "Computer Centre" made by the teacher was placed against the wall above the computer. A container of disks was placed on the table next to the computer. Games such as "Picture Chomper", "Word Muncher", "Arithmetic Critters" and "Magic Spelling" were available for children to play. The children often enjoyed playing with the "Picture Chomper" game and most of the data collected by the researcher at the computer centre was based on this particular game. For a detailed description of the computer game "Picture Chompers" see Appendix J.

Constructive play is defined as the use of manipulative objects or materials toward a goal or an end state (Smilansky, 1968). The constructive play area consisted of a magnetic castle puzzle, legos, beads, and blocks. Since these toys are defined as constructive toys, it was expected that children would engage in constructive play. The children were usually seated at a table to play with the various constructive materials.

Dramatic play is defined as undertaking make-believe roles and props and verbally interacting with at least one other child (Smilansky, 1968). This centre was located at one end of the classroom. The centre had toys such as dress-

up clothes, a carriage, dolls, a refrigerator, a telephone, and a stove. Since these toys were designed to promote dramatic play, it was expected that children would engage in such play.

The storytime activity consisted of having all the children sit on the floor gathered around the teacher. The teacher sat on a chair and chose a story to read to the children. All the stories read to the children were fairy tales since that was the theme of the month.

"News" also identified as "sharing time" is an activity where children are called upon to describe or narrate some past event to the entire classroom (Michaels, 1981). The teacher introduced the activity by asking the children what they did over the weekend. The children were seated on the floor while the teacher stood in front of a chart, holding a large felt marker. The children were expected to sit quietly and listen attentively. Each child was given a turn to respond. For example, if one child said "I went skating with the Brownies", the teacher recorded the child's oral language on the chart and wrote "Lindsay went skating with the Brownies".

Dr. Wizard is similar to a "show and tell" activity where children are called upon to describe an object to the whole classroom. However in this activity, children perform experiments in front of the class, usually with the teacher's or a parent's assistance. For example, a child

would bring in different materials (e.g., vinegar and baking soda) and mix them to form a reaction.

The centre had a small table which had a poster labeled "Dr. Wizard's Science Experiments". The child presenting the experiment wore a black cape and hat, and stood in front of a table to perform the science experiment. The centre also included another big table which displayed a number of experiments done by the children, and objects such as vinegar bottles, baking soda, and plants. The activity began early in the morning for the a.m. class and early in the afternoon for the p.m. class.

Classroom Observations

The time duration for each activity varied and, therefore, activities were observed for different lengths of time. The tape recorder was stopped when there was only one child in the area of the activity or when the children left the centre. During freeplay, the researcher observed the dramatic play, constructive play, and the computer activity. Since freeplay occurred for only a half an hour a session, it was necessary to observe all three freeplay activities (computer, dramatic play and constructive play) within that time frame. Therefore, the researcher chose to observe each freeplay activity for a maximum period of ten minutes. The researcher began by observing first the computer, dramatic play and constructive play. If there were no children present at the computer activity, other activities (e.g.,

dramatic or constructive) were observed, depending on which play activity was in use.

The tape recorder was placed on a table or on the floor near the activity and close enough to capture the children's voices. The tape recorder counter was kept visible to the researcher. When taking field notes, the researcher recorded the number of the counter, and the behavior that occurred. In this way, the researcher was able to link verbal behavior with the context in which it took place. During data collection, two observers independently and concurrently took field notes of the non-verbal behaviors that occurred during each activity.

A SONY cassette recorder (model number BM-18) with a built-in microphone was used to record classroom conversations. Each cassette was identified according to date, location and type of activity.

In the classroom, the children were informed that they were being recorded. The tape recorder was presented to the children during recess and its function was described. At the beginning, the children expressed curiosity about the tape recorder, but they soon took its presence for granted and ignored it. Questions such as "Are you taping us?" or "Why are you taping us?" were asked by some of the children and were answered in a candid and direct manner. Explanations were brief and concise. For example, the researcher responded to questions by stating, "I am

interested in listening to how you speak when you are playing."

Audiotaped recordings were made of spontaneous conversations in six different kindergarten activities. A total of 85 recordings was collected within a four week period from mid-May to mid-June. The total time of observation of all the activities was 9 hours and 53 minutes. All of the audiotape recordings are listed in Appendix K.

Coding Scheme

The purpose of this study was to identify activities that may support the development of decontextualized language. Two coding systems adapted from previous studies (Dickinson, 1991; Dickinson & Keebler, 1989) and from MacWhinney's (1991) categories were developed and used to analyze the conversations that took place in the different activities.

The coding scheme focused on two elements of speech: topics and speech acts. Topic is defined as a subject or content in a conversation. According to Dickinson (1991) topics that include analytical, didactic, and non-present talk constitute decontextualized language, whereas talk about the present is referred to as contextualized talk. Analytical talk is defined as talk towards logical reasoning and includes cause and effect statements. Non-present talk refers to talk about topics which are not observable in the

environment and includes: past and future actions, distant objects and persons, and abstract matters. Didactic talk is defined as talk used or intended for teaching or instruction and it involves talk about books and symbols.

A coding scheme for speech acts was also developed because it was assumed that specific speech acts such as explanation, information and justification of actions were expected to result in more efforts to make referents clear and to communicate novel information (Dickinson, 1991). These are important features of decontextualized talk and are not conveyed by direct control statements. Real questions were expected to produce more decontextualized talk because they are associated with more extended information-rich interactions, while test questions asked by teachers do not extend children's interactions. A variety of both open and closed questions was also more likely to encourage the development of elaborate topics.

Additional categories such as present off-topic and non-present off-topic were included to account for comments that were not relevant to the present activity or task. Paralinguistic responses were also included to capture non-language communication such as gestures. Complete operational definitions of all the categories are found in Appendix L.

Coding Procedure. Coding procedures were carried out in two stages: 1) preliminary coding of all the data collected

and 2) coding of a representative sample using the CHILDES method. The preliminary analysis was conducted by listening to all the audiotapes and coding the type of talk that occurred. This was accomplished by using a tally sheet and recording the number of topics and speech acts. (See Appendix M).

A representative sample was chosen in order to further analyze the data using the Child Language Data Exchange System (CHILDES) (MacWhinney, 1991). The criteria for choosing the representative sample were as follows: a) the live reliability transcripts (activities observed by the two observers) and b) the longest transcripts. Twenty-six transcripts of observations were analyzed using CHILDES (a total number of 244.5 minutes). See Appendix N for a list of the data transcribed and coded.

Transcription. Each transcript for the representative data was identified as to the date on which it occurred, the morning or afternoon class, and the name of the activity. In addition, the names of the speakers were noted and the duration of each transcript.

The tapes were transcribed directly onto the computer using WordPerfect and a Sony transcriber (model BM77). The transcription process was extremely time-consuming. It took approximately fifteen hours to transcribe one (one-hour) tape. Difficulties in transcribing were encountered when 1) discriminating children's utterances, 2) catching utterances

that were spoken relatively softly, and 3) transcribing utterances when several children spoke simultaneously.

The Child Language Data Exchange System. The Child Language Data Exchange System (CHILDES) was used to code the representative data. CHILDES is a computational tool which increases the reliability of transcriptions, provides greater accuracy in coding, and facilitates the analysis of large quantities of conversational data (MacWhinney, 1991). It contains programs which conduct phonological and morphological analysis, compute a word frequency count and calculate the mean length of utterance in a file.

The CHILDES includes conventions for transcription and ensures accuracy of transcription in such matters as end of an utterance, the use of pauses, and the number of utterances etc. The format in which utterances and words is typed and coded is specified in Appendix O.

According to MacWhinney (1991), approximately 60 groups of researchers around the world are using CHILDES to collect and transcribe new data. Several studies have also been reported using CHILDES technology (Dickinson 1991; Snow & Dickinson 1991; Beals 1992).

Reliability

Reliability tests were conducted to assess reliability of the coding scheme, and reliability of transcription. Inter-rater reliability of the topic and speech act coding was established using Cohen's Kappa. An overall Kappa

coefficient of .77 was achieved for the coding of topics and a Kappa of .85 was achieved for the speech act coding. The Kappa computation for closed and open questions resulted in a coefficient of .88.

Reliability of transcription from the tapes was verified and resulted in 94% agreement as to the accuracy of the transcripts. Reliability measures were not conducted for the context notes or field notes: the few disagreements that occurred between observers proved to be complementary observations and thus provided additional context information.

RESULTS

The primary objective of this investigation was to examine activities in the kindergarten classroom that might facilitate the development of decontextualized language. This section begins with the results of the parent questionnaire, and the teacher interview. Following the descriptive data of the sample, a quantitative analysis of the tasks assigned and the activities observed is presented, showing frequencies of the type of talk which occurred during teacher-directed and peer activities. Finally, a qualitative analysis of the children's speech is presented.

Evaluation of parental and teacher language support

Parent Questionnaire. The home environment is an important source of oral discourse and can serve to prepare children for literacy by providing them with opportunities for storyreading (Shin, 1989; Watson & Shapiro, 1988) and discussing or describing past or future events (Snow & Dickinson, 1990). In order to compile information concerning the home environment, a questionnaire was distributed to the parents of the children (See Appendix E). Descriptive data is reported concerning frequency of storyreading episodes, and child-initiated questioning behaviors associated with storyreading, phonological and graphic strategies, and recognition of environmental print. Parent-directed questioning behaviors which focused on concepts about print, and parental literacy levels are also described.

Table 3 represents the frequencies of home reading episodes per week for children in the morning and the afternoon classes. As can be seen, the mean for the morning and afternoon classes is similar. The range for the whole sample is 2-12 with a mean of 5.5 episodes of home-reading per week.

The results regarding child-initiated questions and behaviors during storyreading at home are presented in Table 4. Parents reported that all the children asked questions about the stories and requested to have the same story read over. It was also reported that most of the children participated in literacy behaviors such as asking questions about specific words, predicting what would happen next in the story, describing pictures and looking at pictures to recite stories.

Parents reported that all the children engaged in behaviors related to phonological and graphic systems such as drawing, painting pictures, pretending to write, asking their parents to spell words and to look at words they had written. Most of the children wrote letters of the alphabet, asked their parents to read words they had written, and had their parents correct the spelling of words. Some of the children also scribbled lists, letters and shopping lists. Overall, at home, the children were exposed to a variety of activities and materials related to literacy.

Parent-directed behaviors that were associated with

Table 3

Reading Episodes at Home According to Kindergarten Class

Variable	Class	Range	Mean
Home Reading Episodes/Week	Morning (n=20)	3-12	5.7
	Afternoon (n=11)	2-10	5.2
	Morning/Afternoon (n=31)	2-12	5.5

Table 4

Child-initiated Behaviors at Home

Child-Initiated Behaviors	Responses Frequently/Always	
<u>During Storyreading</u>	n	%
made predictions	(27)	87%
guessed how the story would end	(21)	69%
asked questions about the story	(31)	100%
asked questions about specific words	(22)	71%
requested to read story over	(31)	100%
looked at pictures to recite most of story	(30)	97%
looked at words and read most of story	(17)	55%
described pictures in the book	(29)	93%
 <u>Phonological and Graphic</u>		
drew, coloured and painted pictures	(31)	100%
drew pictures on a chalkboard	(26)	84%
pretended to write	(31)	100%
asked parent to spell words	(31)	100%
asked parent to look at words he/she had written	(31)	100%
asked parent to read words	(30)	97%
asked parent to correct spelling	(23)	75%
wrote letters of the alphabet without the encouragement of their parents	(27)	87%
scribbled shopping lists	(13)	42%
scribbled or wrote letters	(17)	55%
 <u>Environmental Print</u>		
read words on traffic signs	(28)	90%
read words on store signs	(28)	90%
read words on billboards	(21)	68%
read words on restaurant signs	(26)	84%

concepts about print are presented in Table 5. All the parents reported helping their children to recite the letters of the alphabet, identify the names of capital and lower case letters and read simple words and sentences in storybooks.

In terms of phonological and graphic systems, all the parents reported encouraging their children to identify sound within words for spelling and showing their children how to write their names. Most of the parents also indicated volunteering to correct their children when they misspelled a word.

Information describing parental literacy is shown in Table 5. A majority (93%) of the parents reported reading magazines, newspapers (90%) and novels (77%). Many of the parents read textbooks (61%), while some read professional journal articles (42%) or read the Bible (23%).

Generally, the findings regarding the parent questionnaire showed that the majority of the children were exposed to and engaged in high literacy behaviors at home. The results also described the parents as adequate or suitable literacy role models, (e.g., parents reported participating in a variety of reading activities).

Teacher Interview. The interview with the teacher was conducted in order to gain information about the teacher's beliefs and pedagogical orientations. The purpose of the interview was to determine what the teacher believed to be

Table 5

Parent-Directed Behaviors at Home and Parental Literacy

Parent-Directed Behaviors	Responses Frequently/Always	
	n	%
<u>Concepts About Print</u>		
recite letters of the alphabet	(31)	100%
identify the names of capital and lower case letters	(31)	100%
identify sound of letters	(31)	100%
read simple words in storybooks	(31)	100%
read sentences in storybooks	(31)	100%
<u>Phonological/Graphic Systems</u>		
corrected child when he/she misspelled a word	(26)	84%
volunteered to spell words	(30)	97%
encouraged child to identify sounds within words of spelling	(31)	100%
shown child how to write his/her name	(31)	100%
<u>Parental Literacy</u>		
magazines	(29)	93%
newspapers	(28)	90%
novels	(24)	77%
cookbooks	(24)	77%
textbooks	(19)	61%
professional journals	(13)	42%
bible	(7)	23%

important in terms of language and whether her attitudes were displayed when interacting with the children. Research studies (Dickinson & Snow, 1990) have reported a relationship between teachers' attitudes/beliefs and providing extended language opportunities.

According to the teacher, the most important objective of the kindergarten classroom was that the children interact positively with their peers. It was also reported that in the beginning of the school year, the focus of the kindergarten curriculum was on how children should talk or interact with one another. For example, the teacher believed one way to build confidence in children was by pairing children with a partner. Generally, it was important for children to know that school and learning are fun.

In the past, the teacher had used traditional methods. For example, the only freeplay activities that were set out were the dressup corner and the computer. There were no writing centres, no math or science centres. The teacher now believed that the purpose of freeplay was for children to interact socially with their peers and, she had therefore changed her pedagogical approaches. However, she suggested that many parents do not recognize the importance of this.

The teacher emphasized the use of different methods. She strongly believed that not all children learn to read using the whole language method, and that there was a need for teacher-directed activities, such as phonic drills. The

teacher reported using "themes" to structure the curriculum because they were easy to use. Different themes were used to associate letters to sounds, extend children's vocabulary, and increase knowledge in subject matter. According to this teacher, children learn language through modeling, reading, and day to day conversation. It was also stressed by the teacher that it was important for the adult to ask open-ended questions. It was also stated that although some children were not highly verbal, one way to encourage language from these children was to talk to the child on a one-to-one basis.

The teacher believed that children also learn language from their peers by engaging in problem-solving activities, listening to one another during circle or group time, and talking on the playground. Children who have older brothers and sisters use more adult language, for example, by modelling the language of their older brother or sister.

The teacher also described how the activities under investigation by the researcher (news, Dr. Wizard, storyreading, computer and play) helped encourage language development. She explained that the news activity invited children to give their opinions and to share their news or stories with their classmates. By listening to their peers narrate their stories, children learn language. During the Dr. Wizard activity, the children were given the opportunity to speak and provide explanations, and the activity

encourages problem-solving and thinking. As for the computer activity, the teacher reported that the children engaged in problem-solving, learned how to read, and that some children have also learned words from using the computer.

Comments concerning the dramatic and constructive play activity were that children were given the opportunity to use everyday conversation, and that they learned how to solve problems. For example, they learned how to share and by enacting certain situations, and role-playing, they also acquired social skills.

In terms of how children learn language through storyreading, the teacher explained that children learn by listening. She stated that listening to stories tests comprehension, allows children to learn about sequencing events, and analyzing characters. She also emphasized that one may need to change the words in the story because some of the language may be sexist or violent.

Assessment of children's language activities

Picture description task

The purpose of the picture description task was to determine whether language can be classified as contextualized and decontextualized. The results were scored for the total number of words, adjectives, locatives and clarificatory markers used by the children. The scores were analyzed by conducting a repeated measures MANOVA with class and sex as between-subject factors and instructional

condition (decontextualized/contextualized) as within-subject factors.

Table 6 presents a summary of the variables that were examined in the picture description task. There were no significant effects of sex or class on any of the variables. The only significant class-by-sex interaction was for adjectives, with females in the afternoon class recalling more of these in the contextualized condition than did the boys.

A significant main effect was found for the total number of words $F(1, 31) = 8.66, p < .05$. As expected, descriptions in the decontextualized condition were longer and more detailed than the contextualized condition. Since length increased as a function of the task condition, it was important to consider whether the increase of length may by itself account for the differences in the use of the type of words. Therefore, subsequent analyses were conducted with total number of words as a baseline. Significant positive differences were found for adjectives $F(1, 30) = 8.19, p < .05$, for pronouns $F(1, 30) = 13.67, p < .05$, and clarifications $F(1, 30) = 11.57, p < .05$ in the decontextualized condition. The only variable which failed to show a significant effect of the task condition was the use of locative markers.

Overall, children increased their use of adjectives, lexical reference and clarifications in the decontextualized

Table 6

Summary of the Results of the Picture Description Task

Variable	AM Class		PM Class		Combined Class Means
	Males	Females	Males	Females	
Contextualized Condition					
# of Words	70.4	58.2	54.4	70.3	63.7
Adjectives	2.4	0.9	0.0	1.6*	1.3
Pronouns	2.6	1.3	1.8	1.1	1.7*
Locatives	1.5	1.9	2.3	0.5	1.6
Clarifications	0.9	0.7	0.7	0.4	0.7
Decontextualized Condition					
# of Words	86.3	70.9	72.0	101.7	81.7*
Adjectives	5.3	2.0	3.0	3.0	3.3*
Pronouns	1.1	0.6	0.2	0.8	0.7
Locatives	2.5	1.8	1.5	2.0	1.9
Clarifications	1.5	2.7	1.6	2.5	2.1*

Note: * $p = < .05$

condition, as well as the total number of words they used. These results provide support that the children were responsive to the demands or instructions of the task and understood that the two conditions were different.

Classroom activities. The activities observed in the classroom were analyzed in two steps. First, an initial analysis was conducted by listening to all the audiotapes and noting on a tally sheet (See Appendix M) the type of topics and speech acts that occurred. Second, from this initial data, a representative sample was chosen to be coded, transcribed and analyzed by the CHILDES method. The criteria used to select the representative sample took into account class, sex of the children, and those activities which were observed by two researchers (reliability activities). The same number of boys and girls were selected from the morning and the afternoon class, and the same number of activities for both classrooms were analyzed. The findings from the initial data were compared to the representative data and it was found that the results were consistent. Therefore, subsequent analyses were conducted on the representative sample using the CHILDES method. Following the use of this method, a chi square analysis was computed to determine any significant differences across activities.

A total of 26 transcripts (observations) were transcribed into computer files and analyzed according to

CHILDES. There were 12 transcripts (103.5 minutes) representing teacher-directed activities and 14 transcripts (132.8 minutes) focused on peer activities (See Appendix N). The conversations in the teacher-directed activities ranged in length from 3 to 17.4 minutes, with a mean of 8.6 minutes. Peer activities ranged in length from 5 to 11.2 minutes, with a mean of 9.5 minutes. On average teacher-directed activities consisted of 526 utterances ranging from 218 to 794 utterances. Child-child activities averaged 488 utterances with a range of 405 to 626 utterances.

CHILDES analysis of teacher-directed activities: Topic coding analysis. Actual counts and percentages of present analytical, non-present and didactic talk were computed for all the activities. Table 7 shows the percentages of talk addressing different topics during teacher-directed activities. In the news activity, a variety of topics appeared. A high percentage of these concerned non-present topics (42.5%). Within the non-present category, most of the speech was concerned with past actions and events (40.4%) with a few related to future and off-topic remarks. Didactic talk (25%) which focused on symbols or letters also emerged in the news activity when the teacher referred to letters or words she had written on the chart. Analytical talk (12%) was also observed in the news activity and 20% of the conversation which took place was present talk. Within the present category, discussions focused on immediately present

Table 7

CHILDES analysis of topics during teacher-directed activities

	News		Dr. Wizard		Storyreading	
Observations	(n=4)		(n=4)		(n=4)	
Utterances	794		277		218	
<u>Present</u>	%	n	%	n	%	n
Actions	14.7	(117)	48.0	(133)	2.3	(5)
Ownership	0.0	(0)	0.0	(0)	0.0	(0)
Rules	3.4	(27)	2.8	(8)	4.6	(10)
Off-Topic	1.8	(14)	0.7	(2)	1.4	(3)
Total	20.0	(158)	51.5	(143)	8.3	(18)
<u>Analytical</u>						
Cognition	12.0	(95)	40.8	(113)	0.0	(0)
Language	0.3	(2)	1.8	(5)	0.0	(0)
Total	12.3	(97)	42.6	(118)	0.0	(0)
<u>Non-Present</u>						
Past	40.4	(321)	1.8	(5)	0.0	(0)
Future	1.5	(12)	1.4	(4)	0.0	(0)
Pretend	0.0	(0)	0.7	(2)	0.0	(0)
Off-Topic	0.6	(6)	1.4	(4)	0.0	(0)
Total	42.5	(339)	5.3	(15)	0.0	(0)
<u>Didactic</u>						
Symbols	25.0	(200)	0.4	(1)	7.3	(16)
<u>Book Talk</u>						
Label	0.0	(0)	0.0	(0)	7.3	(16)
Mechanics	0.0	(0)	0.0	(0)	9.2	(20)
Vocabulary	0.0	(0)	0.0	(0)	9.2	(20)
Prediction	0.0	(0)	0.0	(0)	3.7	(8)
Analysis	0.0	(0)	0.0	(0)	52.3	(114)
Link	0.0	(0)	0.0	(0)	2.8	(6)
Total	25.0	(200)	0.4	(1)	91.8	(200)

actions and objects (14.7%), followed by a few rules and off-topic comments.

Both present and analytical talk were prominent in the Dr. Wizard activity. Within the present category: 48% was related to actions, and some incidents of classroom rules and off-topic events also occurred. Analytical talk (42.6%) was also predominant in Dr. Wizard and within this category cognitive information (40.8%) occurred most frequently and a very small percentage was related to language. A small percentage of non-present talk also appeared, evenly divided between future and off-topic speech.

During storyreading, a high percentage of didactic book talk (91.8%) emerged. Within the didactic book category: most of the comments focused on analysing events and characters in the story (52.3%), discussion of vocabulary (9.2%), mechanics (9.2%), labeling objects or events (7.3%) and predicting outcomes (3.7%). There was a small percentage of present talk (8.3%), most of it associated with rules, followed by actions, and off-topic comments.

To determine whether teacher-directed activities were related to the type of topic a 3 (News, Dr. Wizard, Storyreading) x 4 (Present, Analytical, Non-present, Didactic) chi-square analysis was computed. The chi-square analysis was significant ($\chi^2 (6) = 572.3$ $p < .05$), and confirmed that topics were significantly different across teacher-directed activities. Table 8 presents the results of

Table 8

Total frequencies of topics across teacher-directed activities

	News		Dr. Wizard		Storyreading	
Observations	(n=4)		(n=4)		(n=4)	
Utterances	794		277		218	
	%	n obs n exp	%	n obs n exp	%	n obs n exp
Present	20.0	(158) (196)	51.5	(143) (68)	8.3	(18) (54)
Analytical	12.3	(101) (131)	42.6	(118) (46)	0.0	(0) (36)
Non-present	42.5	(339) (218)	5.3	(15) (76)	0.0	(0) (60)
Didactic	25.0	(200) (247)	0.4	(1) (86)	91.8	(200) (68)

Note: n obs = observed frequencies
n exp = expected frequencies

the total number of topics across teacher-directed activities. In summary, present talk (51.5%) and analytical talk was observed most frequently during Dr. Wizard, non-present talk (42.5%) was almost exclusively observed during news, and didactic (91.8%) was predominant during storyreading. In conclusion, all the teacher-directed activities consisted of topics which facilitated the development of decontextualized talk.

CHILDES analysis of teacher-directed activities: Speech act Analysis. The percentages of speech acts observed during the teacher-directed activities (News, Dr. Wizard, and Storyreading) are presented in Table 9. In the news activity, the most frequently observed speech acts were extended, evenly divided between real questions and responses (25.9%) and informative comments (25.3%). Control-oriented talk also occurred and was associated with test question/responses (15.9%) and direct control (11.7%) comments, with no negotiation and hardly any warm engagement comments. Other speech acts observed were evaluation reading text and other communicative.

In the Dr. Wizard activity, speech acts were evenly divided between control-oriented and extended talk. Within the control-oriented category direct-control statements accounted for 22.4% of the utterances. Within the extended category information was the most frequent. In contrast to the news activity, there were more test question/responses

Table 9

CHILDES analysis of speech acts during teacher-directed activities

	News	Dr.Wizard	Storyreading
Observations	(n=4)	(n=4)	(n=4)
Utterances	794	277	507
<u>Control-Oriented</u>	% n	% n	% n
Direct-control	11.7 (93)	22.4 (62)	4.5 (23)
Negotiation	0.0 (0)	0.0 (0)	0.0 (0)
Test q/r	15.9 (126)	17.3 (48)	13.4 (68)
Evaluation	7.2 (57)	5.4 (15)	3.1 (16)
Total	34.8 (276)	45.1 (125)	21.0 (107)
<u>Extended</u>			
Information	25.3 (201)	31.8 (88)	17.0 (86)
Real q/r	25.9 (206)	11.2 (31)	1.6 (8)
Warm	0.6 (5)	3.6 (10)	1.0 (5)
Total	51.8 (412)	46.6 (129)	19.6 (99)
<u>Other</u>			
Reading Text	6.2 (50)	0.0 (0)	57.0 (289)
Other	7.1 (56)	8.3 (23)	2.4 (12)
Total	13.3 (106)	8.3 (23)	59.4 (301)

(17.3%) than real question/responses (11.2%). Evaluative comments (5.4%) and other communicative acts (8.3%) were also shown by the teacher and children in this activity. Again, as in the news activity, negotiation and warm engagement acts hardly occurred.

Storyreading was dominated by the other category which included reading text (57.0%) speech acts. Within the control-oriented category, a few direct-control statements occurred and negotiation and warm engagement comments were absent. These results are consistent with the other teacher-directed activities (News and Dr. Wizard). Within the extended category, informative comments (17.0%) were observed and there were more test questions/responses (13.4%) than real question/responses.

A chi-square analysis was computed to determine whether the activities were related to the type of speech acts. The chi-square analysis was significant ($\chi^2 (4) = 403.68$ $p < .05$) and revealed that speech acts were significantly different across teacher-directed activities as shown in Table 10. Both control-oriented and extended talk occurred with almost equal frequencies during the Dr. Wizard activity and news activity. A high percentage of the other category (59.4%) was also observed during storyreading. This included reading text speech acts as shown in Table 9. Generally, all the teacher-directed activities showed extended speech acts relevant to decontextualized talk.

Table 10

Total frequencies of speech acts across teacher-directed activities

	News	Dr. Wizard	Storyreading
Observations	(n=4)	(n=4)	(n=4)
Total # of Utterances	794	277	218
	% n obs n exp	% n obs n exp	% n obs n exp
Control -oriented	34.8 (276) (256)	45.1 (125) (89)	21.0 (107) (163)
Extended	51.8 (412) (322)	46.6 (129) (112)	19.6 (99) (205)
Other	13.3 (106) (216)	8.3 (23) (75)	59.4 (301) (138)

Note: n obs = observed frequencies
n exp = expected frequencies

A chi-square analysis was also computed to explore any differences in questions across teacher-directed activities. A significant difference was found $\chi^2 (4) = 19.67$ $p < .05$. Table 11 presents the number of questions and responses observed during teacher-directed activities. In general, all teacher-directed activities generated almost exclusively closed question/responses, but there was a slight tendency for the news activity to produce open question/responses (15.8%).

CHILDES analysis of peer activities: Topic coding analyses.

Table 12 displays the CHILDES analysis of talk addressing different topics during the peer activities. The main topic category that dominated the computer activity was talk related to the present (71%). Most of the present topics were concerned with actions (65.3%), a few were off-topic and rare cases of rules appeared. Topics, such as analytical (12.3%), were also observed and were related to comments about how to play or figure out the computer game. In addition, didactic talk regarding symbols (11.0%) occurred as the children were sounding out and decoding words on the computer. Only a few incidents of non-present talk involving future, off-topic and past events emerged in the computer activity.

Although in the dramatic play activity there were no topics related to analytical or didactic talk, a very high percentage of non-present talk (69.4%) was displayed during

Table 11

Total frequencies of questions during teacher-directed activities

	News	Dr. Wizard	Storyreading
Observations	(n=4)	(n=4)	(n=4)
Total # of Utterances	794	277	218
	% n obs n exp	% n obs n exp	% n obs n exp
Closed q/r	82.0 (272) (286)	95.0 (76) (69)	97.4 (74) (66)
Open q/r	15.8 (43) (31)	1.2 (1) (7)	2.6 (2) (7)
Clarifi q/r	3.0 (15) (12)	3.7 (3) (3)	0.0 (0) (3)

Note: n obs = observed frequencies
n exp = expected frequencies

Table 12

CHILDES analysis of topics during peer activities

	Computer	Dramatic Play	Constructive Play
Observations	(n=6)	(n=4)	(n=4)
Utterances	626	405	434
<u>Present</u>	% n	% n	% n
Actions	65.3 (409)	17.7 (72)	34.8 (151)
Ownership	0.0 (0)	10.6 (43)	5.8 (25)
Rules	0.6 (4)	0.5 (2)	1.2 (5)
Off-Topic	5.1 (32)	1.7 (7)	9.2 (40)
Total	71.0 (445)	30.5 (124)	51.0 (221)
<u>Analytical</u>			
Cognition	12.0 (75)	0.0 (0)	0.0 (0)
Language	0.3 (2)	0.0 (0)	0.0 (0)
Total	12.3 (77)	0.0 (0)	0.0 (0)
<u>Non-Present</u>			
Past	0.3 (2)	0.0 (0)	0.0 (2)
Future	2.5 (16)	0.0 (0)	0.0 (0)
Pretend	0.3 (2)	69.4 (281)	42.6 (185)
Off-Topic	2.4 (15)	0.0 (0)	6.0 (26)
Total	5.5 (35)	69.4 (281)	48.6 (213)
<u>Didactic</u>			
Symbols	11.0 (69)	0.0 (0)	0.0 (0)
Book Talk	0.0 (0)	0.0 (0)	0.0 (0)
Total	11.0 (69)	0.0 (0)	0.0 (0)

this activity. All of the non-present talk was associated with pretend actions and events. A total of 30.5% of utterances was related to present topics. Within the present category: present actions (17.7%) and ownership (10.6%) were common in this activity. Some incidents of off-topic and rules also appeared.

In the constructive play activity, a high percentage of present talk (51%) was observed, with most of it concentrating on actions (34.8%), followed by off-topic (9.2%), ownership of objects and rules. There was also a high percentage of non-present talk which was heavily concerned with pretend actions (42.6%) and discussions of off-topic events (6.0%). There was no evidence of analytical or didactic talk in constructive play, a result similar to that seen in the dramatic play activity.

A chi-square analysis was also computed to determine whether topics were significantly different during peer activities. Results displayed in Table 13 show that topics were significantly different ($\chi^2 (6) = 577.8$ $p < .05$) according to activity. The predominant topic categories in the peer activities (Computer, Dramatic Play, and Constructive Play) varied according to activity: 80% of present talk observed in the computer activity, 69.4% of non-present talk appeared in the dramatic play activity, and an almost even distribution of present (51%) and non-present (48.6%) talk in the constructive play activity.

Table 13

Total frequencies of topics across peer activities

	Computer		Dramatic Play		Constructive Play	
Observations	(n=6)		(n=4)		(n=4)	
Total # of Utterances	626		405		434	
	%	n obs n exp	%	n obs n exp	%	n obs n exp
Present	71.0	(445) (338)	30.5	(124) (218)	51.0	(221) (203)
Analytical	12.3	(77) (33)	0.0	(0) (21)	0.0	(0) (22)
Non-present	5.5	(35) (225)	69.4	(281) (146)	48.6	(213) (155)
Didactic	11.0	(69) (29)	0.0	(0) (19)	0.0	(0) (20)

Note: n obs = observed frequencies
n exp = expected frequencies

CHILDES analysis of peer activities: Speech act coding

analysis. The percentages of speech acts occurring during peer activities are presented in Table 14. In the computer activity, children's talk was dominated by the extended category. Within this category, children participated in giving information (36.7%) to their peers and providing more real questions/responses (18.7%) than test question/responses (1.5%). Control-oriented talk was also observed which included mostly direct-control comments (22.4%), and some negotiation. In addition, evaluative comments and other communicative statements such as singing and repetitions were observed.

Data regarding the dramatic play activity revealed that there was a high occurrence of extended talk. Within this category information (38.2%) and real questions/responses (18.2%) were observed. The incidence of control-oriented talk included direct control statements (19.0%) and negotiation (12.3%). Other communicative statements (11.1%) and a few comments which were related to evaluation also occurred in this activity.

The findings regarding speech acts in the constructive play activity, are similar to the computer and dramatic play activity. A pattern emerges with control-oriented statements being consistent across activities. Children's extended talk in the constructive play activity involved primarily giving information (44.0%), and asking real questions (14.5%).

Table 14

CHILDES analysis of speech acts during peer activities

	Computer	Dramatic Play	Constructive Play
Observations	(n=6)	(n=4)	(n=4)
Utterances	626	405	434
<u>Control-oriented</u>	% n	% n	% n
Direct-control	22.4 (140)	19.0 (75)	14.7 (64)
Negotiation	8.0 (50)	12.3 (50)	12.4 (54)
Test q/r	1.5 (10)	0.0 (0)	1.8 (8)
Evaluation	4.3 (27)	1.2 (5)	3.5 (15)
Total	36.2 (227)	32.5 (130)	32.4 (141)
<u>Extended</u>			
Information	36.7 (230)	38.2 (155)	44.0 (191)
Real q/r	18.7 (117)	18.2 (74)	14.5 (63)
Warm	3.0 (19)	0.0 (1)	1.2 (5)
Total	58.4 (366)	56.4 (230)	59.7 (259)
<u>Other</u>			
Reading Text	0.6 (4)	0.0 (0)	0.0 (0)
Other	6.2 (39)	11.1 (45)	7.8 (34)
Total	6.8 (43)	11.1 (45)	7.8 (34)

A chi-square analysis was computed to determine whether peer activities were related to the type of speech acts. Chi-square analyses ($\chi^2 (4) = 40.64$ $p < .05$) confirmed that speech acts were significantly different across peer activities as shown in Table 15. In general, speech acts were consistent across activities: a pattern emerged within the extended category with information being the most dominant speech act followed by real questions. Within the control-oriented category, direct control comments were observed followed by negotiation.

A chi-square analysis was also computed to explore any differences in questions across peer activities. Chi-square analyses revealed that ($\chi^2 (4) = 1.35$, ns) questions were not significantly different. Table 16 presents the number of questions and responses observed during peer activities. The results show that closed question/responses, were dominant and fairly consistent across all peer activities. In addition, both open and clarification question responses were consistent across peer activities.

Qualitative examination of teacher-directed activities

Teacher-directed activities. According to the literature review (Dickinson, 1991; Michael & Collins, 1984; Michaels, (1981; Snow, 1983; Wells, 1985; Watson & Shapiro, 1988; Shin, 1989) teacher-directed activities (News, Dr. Wizard, and Storyreading) were expected to promote topics (e.g., analytical, non-present, didactic) and speech acts (e.g.,

Table 15

Total frequencies of speech acts across peer activities

	Computer	Dramatic Play	Constructive Play
Observations	(n=6)	(n=4)	(n=4)
Total # of Utterances	626	405	434
	% n obs n exp	% n obs n exp	% n obs n exp
Control -oriented	36.2 (227) (191)	32.5 (130) (122)	14.7 (64) (107)
Extended	58.4 (366) (389)	56.4 (230) (247)	59.7 (259) (218)
Other	6.8 (43) (55)	11.1 (45) (35)	7.8 (34) (31)

Note: n obs = observed frequencies
n exp = expected frequencies

Table 16

Total frequencies of questions during peer activities

	Computer	Dramatic Play	Constructive Play
Observations	(n=6)	(n=4)	(n=4)
Total # of Utterances	626	405	434
	% n obs n exp	% n obs n exp	% n obs n exp
Closed q/r	77.4 (96) (97)	79.7 (59) (58)	79.7 (59) (58)
Open q/r	9.6 (12) (9)	6.7 (5) (5)	5.4 (4) (6)
Clarifi q/r	12.9 (16) (17)	13.5 (10) (10)	14.8 (11) (10)

Note: n obs = observed frequencies
n exp = expected frequencies

information and real questions) which lead to the development of decontextualized talk. Observation of all the teacher-directed activities revealed the presence of topics associated with decontextualized speech. As for speech acts, the predominant category across all teacher-directed activities was information; also considered an important characteristic of decontextualized speech.

The news activity was the only teacher-directed activity which ranged over several topics (e.g., present, analytical, non-present, and didactic). The teacher usually introduced this activity by asking the children the date and month of the year and spelling the date on the chart, thereby using analytical and didactic symbol talk. The following is an example of analytical talk. The teacher began the activity by asking a test/closed question.

Teacher: okay could somebody tell me what the date is today?
 Teacher: you know what I keep forgetting to put what's the month here?
 The teacher refers to the calendar.
 Teacher: June!
 Teacher: and I keep forgetting.

When the teacher asked another question about the day of the week, the children responded that the day was also June. In response to this answer, the teacher continued to probe for the accurate response:

Teacher: could somebody tell me what we are today?
 Children: June!
 Teacher: what day we are # are we Saturday?
 Children: Monday!
 Teacher: Monday.

The focus of the news activity was having the children recall what they did over the weekend and recording their oral language on a chart. In each case, the teacher shifted the topic from non-present (talk about past events) to didactic symbols. The teacher introduced this non-present topic by asking a real/open question.

Teacher: okay so let's talk about our news.
 Teacher: we didn't get a chance to talk about news yesterday cause we we're so busy with the play.
 Child: yeah.
 Teacher: so what I'd like to do is find out what you guys did this past weekend did you go anywhere exciting did you do anything?
 Teacher: okay we'll start with Stephanie.
 Stephanie: I went swimming in my pool.
 Teacher: no! # you went swimming outdoors?
 [Stephanie nods.]
 Teacher: is it hot enough?
 Teacher: you're right it is cause I went swimming too.
 Alexander: so did I!

When Stephanie responded, the teacher extended her response or maintained the topic by asking her a closed question (e.g., "Is it hot enough?"). As Stephanie responded, the teacher moved the topic from discussion of past events to symbols by asking the children what could be written on the chart. This is shown in the following example:

Teacher: okay so what could we write?
 Alexander: Martine I went swimming too.
 [Alexander speaks to the teacher.]
 Craig: where?
 [Craig speaks to Alexander.]
 Alexander: uum at my friends'.
 Children: Stephanie went swimming in her pool.
 [The children respond to the teacher's question on what to write on the chart.]
 Teacher: you guys say that again.

Teacher: Stephanie # went # swimming #
 [The teacher reads as she writes the text on
 the chart.]
 Children: in her pool.
 Teacher: swimming # in # her # pool.
 [The teacher reads as she writes the text.]

When the teacher completed writing on the chart, she involved the children in reading the written text and continued to impart information regarding letters by focusing on "words" and recognition of sounds.

Teacher: okay I'm going to see who is paying attention here.
 Teacher: could I get Michelle to come up and circle the word swimming.
 Teacher: let's see if Michelle can find the word swimming.
 Teacher: s-s-s.
 [Michelle stands up and the teacher gives her the marker.]
 Teacher: circle it.
 Michelle circles the word "swimming".
 Teacher: good for you.

In this next episode, the teacher modified the news activity by first grouping the children into groups of three and having them tell each other their news. After five minutes with their peers, the teacher grouped the children into a big circle and asked each child real questions about the news they had heard.

Teacher: okay let's start with Louise.
 Teacher: Louise whose news did you find out about?
 Louise: Stephanie's.
 Teacher: okay you tell me what Stephanie did this weekend.
 Louise: she went at her cousin's.
 Teacher: her cousin's # do you know what her cousin's name was?
 Louise shakes her head.
 Teacher: ah that could have been something that you could have asked her.
 Teacher: okay when you ask people about their news you ask them what they did who the people were #
 Teacher: Trenton # are you listening?

Teacher: okay and you can ask them all kinds of details.

The topic shifted from present and moved to non-present (past) as the teacher directed Louise to inform the class of Stephanie's news. Louise responded by stating that Stephanie went to her cousin's. The teacher continued to maintain the topic by probing for more information and asking a real closed question about Stephanie's cousin's name. Louise replied by shaking her head and the teacher informed her that asking Stephanie about her cousin's name would have been a good question to ask. In addition, the teacher provided the children with guidelines on how to seek information from their peers.

This modification of the news activity was interesting in that it provided children with the opportunity to ask their peers real questions. Later, with their teacher's support, the children also received training in maintaining the topic. This was accomplished with the teacher grouping the children together in one big circle, and asking the children additional real questions about their peers' news.

The teacher also engaged in present talk during this activity, with most of it relating to rules. Although the topic was present, speech acts were extended and associated with giving information.

Teacher: okay Philip I'd like you to quieten down and go sit down over there please.

Teacher: guys you've got to remember that if somebody is trying to talk we have to be good listeners otherwise it's what?

Brandon: fair. :

- Teacher: it's kind of rude to be talking when somebody else is talking Justin this is what your're doing now.
- Teacher: do you like it when other people are talking and you're trying to say something no?
- Teacher: so let's respect other people's time when they're speaking you just have to be patient and listen to what they have to say and then you put your hand up okay it's a rule that we all know.

The most prominent topics appearing in the Dr. Wizard activity were present and analytical talk. The activity began with the teacher directing the child who was presenting the science experiment to inform the children about the experimental objects. In this sequence, the topic was present as the teacher directed Karina to provide information about the bottle on the desk.

- Teacher: okay tell us what the bottle is.
[The teacher refers to a bottle of honey.]
- Karina: honey.
- Karina: it's full of honey.

In the following sequence, the teacher continued to ask Karina real questions about the objects on the desk. Tania, another child, responded to the teacher's question by informing the children that the bottle contained kool-aid. Then, Karina corrected Tania by stating that the bottle contained water with blue dye and provided her with the accurate information.

- Teacher: okay now the next one is what?
- Tania: kool aid!
- Karina: water with blue dye.
- Teacher: oh!
- Teacher: food coloring # water and you pour it.

In the next episode, the teacher introduced the activity by asking the child a real/closed question. Philip

responded to the teacher's question by giving information and demonstrating his experiment.

Teacher: what is your experiment about?

Philip: it's on sound.

[Philip is holding two marble balls.]

Teacher: okay.

Philip: this one makes this sound.

[Philip drops one marble ball on the desk.]

Philip: this one makes this sound.

[Philip drops the other marble ball on the desk.]

In the above episode, the topic is considered present because Philip described objects which were visible to the children. However, he also participated in extended talk as he presented meaningful information to his peers regarding the sound of specific objects. In the next sequence, the teacher moved the topic to analytical by asking the children a control-oriented question (specifically, a test/closed question).

Teacher: why do you think they make different sounds?

Megan: I know this one.

Teacher: or do you wanna ask the audience Philip you can ask them.

Philip: because this one is metal and this one is rubber.

Brandon: you mean it's plastic.

Philip: no it's rubber.

Philip responded to the teacher's question by describing the materials from which the marbles were made. Brandon, another child, intervened and referred to one of the marbles as being plastic. Philip provided Brandon with the correct information, informing him that it was made of rubber. The teacher accepted Philip's response, but she continued to probe for more information from the children by asking them the same analytical test question.

Teacher: why else does it make a different sound anybody else know?
 Brandon: I know.
 Brandon: cause one is hollow and one is light.
 Teacher: good for you one is heavier than the other so they can make different sounds.
 Philip: and look # it's making a sound.
 [Philip makes a sound by rubbing the two marble ball together.]
 Teacher: oh.
 Teacher: I guess that's sort of like friction they call that friction when you rub two things together they might make a sound or it might have a reaction.

In this episode, Brandon's response offered an explanation for the different sounds. When Philip rubbed the two marbles together, the teacher identified his actions by introducing and defining a new word (e.g., friction) to the children.

Dr. Wizard also provided the children with the opportunity to ask their peers analytical questions. In this episode, Karina presented her science experiment to the children. She had a jar filled with water and oil on the desk and she was holding a paper clip in one hand and a cork in the other. She asked her peers a test question about the paper clip and the cork.

Karina: which one do you think is going to float?
 Children: that one.
 Teacher: put your hand up if you think the cork will.
 Teacher: put your hand up if you think the paper clip will.
 Teacher: let's see.
 Karina places the paper clip and the cork in the mixture.
 Teacher: which one floats?
 Teacher: the cork floats.

Following Karina's question, the teacher involved all the children by directing them to choose between the paper

clip and the cork. As Karina dropped both objects in the liquid, the teacher described the result. In the following episode, the teacher continued to maintain the topic:

Teacher: and what happened to the paper clip?
 Brandon: it sunk to the bottom.
 Teacher: right.

After Brandon responded to the teacher's analytical test closed question about the paper clip, she extended his comment by asking another cause and effect question, thus probing for further information and then providing a generalization.

Teacher: and why did it sink?
 Brandon: cause it was heavy!
 Teacher: ause it was heavier # that's right.
 Teacher: and it's also made of?
 Brandon: metal.
 Teacher: metal which does not # float # the cork does.

In the next episode, the conversation continued with the teacher asking a further analytical test question. Children were given the opportunity to share and display their knowledge with their peers. Here, one child responded by stating that cork came from bottles of wine, while another claimed that it came from a tree. Both answers were accepted by the teacher as being accurate.

Teacher: where does cork come from?
 Child: bottles of wine.
 Teacher: bottles of wine # you're right!
 The teacher giggles.
 Justin: they # it's # it comes from trees.
 Teacher: from a tree # from a cork tree # that's right.
 Teacher: oh that was a fantastic experiment.
 Teacher: thank you very much Dr. Wizard.
 [The teacher claps and so do the children.]

The teacher concluded the Dr. Wizard activity by

evaluating the experiment, and thanking the child for the presentation. Finally, as the teacher clapped, so did the children.

In the storyreading activity, a high incidence of didactic talk emerged. Within this category, book discourse was observed and most of the comments were related to analysing events or characters in the story. In this sequence, the teacher invited the children to give the names of the seven dwarfs from the story "Snow White and the Seven Dwarfs".

Teacher: now one thing they didn't tell us in this book were the names of the dwarfs.

Teacher: there were seven dwarfs and they all had a name.

Brandon: I remember one.

Teacher: okay what were going to do we're going to write their names down here.

Child: Sneezy.

Teacher: okay can I just have your hand up if you know one of them.

Teacher: Kristen what was the one you had?

Kristen: Grumpy.

Teacher: Grumpy! Okay so we have Grumpy.

[The teacher writes the word Grumpy on the chart.]

Analysis of characters took place during storyreading, as the teacher referred to the dwarfs in the story. As children provided the teacher with the names of the dwarfs, the teacher recorded the children's responses on a chart, in the same way as she did for the news activity.

In the following episode, the teacher invited the children to think about the characteristics of characters in "Snow White" thus, engaging the children in the analysis of characters. The teacher began by asking a test/closed

question about Grumpy.

Teacher: do you think he was a happy dwarf?

Children: no!

Teacher: how do you think he was?

Children: he was always Grumpy.

Teacher: he was not a happy one.

Teacher: Olivier do you have another one?

Olivier: Sneezy.

Teacher: Sneezy.

Teacher: and what did Sneezy always do?

Child: sneeze!

To one of the children's responses to her test/closed question about Grumpy, the teacher provided a definition the child's statement by providing a definition of the word grumpy by stating that "he was not a happy one."

While reading the story "Snow White and the Seven Dwarfs", the teacher made an effort to include discussions of the meaning of words. Here, the teacher asked the children a test/closed question about what the word vain meant and a child responded by stating that it referred to "bad". The teacher responded in the same way as in the earlier episode about "Grumpy", by explaining or clarifying the child's response and stating that the word "vain" meant that the witch loved herself, thus providing the children with accurate information.

Teacher: remember what the word vain was?

Children: yeah!

Teacher: what does it mean?

Child: bad! bad!

Teacher: vain means that she loves her.

Teacher: //self.

Child: //self.

Children were also given the opportunity to ask their own questions about the meaning of words. In the next

sequence, Sam heard the teacher mention the word bodice and asked her a real/closed question:

Sam: what's a bodice?

Teacher: a bodice is like this thing here.

[The teacher shows a picture of the bodice.]

Teacher: where is it # oh you can't see it it's the top part of her dress.

Teacher: right?

Children: right.

Teacher: it's like a garter.

The teacher provided the children with a definition and also imparted further information.

The storyreading activity also included talk related to the mechanics of bookreading (e.g., how books work and information about books). In this next episode, the children were seated on the floor, and the teacher was sitting on a chair holding up the book "Snow White." The teacher began the activity in the following manner:

Teacher: who knows what this one is?

The teacher refers to the book.

Children: Snow White!

Teacher: and the three dwarfs?

Teacher: how many dwarfs?

Children: seven!

In order to gain more information from the children, the teacher asked another test question to elicit more accurate information.

The next storyreading episode displayed talk related to prediction of events. The teacher had started to read the book "There's No Such Thing as a Dragon" and asked the children the following test/closed question:

Teacher: what do you think is going to happen?

Brandon: shrink!

Teacher: the dragon wagged its tail happily even faster the dragon started getting smaller.
 [The teacher reads the text.]
 Teacher: soon it was kitten size again.
 Teacher: see they kept patting it and paying attention to it and it started to shrink.

Brandon responded to the teacher's test question by stating that the dragon was going to shrink. Instead of evaluating his response, the teacher continued to read the story and thus reassured Brandon that he had provided accurate information. After reading the text, the teacher referred to a picture of the dragon in the book and showed that the dragon shrunk.

Qualitative examination of peer activities

Peer activities. Research reviewed earlier suggested that activities such as the computer (Cummins, 1985), and dramatic play (Pellegrini, 1985) gave children the opportunity to engage in decontextualized talk. The findings from the peer activities (computer, dramatic play, constructive play) revealed that the most frequently occurring topic was present talk. However, there was also evidence of non-present, analytical and didactic topics appearing across all peer activities. In terms of speech acts, children displayed most frequently extended talk, followed by control-oriented talk.

Analysis of the computer activity revealed topics such as analytical and didactic talk. When children played with the Picture Chomper Game, analytical talk took place. This game provided children with the opportunity to make

hypothetical guesses. An example of this is shown in the next episode. Louise could not read the screen but developed a hypothesis about what Lindsay should do.

Louise: blue.
 The screen reads "Chomp all blue things".
 Louise: I think it's blue.
 Lindsay: I don't know.
 Lindsay: you're right it is blue.
 Louise: cause that's the only color left and after # it's purple again.
 [Lindsay chomps all the blue objects on the screen.]
 no more blue.
 Lindsay: oops!
 [The screen changes to "Chomp all orange things."]
 Lindsay: yes it's my turn again.
 Louise: one more turn.
 Louise: oranges.
 [The screen reads "Chomp all orange things".]
 Lindsay: I already got them.

In the first instance, the computer screen read "Chomp all blue things" and Louise made an educated guess that Lindsay must chomp all the blue items. Lindsay took Louise's suggestion and found out that she was correct. Furthermore, Louise explained her reasoning for choosing the color blue by stating that it was the only color left on the screen. When the screen changed to "Chomp all orange things", Louise once again provided Lindsay with the information that it was orange. This episode of the computer activity clearly indicated that children were given opportunities to use analytical talk (e.g., make hypotheses, and provide reasons and explanations for events) and it permitted children to impart information (extended talk).

The computer activity also included didactic topics. In

this sequence, the computer game consisted of matching the picture on the screen with the appropriate letter on the keyboard. Thus, the topic became didactic symbols, with children referring to letters and sounds of letters.

Adam: c.
 Craig: king.
 Craig: I can make him do flips quick.
 Craig: refers to the frog on the screen.
 Adam: b.
 Craig: v.
 Craig: that's b.
 Adam: b ba.
 Craig: I can do a flip on this game.
 Adam: how?
 Craig: easy!
 Adam: camel.
 Adam: oh you missed his name.
 Adam: one more and and you are on the next game.
 Craig: how do you know?
 Adam: because there's only two that's three # the last one he does something funny # like he uses an umbrella or does a flip.
 [Adam refers to the frog on the screen.]
 Adam: b is bed!
 Adam: he did a flip!
 the frog on the screen does a flip when answers are correct.

There was also some evidence of non-present topics associated with future events. For example, in the next episode, Ryan began a conversation at the computer, by stating that in future, he will play the game against the timer.

Ryan: later I'm playing timer.
 Lindsay: if you play timer then you are xxx.
 Ryan: I know.
 Lindsay: when what if you get to zero and you haven't got all the things?
 Ryan: maybe I could.
 Lindsay: what happens if you don't?
 Ryan: then I lose # then it's your turn.

A high percentage of present talk related to actions

appeared in the computer activity, and control-oriented talk associated with negotiation of control was also apparent. This occurred when groups of children needed to negotiate turns on the computer. In the following episode, Lindsay and Louise discussed turntaking on the computer.

Lindsay: now # now it's my turn.
 [Louise completes the game on the screen.]
 Louise: no you wait till I finish then you get a whole turn.
 Ryan: then it's purple.
 Ryan: chop all the purple things.
 Lindsay: well it's my turn it's my turn after.
 Ryan: I know.

The main topic category displayed in the dramatic play activity was non-present. Specifically, conversations were related to pretend actions and events. In this episode, Louise was dressed up in a dress and Allison was at the house corner, wearing a wedding gown. Louise approached Allison and their conversation led to negotiating possible roles.

Louise: are you getting married?
 Allison: no!
 Allison: no I haven't anybody to be my xxx why do you wanna be the girl?
 Louise: could I be the next door neighbor?
 Allison: okay you can if you want.
 Louise: I'm the next door neighbor.
 Allison: and I'm a little kid.
 Allison: okay can you zip this up for me?
 [Allison takes off the wedding dress and Louise takes off her dress. Both girls switch dresses.]

While the topic was pretend, the children also provided each other with information about their roles. This was also displayed in the following sequence, as Lindsay imparted information to Allison regarding her role:

Lindsay: pretend he kidnapped me.
 [Lindsay speaks to Allison.]
 Allison: you guys have to stay home.
 Allison: you kidnapped both of us.
 Allison speaks to Alexander and Jordan.
 [Derrick approaches Lindsay and takes her by the
 hand back to the other end of the play area.]
 Derrick: I'm calling the police.
 [Derrick is on the telephone dialing.]

The second most frequent category appearing in the dramatic play activity was present talk. Talk related to ownership of objects and play materials was found in this sequence, with two children trying to negotiate an agreement about which part of the castle each should have.

Sam: this is my part of the castle and I can do
 whatever I want.
 Justin: all that?
 [Justin refers to the whole castle.]
 Sam: no only this.
 [Sam refers to one part of the castle.]
 Justin: that's your part too? this is your part?
 Sam: no but I'm using it.
 Justin: you're using my part?
 Sam: oooh boy!
 Justin: if you're using my part then you have to give it
 to me.
 Justin: no let's make it proper.
 Sam: I like it like this so I can see inside.
 Justin: no way!
 Justin: I'm the boss of it okay.
 Sam: you aren't the boss no one is a boss!
 Justin: fine then I'll take this for my half and you can
 have that whole one.
 Sam: no I'm using this.
 Sam refers to a piece of the green castle.
 Justin: then I'll take this.
 [Justin refers to the purple piece of the castle.]
 Justin: give me a part of the castle this or this part.
 Justin refers to the pieces of both purple and
 green castles.
 Sam: what?
 Justin: give me this part or this part?
 Sam: this part I'm using.
 Justin: no your favorite one so I can get the one that I
 want.
 Sam: this part and this part.

[Sam points to the green and purple castles pieces.]
 Justin: no you can't take both.
 Sam: then you can't have both.
 Justin: I just want one # which part do you like the best?
 Sam: then it won't be fair.
 Sam: we're sharing this # like this.
 Justin: how about we make it like this put it here so it's a longer castle.

This episode showed several turns of negotiation as two children attempted to resolve the problem of sharing toys. Justin began by taking control and stating that he is the boss, however, he also suggested possible solutions.

Although the aim of the constructive play activity was for children to construct or build with the use of specific materials, most of the conversation focused on children using the materials as make-believe props, as seen in the next episode, where the children refer to the legos as guns. The topic became non-present (specifically pretend play) and the main speech acts appearing were extended and related to information.

Justin: I have a gun # look at this my gun it's so little.
 [Justin has made a lego gun placed on the lego board].
 Kyle: oh yeah look at mine piouh!
 [Kyle makes shooting gun noises].
 Justin: oh these two are mine # these two are mine.
 Kyle: I have a lot of guns.
 Kyle: some of my stuff can turn into guns.
 Kyle: pounp pounp pounp.
 [Kyle making gun shooting noises].
 Kyle: hi Brandon I'm just practicing my shooting.

In this next sequence, the children argued about the pretend situation:

Brandon: this is a flying axe.
 [Brandon refers to the lego piece].

Brandon: now I'm in okay # pretend I floated in okay.
 Brandon: you can't you can't fly.
 Justin: yeah wing here wing here wing here and wing here.
 [Justin points to the legos on the lego plane].
 Justin: don't bust those wings!

Another example of using the legos as make-believe props is shown when Alexander and Ryan referred to the legos as being computers.

Alexander: we have six computers!
 Ryan: eight!
 Alexander: then again eight
 Ryan: then all my computers fell.

Analysis of the constructive play activity using the "Magnetic Castle" play materials (a constructive game designed by the teacher) also revealed non-present talk. The children again, in the same way as they did with the legos, used the materials as props to engage in imaginary play. In the next transcript, Lindsay and Brooke were building a castle and referring to present objects. However, Lindsay, switched the topic from present to non-present when she gave the giant puzzle piece an imaginary role.

Lindsay: we need a door we almost forgot the door!
 Brooke: that's the door.
 Brooke: we made a door.
 Lindsay: I don't have one of these
 [Lindsay refers to one of the dragon pieces of the puzzle].
 Lindsay: see there's yours # there's mine.
 Lindsay: ah dragon!
 Lindsay: I want to see your.
 [Lindsay holds the "giant" piece and pretends to be a giant].
 Lindsay: I'm going to fly and help some people!
 Lindsay: and some nice little music.

A similar pattern of pretend talk was observed when Justin and Olivier engaged in pretend play instead of

building a castle. In the following conversation, Justin was holding a dragon puzzle piece and speaking to his friend Olivier.

Justin: stop playing around or you're gonna get ran by a dragon # and get killed.

Justin: the unicorn's in the sky so the dragon or the giant comes after you and.

[Justin moves the dragon onto the clouds].

Olivier: and pretend this is my magic cloud I can go tu ru tu ru.

[Olivier places the unicorn on one of the cloud puzzle pieces].

Justin: and pretend you got hit by a dragon and you went down.

Olivier: I fell through the clouds I went # no actually actually.

Justin: no that's not a magic cloud it's just a plain cloud!

Olivier: okay okay but pretend pretend I fell through the clouds and this thing opened and ohhh!

Although in the above sequence, the topic was non-present (e.g., pretend), the most reoccurring speech acts were negotiation exemplified by Justin and Olivier who were attempting to negotiate their actions while playing with the "Magnetic Castle".

Qualitative examination of off-topic conversations.

Both teacher-directed activities and peer activities displayed some incidents of present, and non-present off-topic speech which contained important examples of decontextualized talk. The storyreading activity showed one interesting occurrence which was coded as present off-topic. This occurred, when Matt, a child from grade one, interrupted the storyreading activity to come and share his written story. He walked into the classroom and announced

that he had written a story.

Children: hi Matt!
 Teacher: this is Matt from grade one.
 Children: we know we know!
 [Matt whispers to the teacher that he has a full page story].
 Teacher: wow! did you hear that a four page story that
 Matt wrote.
 Matt: a full page story!
 Teacher: a full page story excuse me.
 Teacher: okay.
 Matt: no pictures I didn't have time to write # it
 took me all recess.
 Matt: I went to the doctor # I had seven blisters
 from my shoes and the diving board was it was
 rough on my feet # I had fun.
 Teacher: oh great! Good for you!
 Teacher: you wrote all that? and you had seven
 blisters.
 Matt: yeah.
 Teacher: poor you how were you able to walk with seven
 blisters on your feet.
 Philip: I touched a cactus once.

After Matt shared his story with the class, the teacher responded in a positive way. Then Philip intervened and related Matt's story to his own experience (e.g., stating that he touched a cactus once). Although this episode was coded as present off-topic, it actually included a narrative which is considered to be significant for the development of decontextualized language.

The presence of off-topic conversations during the constructive play activity is also worthwhile mentioning. In the following sequence, the teacher interrupted the children's play with the legos to talk to Justin about a future field trip.

Teacher: are you coming on the trip sweetie?
 [The teacher is speaking to Justin about the field trip tomorrow.]

Justin: oh I don't think so.
 Teacher: do you have money with you?
 Justin: I'm not coming.
 Teacher: you're not going.
 Justin: yeah because I already been there.
 Teacher: oh yeah when?
 Justin: um last year last two years.
 Teacher: oh.
 Olivier: is it boring Justin?
 Justin: it's very boring.

In this sequence, the teacher participated in correcting information in a child's speech. When Justin responded by saying "I'm not coming," the teacher responded by saying "You're not going". The teacher continued to probe for more information by asking him a real/closed question about the trip. The topic in this episode was non-present off-topic because it dealt with a future event and past experience.

In the following non-present off-topic episode which occurred during the constructive play activity, Alexander shifted the topic from present talk concerning the legos, to discuss the non-present (e.g., past) by asking Ryan what he had had for supper last night.

Alexander: oh goody I've got two blues!
 [Alex refers to the blue colored lego pieces].
 Alexander: hey Ryan what did you have for supper last night?
 Ryan: I don't know.
 Alexander: what did you have?
 Ryan: I don't know!
 Alexander: well do you want to know what I had?
 Ryan: okay.
 Alexander: pizza.
 Ryan: me too!
 Alexander: where did you order from?
 Ryan: what?
 Alexander: where did you order from?

Ryan: where did you order from?
Alexander: Sergeant Pepperoni.
Ryan: I know I ordered my dad #.
Alexander: one two three four five six.
[Alexander counts the number of legos].
Alexander: we have six!

When Ryan responded no to Alexander's real/closed question Alexander replied that he had had pizza for supper, further maintained the topic by asking Ryan another real/closed question (e.g, "Where did you order from?"). Ryan addressed the same question to Alexander, and Alexander responded that he had ordered from "Sergeant Pepperoni". Although the topics displayed during these episodes were off-topic (speech not relevant to the activity) speech acts observed were extended and associated with information and real questions; categories relevant to the development of decontextualized talk.

DISCUSSION

The main objective of this study was to determine which activities in the kindergarten classroom facilitate the development of decontextualized language. Overall, it was found that both teacher-directed and peer activities in which children interact with each other support decontextualized talk. However, teacher-directed activities produced richer conversations and provided more opportunities for decontextualized language than peer activities. These findings are consistent with Dickinson (1991) who reports that decontextualized talk is much more common with the teacher during group time.

Although peer activities consisted of higher frequencies of present-focused talk and more controlling speech acts than teacher-directed activities, decontextualized talk was nevertheless evident in children's interactions. This finding supports the literature (Staab, 1992; Cazden, 1988) that talk with peers is worthwhile investigating because it allows children to learn from one another by asking and answering questions, and providing information.

Activities supportive of decontextualized language.

According to Dickinson (1991) talk about the "here and now" or present talk is considered to be contextualized language, and categories such as analytical, non-present, and didactic are referred to as decontextualized language.

In addition, Dickinson (1991) reported that specific speech acts such as providing information and real questions are considered as important decontextualized categories, whereas control-oriented speech limits conversations and is referred to as contextualized language (Dickinson, 1991; Foley, 1991).

Teacher-directed activities. Comparison of teacher-directed activities revealed that topics and speech acts were significantly different across activities. Specifically, the nature of the activities influenced the type of language that emerged. The news activity displayed decontextualized categories as it was associated with a divergence of rich topics. These included non-present, analytical, and didactic talk. This finding is consistent with the literature (Michaels & Collins, 1984) that news, also known as sharing time, is supportive of decontextualized language.

The purpose of the news activity was for the children to narrate a past event to the classroom. However, news differed from the sharing time activity described in the study by Michaels and Collins. The teacher in this study extended the news activity by recording each child's oral language on a chart; thus attempting to make a connection between spoken and written language. This explains the observation of didactic talk (e.g., the teacher emphasizing words and letters on the chart). Analytical talk was also observed during news, and was evident as the teacher

included a calendar activity and discussed the month and day of the week.

A high percentage of extended speech acts were observed during the news activity. Specifically, the most frequently observed speech acts were real question/responses and information comments. The teacher's use of real question/responses helped expand or extend the children's contribution and encouraged children to participate as equal conversational partners. The IRE sequence (e.g., teacher initiates, child responds, teacher evaluates) which has been found to be control-oriented by a number of researchers, was avoided in this activity. One possible reason for this is the teacher's explanation during the interview that the objective of the news activity was for children to be able to provide their opinions and share their stories with their peers. The teacher also emphasized that by listening to their peers children learn language.

Dr. Wizard displayed the greatest frequency of analytical topics across all teacher-directed activities. This activity encouraged cause and effect statements and questions, helped build world knowledge, and vocabulary. The materials presented (e.g., science experiments) also contributed to analytical talk. Of these topics, the most frequent category observed was present talk associated with actions. Conversations centred on the materials that were presented by the children and focused primarily on their

actions. For example, the teacher often assisted the children in describing to their peers about how to conduct their science experiments.

Control-oriented speech acts such as direct control and test question/responses were also observed during Dr. Wizard. In this activity, the teacher felt a need to control what the children learned and how they would learn it. For example, the teacher asked several test questions about the children's science experiments. A possible explanation for this control-oriented discourse could be due to the teacher's use of test questions as a strategy to stimulate critical thinking and problem-solving. This is supported by the interview, as the teacher reported that the objective of Dr. Wizard was to give children the opportunity to think and participate in problem-solving.

Extended discourse was also observed during the Dr. Wizard activity. Within the extended category information speech acts were frequently observed. Children presented useful information to their teacher and peers regarding how to perform their experiments. The teacher also assisted the children in providing information about liquids, powders, and concepts such as gravity.

Storyreading promoted a high percentage of didactic book talk. In relation to all other activities, this activity had the least present talk. Conversations focused primarily on the stories that were read, and the teacher

strove to discuss characters, meaning of words, prediction of outcomes. The activity provided children with information and enriched their vocabularies. These results are consistent with other studies which emphasize the importance of bookreading discourse (Watson & Shapiro, 1988; Wells, 1985) for the development of decontextualized talk.

Although half of the speech acts in the storytelling episodes consisted of reading text, both control-oriented and extended discourse occurred with almost equal frequencies. A possible reason for the control-oriented speech could be the teacher's view of the importance of comprehension during storyreading. This is supported by the interview as the teacher reported that children learn language by listening to stories and that listening tests comprehension.

One possible explanation for the observation of considerable decontextualized talk during storyreading is that the children were exposed to high literacy behaviors at home. Specifically, the findings from the parent questionnaire showed that most of the children initiated behaviors (e.g., made predictions, asked questions about the story) during storyreading episodes at home. In addition, children were read to on a frequent basis. Therefore, children were able to take advantage of classroom activities to further develop these behaviors.

The questions observed in teacher-directed activities

were significantly different. In the news activity, the teacher asked more open questions than in either of the other activities. One reason for the occurrence of open questions is that the teacher always introduced the news activity by asking the children what they did over the weekend. In her interview, the teacher had emphasized the importance of adults asking open questions. Since the objective of the news activity was to describe or narrate a past event, open questions proved to be most appropriate for eliciting such language.

In general, teacher-directed activities (e.g., News, Dr. Wizard and Storyreading) produced significantly different language. The results also show that these activities supported decontextualized topics and speech acts.

Peer activities. Comparison of peer activities confirmed that topics and speech acts were significantly different according to activities. In the computer activity, the children engaged in topics associated with decontextualized language. Specifically, analytical and didactic topics frequently appeared during this activity. The children demonstrated the same kinds of language found by Cummins (1985), that is, during computer activities, children participate in discourse that requires them to explain, hypothesize, recognize problems and solutions. Other research by King (1989) also reported that students use

language to explain and hypothesize in order to solve problems on the computer.

One reason for the preponderance of analytical talk could be the computer program "The Picture Chomper Game". The objective of this game was for children to chomp the appropriate objects on the screen. In order to figure out what objects to chomp, children had to be able to read. Since most children lacked the ability to read the screen, they hypothesized about which objects to chomp. This led to the production of analytical language. Didactic talk also appeared during the computer activity and was related to another type of game which emphasized the teaching of letters and sounds.

The dramatic play activity revealed a high incidence of non-present talk which was associated with pretend actions, (e.g., negotiating roles and assigning new characteristics to objects). The most frequent speech act was related to information. This finding supports previous literature (Pellegrini, 1982, 1984, 1985) which suggests that during symbolic play, children use explicit oral language to transform their roles, actions and objects which are characteristic of decontextualized language.

The constructive play activity also showed a high occurrence of non-present talk related to pretend actions. As noted earlier, children did not participate in construction in this activity, instead, they engaged in

pretend play. One possible explanation for this is that the constructive play activity occurred during free play, in which the children played in the manner they wished. The teacher did not intervene to suggest that the children should be constructing with the materials.

In general, peer activities promoted decontextualized topics and speech acts. These findings suggest that the significance of talk among peers needs to be reconsidered and that children should be provided with opportunities to practice decontextualized talk (e.g., give directions, ask questions, and solve problems) with their peers.

A possible reason for the incidence of decontextualized talk during peer activities is the children's socioeconomic status and home environment. The children came from middle class homes and it was reported by parents that children participated in a variety of literacy behaviors. Specifically, parents reported reading frequently to their children and participated in initiating discussion of stories. Previous research (Heath, 1982, 1983; Snow, 1983; Teale, 1984; Wells, 1981, 1985, 1986) suggests that storyreading episodes allow children to become familiar with written language, mechanics of reading and speaking decontextualized language.

The teacher's relationship with the children is an important factor which could have affected the results. She did not feel it necessary to control all the interactions

that occurred. During the teacher-directed activities, children's input and contributions were accepted and expanded. The interpersonal relationship that existed between the teacher and the children was one of mutuality, caring, sharing and respect. The teacher viewed the children as active learners and provided children with many opportunities to interact with one another. This is supported in her interview as she emphasized that the most important objective of the kindergarten classroom was that the children positively interact with their peers and that learning should be fun. This attitude towards children helps build a foundation for extended discourse. Specifically, behaviors and experiences such as providing children with a variety of free play activities, encouraging peer tutoring, small group activities, using a variety of teaching methods (e.g. whole language) help promote a rich language environment.

In addition, the physical organization of the classroom could have influenced the type of interactions that emerged. For example, the classroom was very large, and had a wall-to-wall carpet which contributed a comfortable atmosphere. Children's seating arrangements were positioned in learning centres to promote groupwork and encourage interaction. Placement of cupboards and materials were also accessible to the children. Materials and activities were created by the teacher to add or to change the centres daily. The classroom

was also decorated with children's products (e.g, storybooks, science experiments, news charts and artistic drawings) and provided an atmosphere that encouraged literacy and learning.

Overlapping of categories

Most of the research findings discussed in the literature were based on eliciting decontextualized language by the use of specific tasks. According to the present study, decontextualized language can be elicited by using a picture description task, and the following features of language can be expected: adjectives, locatives, and clarificatory markers. In the picture description task for this study, results showed a significant difference between the results under the decontextualized and contextualized conditions. Specifically, the children used more adjectives and clarificatory markers in the decontextualized condition, and contextualized descriptions relied more on the use of pronouns. These results support earlier studies (Davidson et al., 1986; Dickinson & Snow, 1987; Ricard & Snow, in press) and provide evidence that elicited language can be classified as contextualized and decontextualized. Past research (Dickinson, 1991; Tizard & Hughes, 1984) has reported rare occurrences of spontaneously produced narratives in the classroom and in the home. Both Dickinson (1991) and Tizard and Hughes did not find narrative speech in their studies (e.g., in the classroom or in the home).

An attempt was made to analyze the naturalistic language data employing the same categories used to analyze the speech obtained from the picture description task. However, it soon became evident that it was not possible to classify speech which was collected at the different activity centres in this way. A possible explanation is that the picture description task was an elicited task, and the result was a child's monologue; while the classroom data were more complex, consisting of transcriptions of spontaneous conversations of groups of children (dyads, triads) and teacher-child dialogues in various situations. In addition, the classroom conversations ranged over different topics, turns, and involved responses to the comments of others. The researcher, therefore, employed categories developed by Dickinson (1991) to classify contextualized and decontextualized language.

In order for decontextualized language to occur, it was expected that both decontextualized topics (e.g., analytical, non-present, didactic) and speech acts (e.g., extended talk related to information, real questions) would be observed concurrently during activities. The most significant finding to emerge from this investigation was the overlapping of topic and speech act categories. This was evident in both teacher-directed and peer activities. For example, across all activities, the computer activity displayed the most present talk, (also known as

contextualized speech) with frequencies of extended (e.g., information) speech acts, considered to be decontextualized speech. A possible reason for the present talk was that children discussed their present actions (e.g., tactics and moves) and referred to visible objects on the computer screen. However, children were also providing their peers with valuable information such as how to play the game.

The same phenomenon was also observed in the Dr. Wizard activity (also known as show-and-tell), which consisted of teacher-directed conversations. Data from this activity also revealed that there was a high percentage of present talk, when the children and teacher were describing concrete objects associated with their experiments. Some of the speech acts, during Dr. Wizard, however, were informative and classified as decontextualized speech. The teacher and children provided meaningful information about the experiments presented.

In both the computer and Dr. Wizard activities, the present topic category (usually considered as contextualized and not relevant to the development of literacy), was found in combination with speech acts which were extended (e.g., information) and represented relevant decontextualized categories.

The reverse was also observed during the classroom activities with decontextualized topics appearing in conversations, and control-oriented speech acts occurring

which, according to the literature (Dickinson, 1991; Foley 1991), limit conversation. The main topic category in the dramatic play activity centred around the non-present (a decontextualized topic) with talk about pretend actions and objects. When analysing the speech acts for non-present topics, there was evidence of control-oriented talk associated with direct control or negotiation of control throughout the activity (these are usually associated with contextualized talk).

It should also be noted that the off-topic category occurred in both present and non-present topics during all activities and that information speech acts were also observed. This finding suggests that even off-topic speech in the classroom can contribute to children's development of decontextualized language.

There are a number of possible explanations for the observation of overlapping categories. One explanation is that oral language ability lies on a continuum with the endpoints contextualized and decontextualized (Davidson et al., 1986). This continuum model is supported by Cummings (1980) and Davidson et al. (1986) and suggests that an interaction of contextualized and decontextualized language occurs. For example, teachers try to teach skills to the learner that are not already known (e.g., decontextualized language). However, they know it is best to use context (e.g., relate information to the child's experience) in

order to teach new skills.

Another possible reason for the overlapping of categories is the lack of consensus on the definition of decontextualized language. Researchers and theorists have applied their own personal definition of decontextualized language. For example, Snow (1983) emphasizes that it consists of providing definitions, telling stories, giving descriptions and explanations. Pellegrini (1985) refers to decontextualized language as the use of cohesive ties in speech (e.g., so, because, then). Dickinson (1991) considers topics (e.g., non-present, analytical and didactic) and speech acts (e.g., information and real questions) as decontextualized language.

The results of this study indicate that the analysis of speech acts provides a more accurate description of language than does an analysis of topics. For example, the off-topic and present categories provided speech acts related to decontextualized language (e.g., information). Language conveys meaning by using speech acts situated in a particular topic. Speech acts and topics interact in a way that cannot be characterized as contextualized and decontextualized language. Therefore, the dichotomy between decontextualized and contextualized language appears to be a false one.

The classroom activities in this study were described by means of naturalistic data and their complexity may

explain the appearance of overlapping categories. For example, the naturalistic language was more complex as it involved conversations ranging over different topics, and turns. Conducting research under natural conditions in which no manipulation or intervention is imposed by the researcher reflects the true state of how children generate language.

Finally, it should be noted that it was the methodology used in analyzing the data that permitted the researcher to observe the overlapping of categories. Transcription of the tapes and meticulous coding of the language allowed the researcher to discover that the language observed did not always fit the expected categories. The coding facilitated the accurate analysis of the data through using CHILDES (e.g., coding the data directly onto Wordperfect).

Limitations of the study

The findings of the present study cannot be generalized to the population at large for a number of reasons. Although 36 children were involved in this study, not all children were observed in all of the classroom activities. In addition, they came from middle class homes, and therefore the sample is not representative of all kindergarten-aged children.

Although efforts were made to capture most of the nonverbal behaviors, it was not possible for the researcher to record all paralinguistic behavior with the use of notetaking. For example, it was difficult to record all the

nonverbal behaviors of groups (dyads, triads) of children. This is important especially when looking for gestures, pointing, and facial expressions. Context might have been captured better with the use of a videotape recorder.

Although it cannot be always assumed that the teacher's and children's performance were not affected by the presence of the researcher and the tape-recorder, the evidence indicated that the researcher was not intrusive, and after being in the classroom for thirty consecutive days the researcher was accepted as a part of the classroom.

Directions for future research

The present study focused on observing activities in the kindergarten classroom that might facilitate the development of decontextualized language. One significant finding of this investigation was the overlapping of categories displayed in the naturalistic data collected. Specifically, the categories developed by Dickinson (1991) and used to analyze the classroom activities did not always fit the accepted model of decontextualized and contextualized language. Future research should take this into account. Speech acts could be analyzed more carefully to determine the use of cohesive ties and other strategies in different situations to convey meaning. A video camera would be necessary to capture other channels of communication (e.g., gestures, intonation, pointing, and facial expression). Examining language in a natural setting

and relating it to context, imagination or emotions reveals its complexity and the reasons it does not fit a Procrustean model.

Finally, individual differences also need to be considered in the investigation of language in order to understand why some children are better than others at producing rich language.

Implications for educators

The present study provides some valuable information for teachers of young children. The finding that there was more decontextualized talk observed during teacher-directed activities than peer activities suggests that teacher/child discourse is a crucial factor in the development of decontextualized language. Bruner (1971) supports this view by stating that "one of the most crucial ways in which a culture provides aid to intellectual growth is through a dialogue between the more experienced and the less experienced" (p. 107). However, teachers should not limit a child's role to being a passive receiver in the classroom. To promote optional language development, children must be given the opportunity to initiate topics and ask questions.

Teachers need also to become aware of ways of fostering rich language in the classroom. This may include changing the way they organize the talk in the classroom. They may consider extending children's language by asking real questions and not primarily test questions (known-answer

questions). They could also limit their use of control-oriented talk and focus on expanding and extending children's language and thinking. Teachers should consider providing a low risk environment in which children can easily participate in conversations or discussions. School success for children and teachers often depends on listening and talking together.

Conclusions

The results of the present study showed that both teacher-directed and peer activities support decontextualized language defined according to Dickinson (1991). Specifically, teacher-directed activities produced richer conversations than peer activities. For educators, this provides useful information about the importance of teacher/child discourse.

This study also revealed that elicited language (e.g., picture description task) can be classified as contextualized and decontextualized, while language in naturalistic settings (e.g., classroom activities) cannot. The most significant linguistic findings to emerge from this investigation, therefore, are the overlapping of contextualized and decontextualized categories in the naturalistic language data, the interaction of speech acts and topics in a way that cannot be dichotomized, and the importance of analyzing speech acts to determine the use of cohesive ties in different contexts. These findings

represent a significant contribution to the existing literature and provide valuable insights for researchers interested in observing language in natural settings. Future research can build on these findings to further develop this field.

References

- Anderson, A. B., Teale, W. H., & Estrada, E. (1980). Low income children's preschool literacy experiences: Some naturalistic observation. The Quarterly Newsletter of the Laboratory of Comparative Human cognition, 2, 59-65.
- Barnes, D. (1976). From Communication to Curriculum. Harmondsworth, Middlesex: Penguin.
- Beals, D. E. (1992, April). Explanation as co-constructed discourse: A study of conversations in low-income families of preschoolers. Paper presented at the annual meeting of the American Education Research Association, San Francisco, CA.
- Bereiter, C. & Scardamalia, M. (1982). Form conversation to composition: the role of instruction in a developmental process. In R. Glaser (ed.) Advances in instructional psychology. Volume 2. Hillsdale, NJ: Erlbaum.
- Bernstein (1971). Class, Codes and Control, vol I. London: Routledge & Kegan Paul.
- Bloom, L. (1970). Language development: Form and function in emerging grammars. Cambridge, MA.: MIT Press.
- Bruner, J. S. (1971). The relevance of education. New York: Norton.
- Bruner, J. S. (1975). Language as an instrument of thought. London: Heinemann.

- Burns, J. M. & Ratliff, J. (1985). A study of the relationship between levels of intelligence and early reading within high literacy homes. In J. A. Niles & R. V. Lalik (eds.) Issues in literacy: A research perspective (pp. 295-299). Rochester, NY: National Reading Conference.
- Cayer, R. L. & R. K. Sacks (1979). Oral and written discourse of basic writers: Similarities and differences. Research in the Teaching of English, 13, 121-128.
- Corson, D. (1984). The case for oral language in schooling. The Elementary School Journal, 84, 458-467.
- Cummings, R. (1985). Small group discussions and the microcomputer. Journal of Computer Assisted Learning, 1, 149-158.
- Cummins, J. (1980a). The entry and exit fallacy in bilingual education. NABE Journal, 4, 25-61.
- Cummins, J. (1980b). Psychological assessment of immigrant children: Logic or intuition? Journal of Multilingual and Multicultural Development, 2, 97-111.
- Davidson, R. G., Kline, S. B. & Snow, C. (1986). Definitions and definite noun phrases: Indicators of children's decontextualized language skills. Journal of Research in Childhood Education, 1, 37-48.
- Dickinson, D. K. (in press). Contexts that support discourse development in preschool. In A. McCabe & C.

- Peterson (Eds.), New directions in discourse development. Hillsdale, NJ: Erlbaum.
- Dickinson, D. K. (1987). Oral language, literacy skills and response to literature. In J. Squire (Ed.), The dynamics of language learning (pp. 147-183). Urbana, IL: ERIC.
- Dickinson, D. K. (1985). Collaborative writing at the computer. Paper presented at the annual meeting of the American Educational Research Association.
- Dickinson, D. K. & Keebler, R. (1989). Variation in preschool teachers' book reading styles. Discourse Processes, 12, 353-375.
- Dickinson, D. K. & Snow, C. E. (1987). Interrelationships among prereading and oral language skills in kindergarteners from two social classes. Research on Childhood Education Quarterly, 2, 1-25.
- Donaldson, M. (1978). Children's minds. Glasgow: Collins.
- Dyshon, A. H. & Genishi, C. (1983). Research currents: Children's language for learning. Language Arts, 60, 751-757.
- Flashner, (1987). An exploration of linguistic dichotomies and genres in the classroom language of native and nonnative English speaking children. Unpublished doctoral dissertation, University of California).
- Foley, S. K. (1991). Decontextualized language development in home and school interactions. Journal of the CAAL,

13, 69-83.

Genesee, F. (1976). The role of intelligence in second language learning. Language Learning, 26, 267-280.

Genesee, F. (1986). The baby and the bathwater or what immersion has to say about bilingual education: Teaching and learning in bilingual education-significant instructional features. NABE Journal, 6, 227-255.

Gray, R. A., Saski, J., McEntire, M. & Larsen, S. (1980). Is proficiency in oral language a predictor of academic success? Elementary School Journal, 80, 260-268.

Gumperz, J. J., Kaltman, H., & O'Connor (1984). Cohesion in spoken and written discourse: Ethnic style and the transition to literacy. In D. Tannen (Eds.), Coherence in spoken and written discourse. (pp 3-19). Norwood, NJ: Ablex.

Heath, S. B. (1982). What no bedtime story means: Narrative skills at home and school. Language in Society, 11, 49-76.

Heath, S. B. (1983). Ways with words: language, life and work in communities and classrooms. London: Cambridge University.

Hollingshead, A. (1975). Four Factor Index of Social Status. Connecticut: Yale University, Department of Sociology.

MacWhinney, B. (1991). The CHILDES project: Tools for

- analyzing talk. NJ: Erlbaum.
- Meier, T. R. & Cazden C. B. (1982). A focus on oral language and writing from a multicultural perspective. Language Arts, 59, 504-512.
- Michaels, S. (1981). "Sharing time": Children's narrative styles and differential access to literacy. Language Society, 10, 423-442.
- Michaels, S., & Cook-Gumperz, J. A. (1979). A study of sharing time with first grade students: Discourse narratives in the classroom. Proceedings of the Fifth Annual Meeting of the Berkeley Linguistics Society, 51-80.
- Michaels, S. & Collins, J. (1984). Oral discourse style: Classroom interaction and the acquisition of literacy. In D. Tannen (Eds.), Coherence in spoken and written discourse. (pp 219-44). Norwood, NJ: Ablex.
- Ninio, A. (1980). Picture-book reading in mother-infant dyads belonging to two subgroups in Israel. Child Development, 51, 587-590.
- Ninio, A. (1983). Joint book reading as a multiple vocabulary acquisition device. Developmental Psychology, 19, 445-451.
- Ninio, A., & Bruner, J. (1978). The achievement and antecedents of labelling. Journal of Child Language, 5, 1-15.
- Norris, J. A. & Bruning, R. H. (1988). Cohesion in the

- narratives of good and poor readers. Journal of Speech and Hearing Disorders, 53, 416-424.
- Oller, J. W. (1979). Language tests at school: A pragmatic approach. New York: Longman.
- Olson, D. R. (1977). From utterance to text: The bias of language in speech and writing. Harvard Educational Review, 47, 257-281.
- Pellegrini, A. (1982). The construction of cohesive text by preschoolers in two play contexts. Discourse Processes, 5, 101-108.
- Pellegrini, A. (1984). The effects of dramatic play on children's generation of cohesive text. Discourse Processes, 7, 57-67.
- Pellegrini, A. (1985). The relations between symbolic play and literate behavior: A review and critique of the empirical literature. Review of Educational Research, 55, 107-121.
- Ricard, R. J. & Snow, C. E. (in press). Language skills in and out of context: Evidence from children's picture descriptions. Journal of Applied Developmental Psychology.
- Shapiro, J. & Doiron R. (1987). Literacy Environments: Bridging the gap between home and school. Childhood Education, 5, 262-269.
- Shin, E. J. (1989). Young children's use of decontextualized language as a function of parents'

- mediation of storybook reading. Doctoral dissertation, University of Michigan.
- Smilansky, S. (1968). The effects of sociodramatic play on disadvantaged preschool children. New York: Wiley.
- Snow, C. (1983). Literacy and language: Relationships during the preschool years. Harvard Educational Review, 53, 165-189.
- Snow, C. (1984). Beyond conversation: Second language learners' acquisition of description and explanation. In J. P. Lantolf & A. Labanca (Eds.). Research in Second Language Learning: Focus on the Classroom. Norwood, NJ.: Ablex.
- Snow, C., Cancino, H., Gonzalez, P. & Shriberg, E. (1987). Second Language Learners' Formal Definitions: An Oral Language Correlate of School Literacy. (ERIC Document Reproduction Service No. ED 287 307).
- Snow, C., Cancino, H., Gonzalez, P. & Shriberg, E. (1989). Giving formal definitions: An oral language correlate of school literacy. In D. Bloome (ed.), Classrooms and literacy. Norwood, NJ: Ablex.
- Snow, C., & Dickinson, D. K. (1990). Social sources of narrative skills at home and at school. First Language, 10, 87-103.
- Snow, C., & Dickinson, D. K. (in press). Skills that aren't basic in a new conception of literacy. In L. Fielding & T. Jennings (eds.), New Conceptions of Literacy.

Albany: SUNY Albany press.

- Snow, C. E., & Ninio, A. (1986). The contracts of literacy: What children learn from learning to read books. In W. H. Teale, & E. Sulzby (Eds.), Emergent literacy: Writing and reading, (pp. 116-138). Norwood, NJ: Ablex.
- Snow, C., Tabors, P. O., Beals, D. E., DeTemple, J. M., Dickinson, D. K. & Smith, M. (1991, April). The Social Prerequisites of Literacy Development: Home and School Experiences of Preschool-Aged Children. Paper presented at the Annual Meeting of the American Research Association, Chicago, IL.
- Teale, W. H. (1984). Reading to young children: It's significance for literacy development. In H. Goelman, A. Oberg., & F. Smith (Eds.), Awakening to literacy (pp. 110-121). Portsmouth, NH: Heinemann.
- Tizard, B. & Hughes, M. (1984). Young children learning. Cambridge: Harvard University Press.
- Tough, J. (1983). Children's use of language and learning to read. In R. P. Parker & F. A. Davis (Eds.), Developing literacy: Young children's use of language, (pp.55-67). Newark: International Reading Association.
- Torrance, N & Olson, D. (1985). Oral and literate competencies in the early school years. In Olson, D., Torrance, N. & Hildyard, A. (Eds.), Literacy, language and learning, (pp.256-285). New York: Cambridge

University Press.

Watson, R. (1985). Towards a theory of definition. Journal of Child Language, 12, 181-198.

Watson, R. & Shapiro, J. (1988). Discourse from home to school. Applied Psychology: An International Review, 37, 395-409.

Wells, G. (1979). Variation in child language. In P. Fletcher & M. Garman, (eds). Language Acquisition (pp. 377-396). New York: Cambridge University Press.

Wells, G. (1981). Learning through interaction: The study of language development. New Rochelle: Cambridge University Press.

Wells, G. (1981). Some antecedants of early education attainment. British Journal of Sociology of Education, 2, 181-200.

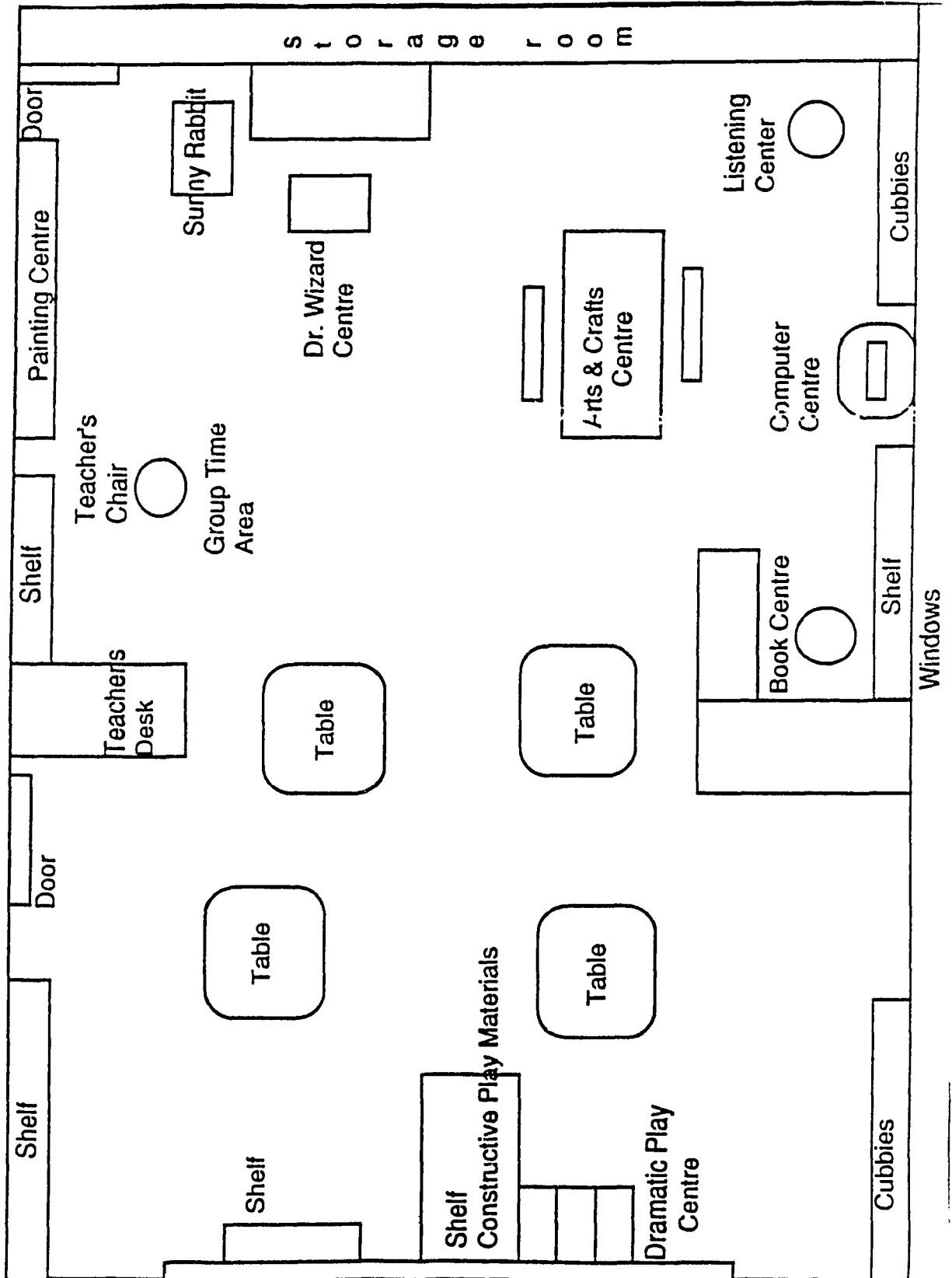
Wells, G. (1985). Preschool literacy-related activities and success in school. In D. R. Olson, N. Torrance & A. Hildyard (ed.). Literacy, language and learning (pp.229-255). New York: Cambridge University Press.

Wells, G. (1986). The meaning makers: Children learning language and using language to learn. Portsmouth, NH: Heinemann.

Wolf, M., & Dickinson (1984). From oral to written language: Transitions in the school years. In J. Berko-Gleason (Ed.), Language development. Columbus, Ohio: Charles E. Merrill.

Appendix A
Diagram of Classroom Setting

Classroom Layout



Appendix B
Timetable of the Classroom Routines

Timetable of Kindergarten Classroom

AM KINDERGARTEN CLASS							
Per	Min	Time	Mon	Tues	Wed	Thurs	Fri
1	30	8:45	Circle		Circle	Circle	Circle
2	30	9:15	Journal	Free play	Journal		Journal
3	30	9:45	Free play			Free play	Free play
15		10:15-10:30	Recess				
4	30	10:30		Math			
5		11:00	Lang Arts			Art	
		11:36-1:15	Lunch				
PM KINDERGARTEN CLASS							
6	30	1:15					
7	30	1:45	Circle	Circle		Circle	
8	30	2:15	Free play	Math		Art	
9 11	36	2:45	Lang Arts			Free play	

Note: Shaded time slots represent gym and music classes.

Appendix C
Consent Form for Principal and Teacher

May 1991

Consent Form to Participate in Research

This is to state that I agree to participate in a program of research conducted by Concordia University on behalf of Kiki Kastelorizios.

-I understand that the purpose of the research is to observe children's oral language in various activities.

-I understand that Kiki Kastelorizios will be observing the children by audiotaping their conversations in different contexts

-I understand that I am free to withdraw my consent and to discontinue my participation at any time without giving notice and without negative consequences.

-I understand that the identity of the classroom and the school will be kept confidential and anonymous.

-I understand that the data from this study may be published, however only group findings will be reported.

-I understand that I am participating in this research to advance knowledge about language development and that the study has no further motive with which I have not been acquainted.

I UNDERSTAND THIS AGREEMENT, AND THEREFORE I FREELY CONSENT AND AGREE TO PARTICIPATE IN THE STUDY.

NAME (PLEASE PRINT) _____

SIGNATURE _____

WITNESS _____

SIGNATURE _____

DATE _____

Appendix D
Parental Consent Form

May 1991

Dear Parents,

This letter is to verify that I am a graduate student at Concordia University and working on my Master's Thesis in Child Study under the supervision of Dr. Florence Stevens. I am interested in studying children's oral language skills in different types of activities in the kindergarten classroom.

Over a period of six weeks I will be in your child's classroom, four times each week to observe how the children interact during group time and freeplay. I hope to determine what type of language skills are being acquired in the kindergarten classroom and which activities provide a rich context for language. My research study is based on the premise that specific oral language skills are related to academic success in school. The children will be observed by audiotaping their conversations in different activities. The children will also be given a picture-description task in which they will be asked to describe a particular picture. It is important that the children be observed in their natural setting and that the teacher and children continue with their ongoing activities and routines. The identity of the kindergarten class and the children will be kept confidential.

Your permission is required to include your child in this study. If you have any concerns or questions, please feel free to contact me at _____ or at _____. Please return the permission slip to your child's teacher as soon as possible. I thank you for your cooperation.

Sincerely

Kiki Kastelorzios

_____ I hereby give permission for my child to be included in the research study conducted by Ms. Kastelorzios.

_____ I do not give permission for my child to be included in the research study conducted by Ms. Kastelorzios.

Parent's Signature _____

Date _____

Child's Name _____

Appendix E
Parent Questionnaire

Parent Questionnaire

In order to complete my study, I need to gather information about the home environment. The questions I will ask you have been developed to collect information about various types of experiences that may or may not be important to the development of language and literacy among young children. In that it is an exploratory study, there are no right or wrong answers on the questionnaire. For that reason, it is very important that you answer each question as it relates specifically to you and your child. It would help me very much if you could answer as accurately as you can. Please feel free to add any comments concerning the questions.

NOTE: All the information you give me will be treated very confidentially.

1) Name of child _____
(indicate first name)

2) Age _____ years _____ months

3) Mother's occupation _____, number of years in school _____

Father's occupation _____, number of years in school _____

4) The first language of your child is _____

5) On the average how many times a week does someone in your family read to your child? Number of times _____

6) To what extent have you or members in your family helped your child learn to:

	Nev	Som	Oft
a) Recite letters of the alphabet	1	2	3
b) Identify the names of capital letters	1	2	3
c) Identify the names of lower case letters	1	2	3
d) Identify sound of letters	1	2	3
e) Read simple words in story books	1	2	3
f) Read sentences in story books	1	2	3

7) To what extent have you or members of your family:

	Nev	Som	Oft
a) Corrected your child when	1	2	3

he/she misspelled a word			
b) Volunteered to spell words for your child	1	2	3
c) Encouraged your child to identify sound within words	1	2	3
d) Shown your child how to write his/her first name	1	2	3
e) Shown your child how to write his/her last name	1	2	3

8) On a weekly basis how often do you read each of the following materials:

	Nev	Som	Oft
a) Magazines	1	2	3
b) Newspapers	1	2	3
c) Novels	1	2	3
d) Cookbooks	1	2	3
e) Textbooks	1	2	3
f) Professional Journals	1	2	3
g) Bible	1	2	3

9) While in the car driving around the city, to what extent has your child read words that appeared on:

	Nev	Som	Oft
a) Traffic signs	1	2	3
b) Store signs	1	2	3
c) Billboards	1	2	3
d) Restaurant signs	1	2	3
e) Tractor trailer trucks	1	2	3

10) While reading a story, to what extent has your child:

	Nev	Som	Oft
a) Tried to guess what would happen next in the story	1	2	3
b) Tried to guess how the story would end	1	2	3
c) Asked questions about the story	1	2	3
d) Asked questions about specific words	1	2	3
e) Asked to have the same story read over	1	2	3
f) Looked at pictures on each page and accurately recited most of the story	1	2	3
g) Looked at words on each page and accurately read most of the story	1	2	3
h) Pointed to a picture in a book and described objects in the picture	1	2	3

11) In your home, to what extent has your child:

	Nev	Som	Oft
a) Drawn and colored pictures	1	2	3
b) Drawn and painted pictures	1	2	3

c) Colored in coloring books	1	2	3
d) Drawn pictures on a chalkboard	1	2	3
e) Pretended to write	1	2	3
f) Asked you to spell words	1	2	3
g) Asked you to look at words he/she has written	1	2	3
h) Asked you to read words he/she has written	1	2	3
l) Asked you to correct spelling that he/she has written	1	2	3
m) Wrote letters of the alphabet without your encouragement	1	2	3
n) Scribbled shopping lists as you prepare your own	1	2	3
o) Scribbled or written letters as you wrote letters to friends	1	2	3

THANK YOU VERY MUCH FOR YOUR COOPERATION.

Appendix F

Hollingshead Four Factor Index of Social Status

A Sample from Hollingshead (1975)

OCCUPATIONAL SCALE

Score 9 Higher Executives, Proprietors of Large Businesses, and Major Professionals

- a. Higher executives: chairpersons, presidents, vice-presidents, assistant vice-presidents, secretaries, treasurers;
- b. Commissioned officers in the military: majors, lieutenant commanders, and above, or equivalent;
- c. Government officials, federal, state, and local: members of the United States Congress, members of the state legislature, governors, state officials, mayors, city managers;
- d. Proprietors of businesses valued at \$250,000 and more;
14
- e. Owners of farms valued at \$250,000 and more;
- f. Major Professionals (census code list).

<u>Occupational Title</u>	<u>Census Code</u>
Actuaries	034
Aeronautical engineers	006
Architects	002
Astronautical engineers	006
Astronomers	053
Atmospheric scientists	043
Bank officers	202
Biologic scientists	044
Chemical engineers	010
Chemists	045
Civil engineers	010
Dentists	062
Economists	091
Electrical/electronic engineers	012
Engineers, not elsewhere classified 15	023
Financial managers	202
Geologists	051
Health administrators	212
Judges	030
Lawyers	031
Life scientists, n.e.c.	054
Marine scientists	052
Materials engineers	015

Hollingshead Four Factor Index of Social Status (1975)

SES Computation

EDUC (Education - years completed)

- 1 = less than 7th grade
- 2 = junior high (grade 7,8/Secondary 1, 2)
- 3 = partial high school (grade 9,10 Secondary 3,4)
- 4 = high school graduate (grade 11,12/ Secondary 5)
- 5 = partial college (minimal 1 year/college finished/specialized training)
- 6 = standard university graduation (B.A.)
- 7 = graduate professional training (graduate degree)

FOCCUP: Father's occupation

MOCCUP: Mother's occupation

FEDUC : Father's education

MEDUC : Mother's education

IF single income family:

$$\text{SES} = (\text{OCCUP} \times 5) + (\text{EDUC} \times 3)$$

If double income family:

$$\text{SES} = [(\text{FOCCUP} \times 5) + (\text{FEDUC} \times 3) + (\text{MOCCUP} \times 5) + (\text{MEDUC} \times 3)] / 2$$

SCORING MANUAL FOR SOCIO-ECONOMIC STATUS (SES)

Using the HOLLINGSHEAD Four Factor Index

1-Using each parent's occupation, find the occupation scores (1-9) from the table (pg 7-18) and multiply them by 5.

2-Find the education scores of each parent depending on the level of school completed (page 6) and multiply them by 3.

3a-For single income families: add these two products to get the SES score

3b-For double income families: score for both parents individually then add and divide by 2.

Example: Father is a dentist with a graduate degree and mother is a photographer with specialized training.

Father: Occupation score = 9

Education score = 7

Mother: Occupation score = 6

Education score = 5

SES score = $\frac{(9 \times 5) + (7 \times 3) + (6 \times 5) + (5 \times 3)}{2} = 55.5$

Appendix G
Teacher Interview Questions

Teacher Interview Questions

- 1) What is the most important objective for children to acquire in kindergarten?

- 2) What teaching methods do you most commonly use?

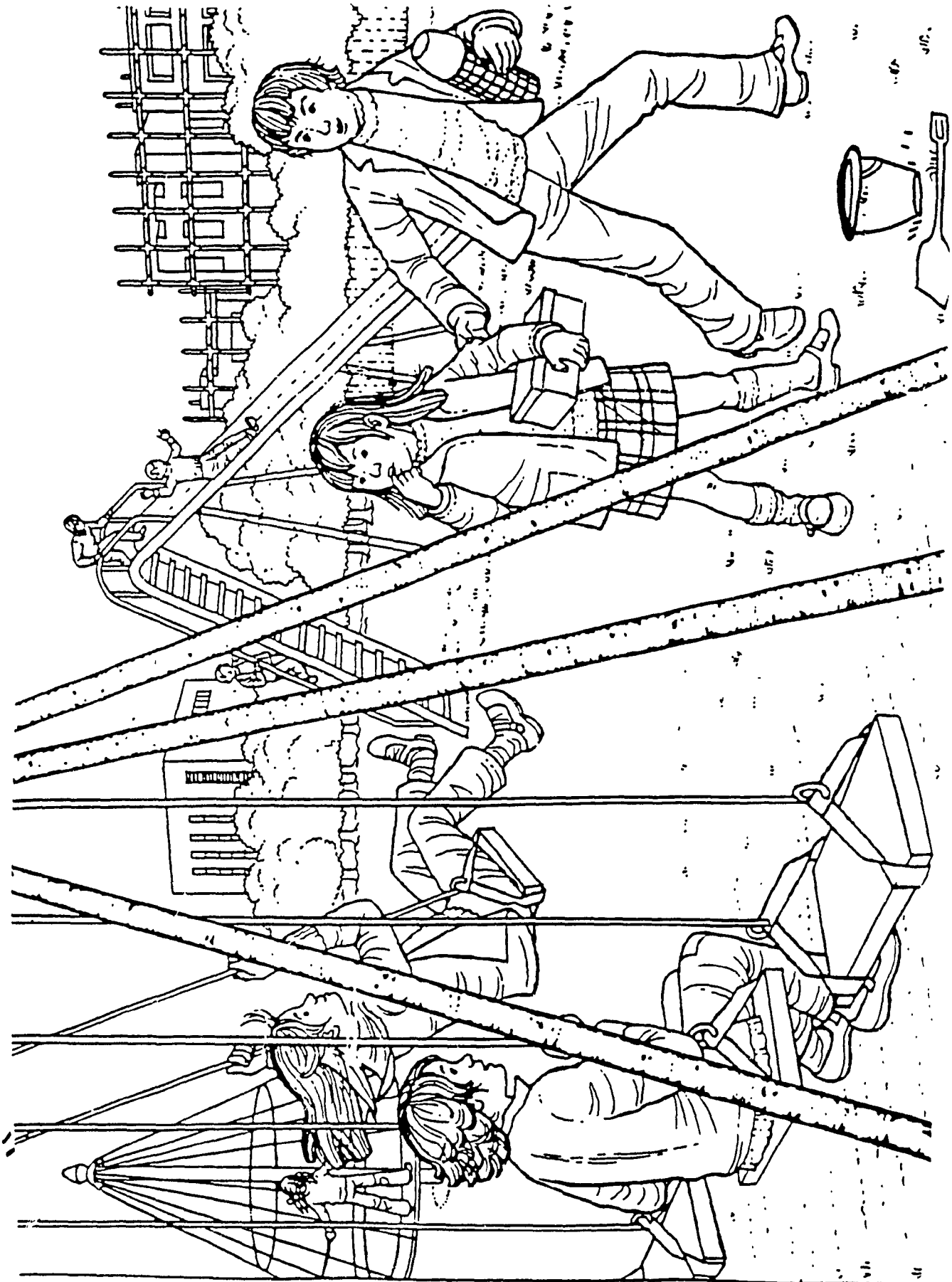
- 3) How do you think children learn language from adults?

- 4) How do you think children learn language from their peers?

- 5) Which language experiences do you value? How do they help prepare children for literacy?

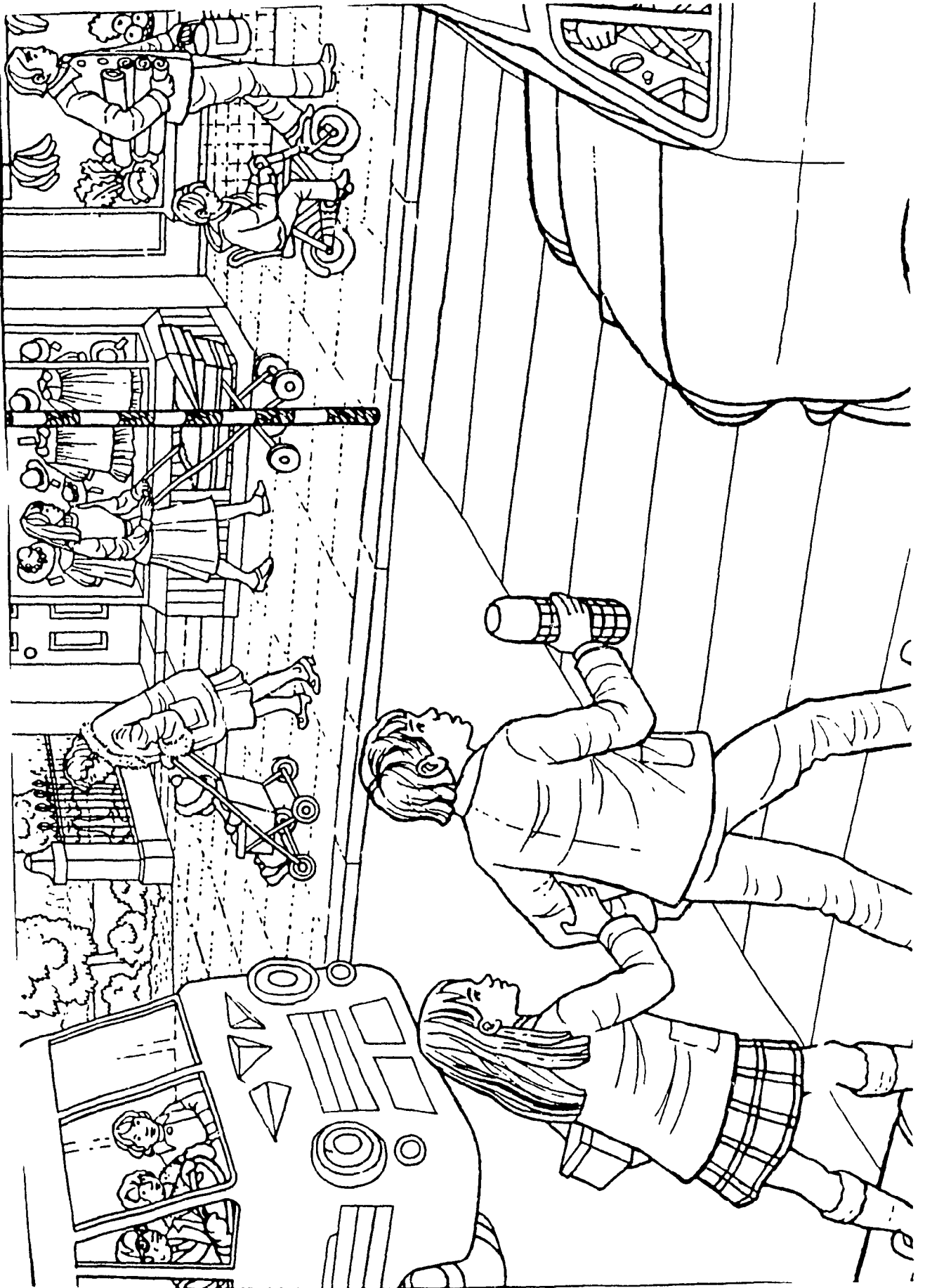
- 6) Comment on how the following activities (news, Dr. Wizard, storyreading, play and the computer) enrich children's language?

Appendix H
Pictures for Picture Description Task



Picture #1: Number of Elements

- 1) swing poles
- 2) trees
- 3) a building being built
- 4) buildings in the back
- 5) a boy going down the slide
- 6) a boy about to go down the slide
- 7) a boy going up the slide
- 8) a boy carrying a thermos
- 9) a boy pulling a girl's arm
- 10) a girl looking at the children on the swings
- 11) a girl carrying a shoe box
- 12) a boy sitting on a swing
- 13) a girl swinging high on the swing
- 14) a girl playing on the jungle gym
- 15) an empty swing
- 16) a pail and shovel on the grass



Picture #2: Number of Elements

- 1) a boy holding a thermos
- 2) a girl holding a shoebox
- 3) a boy and girl crossing the street
- 4) a boy on a bicycle
- 5) a car moving to the right
- 6) a bus moving to the left
- 7) the driver of the bus is wearing glasses
- 8) two passengers on the bus
- 9) a woman with her baby
- 10) a baby in a stroller
- 11) another woman with a baby carriage
- 12) a dress shop with hats and dresses
- 13) a man carrying rolls of paper and a pail
- 14) a fruit store
- 15) a fruit store with bananas
- 16) trees and bushes in the background

Appendix I
Picture Description Task Instructions

Picture Description Task Instructions

Contextualized Condition:

Both researcher and child can see the picture.

- 1) I'm going to show you some pictures. The first one is right here. I want you to look at the picture and tell me what you see in this picture.
- 2) What is happening in this picture? What is going on?
- 3) Look real hard all over the picture and tell me something else about it.

Decontextualized Condition:

Only the child can see the picture displayed in the the slide projector.

- 1) Here's another picture and this time you will be using the slide projector. This is how it works (researcher demonstrates the use of the slide projector).
- 2) I brought a bunch of slides with me and I'm going to put one of them in the slide projector. I'd like you to tell me as much as you can about this picture so I can tell which one it is. Remember only you can see the picture, I can't see the picture.
- 2) I want you to look at this picture and tell me what you see in this picture.
- 3) What is happening in this picture? What is going on?
- 4) Look real hard all over this picture and tell me something else about it.

Appendix J

Computer Program: Picture Chomper

Computer Program: Picture Chompers

The children played most of the time with the computer program Picture Chompers.

1) The first screen that appears in this program is the option screen:

Options

- | | |
|----------|-----------|
| 1. Color | 4. Design |
| 2. Size | 5. Class |
| 3. Shape | 6. Use |

- 7. See Chompers Club
- 8. Information
- 9. End

Use arrows to move, Press return

For example, if a child chose the color option the screen would read "Chomp all blue things".

2) The second screen permits the child to choose a level:

Choose a level

- 1. easy
- 2. medium
- 3. hard

3) The third screen permits the child to choose a timer.
Do you want a timer?

Yes No

On top of the screen the computer clearly states which objects to chomp (e.g. Chomp all blue things). The objective of the game is to chomp all the appropriate objects. Since most of the children cannot read the screen, they make use of the trial and error strategy. For example, a child would start off chomping everything on the screen and when the chomper does not give appropriate noise feedback the child figures out that he/she must chomp some other object on the screen. Another clue to figure out the game is when the chomp is right, the object disappears on the screen. When the chomp is wrong the child receives a big X on the object.

Appendix K
List of All Data Collected

LIST OF ALL DATA COLLECTEDI CHILD-CHILD INTERACTIONS**COMPUTER****CLASS AM**

- 1) Date: 17-May-1991
Class: AM
Participants: Justin, Olivier
Computer: Game: Picture Chomper
Time Duration: 8.2 minutes
- 2) Date: 24-May-1991
Class: AM
Participants: Philip, Brandon
Computer Game: First Letter Fun Disc
Time Duration: 8 minutes
- 3) Date: 30-May-1991
Class: AM
Computer Game: Picture Chomper
Participants: Tania, Mat, Karina, Allison
Time Duration: 11 minutes
- 4) Date: 4-June-1991
Class: AM
Computer Game: Picture Chomper
Participants: Tania, Tammy
Time Duration: 9.1 minutes
RELIABILITY
- 5) Date: 3-June-1991
Class: AM
Computer Game: Picture Chomper
Participants: Kristen Alison Karina
Time Duration: 11 minutes
RELIABILITY
- 6) Date: 5-June-1991
Class: AM
Computer Game: Picture Chomper
Participants: Mark, Matthew
Time Duration: 10 minutes
- 7) Date: 6-June-1991
Class: AM
Computer Game: First Letter Fun Disc
Participants: Mark, Sam, Olivier
Time Duration: 10.5 minutes
RELIABILITY

- 8) Date: 6-June-1991
Class: AM
Computer Game: Picture Chomper
Participants: Mark, Mat
Time Duration: 10 minutes
RELIABILITY
- CLASS PM**
- 9) Date: 16-May-1991
Class: PM
Computer Game: Picture Chomper
Participants: Michelle, Lindsay
Time Duration: 4.0 minutes
- 10) Date: 21-May-1991
Class: PM
Computer Game: Arithmetic Critters
Participants: Ryan, Derrick
Time Duration: 5.7 minutes
- 11) Date: 24-May-1991
Class: PM
Computer Game: Picture Chomper
Participants: Stephanie, Louise
Time Duration: 10.3 minutes
- 12) Date: 24-May-1991
Class: PM
Computer Game: Picture Chompers
Participants: Louise, Stephanie, Derrick
Time Duration: 3.4 minutes
- 13) Date: 28-May-1991
Class: PM
Computer Game: Picture Chomper
Participants: Lindsay, Ryan, Louise
Time Duration: 11.2 minutes
- 14) Date 30-May-1991
Class: PM
Computer Game: Picture Chomper
Participants: Ryan, Trent, Jordan
Time Duration: 6.5 minutes
RELIABILITY
- 15) Date: 3-June-1991
Class: PM
Computer Game: Picture Chomper
Participants: Derrick, Brooke, Ryan.
Time Duration: 17.2 minutes

- 16) Date: 3-June-1991
Class: PM
Computer Game: Picture Chomper
Participants: Alex, Adam
Time Duration: 3.4 minutes
- 17) Date: 4-June-1991
Class: PM
Computer Game: Picture Chomper
Participants: Adrienne, Jordan
Time Duration: 3.6 minutes
- 18) Date: 6-June-1991
Class: PM
Computer Game: Picture Chomper
Participants: Adrienne, Alex, Trent
Time Duration: 9.0 minutes
- 19) Date: 10-June-1991
Class: PM
Computer Game: First Letter Fun Disc
Participants: Adam, Craig, Jordan
Time Duration: 10.5 minutes
- 20) Date: 11-June-1991
Class: PM
Computer Game: Picture Chomper
Participants: Lindsay, Alex
Time Duration: 1.5 minutes

Total number of computer observations: 20
Total time of computer observation: 164.10 minutes

CONSTRUCTIVE PLAY

CLASS AM

- 1) Date: 21-May-1991
Class: AM
Play: Magnetic Castle
Participants: Justin, Olivier
Time Duration: 10 minutes
- 2) Date: 21-May-1991
Class: AM
Play: Magnetic Castle
Participants: Graham, Kyle
Time Duration: 4.3 minutes
- 3) Date: 21-May-1991
Class: AM
Play: Magnetic Castle

Participants: Kristen, Megan, Alison
Time Duration: 3.2 minutes

- 4) Date: 22-May-1991
Class: AM
Play: Wooden Blocks
Participants: Graham, Sam
Time Duration: 6.0 minutes
- 5) Date: 7-June-1991
Class: AM
Play: Legos
Participants: Olivier, Justin, Kyle, Philip
Time Duration: 15 minutes
- 6) Date: 12-June-1991
Class: AM
Play: Legos
Participants: Brandon, Johnnie, Philip, Tammy
Time Duration: 7.0 minutes
- 7) Date: 13-June-1991
Class: AM
Play: Beads
Participants: Erin, Angela, Megan
Time Duration: 11.0 minutes
- 8) Date: 14-June-1991
Class: AM
Play: Legos
Participants: Justin, Olivier, Kyle, Brandon
Time Duration: 18 minutes
RELIABILITY

CLASS PM

- 9) Date: 21-May-1991
Class: PM
Play: Magnetic Castle
Participants: Lindsay, Brooke
Time Duration: 8.5 minutes
- 10) Date: 3-June-1991
Class: PM
Play: Wooden Blocks
Participants: Trent, Trevor, Ryan, Craig
Time Duration: 3.0 minutes
- 11) Date: 11-June-1991
Class: PM
Play: Legos

Participants: Alex, Ryan
 Time Duration: 5 minutes

Total number of constructive play observations: 11
 Total time of constructive play observation: 89 minutes

DRAMATIC PLAY

CLASS AM

- 1) Date: 24-May-1991
 Class: AM
 Play: GI Joe, robots
 Participants: Philip, Kyle, Sam, Olivier
 Time Duration: 5.3 minutes
- 2) Date: 3-June-1991
 Class: AM
 Participants: Justin, Mark, Olivier, Graham
 Play: Monster Castles
 Time Duration: 3.0 minutes
- 3) Date: 4-June-1991
 Class: AM
 Play: Monster Castles
 Participants: Justin, Mark, Graham
 Time Duration: 17 minutes
 RELIABILITY
- 4) Date: 5-June-1991
 Class: AM
 Play: doll, house
 Participants: Tammy, Brandon
 Time Duration: 8 minutes
 RELIABILITY

CLASS PM

- 5) Date: 21-May-1991
 Class: PM
 Play: house
 Participants: Derrick, Louise, Stephanie
 Time Duration: 9 minutes
- 6) Date: 24-May-1991
 Class: PM
 Play: dress-up
 Participants: Derrick, Louise, Erin, Lindsay
 Time Duration: 5.0 minutes

- 7) Date: 4-June-1991
 Class: PM
 Play: Kidnap
 Participants: Derrick, Lindsay,
 Allison, Alexander, Jordan, Ryan
 Time Duration: 6.5 minutes
 RELIABILITY
- 8) Date: 11-June-1991
 Class: PM
 Play: Telephone, Mother and Child
 Participants: Louise, Allison
 Time Duration: 10 minutes

Total number of dramatic play observations: 8
 Total time of dramatic play observation: 63.80 minutes

II TEACHER-CHILD INTERACTIONS

NEWS

CLASS AM

- 1) Date: 27-May-1991
 Class: AM
 Participants: Teacher, Philip, Angela, Brandon,
 Olivier, Sam, Tammy, Justin, Megan, Erin, Kristen, Kyle
 Time Duration: 14 minutes
- 2) Date: 10-June-1991
 Class: AM
 Participants: Teacher, Justin, Tania, Olivier, Brandon,
 Graham, Philip, Shelly, Angela.
 Time Duration: 9 minutes

CLASS PM

- 3) Date: 27-May-1991
 Class: PM
 Participants: Teacher, Adam, Jordan,
 Louise, Stephanie, Alexander, Ryan, Brooke,
 Michelle, Allison, Craig, Derrick,
 Lindsay, Trent
 Time Duration: 6.7 minutes
- Date: 4-June-1991
 Class: PM
 Participants: Teacher, Ryan, Lindsay, Adam, Jordan,
 Craig, Stephanie, Alexander, Brooke, Michelle
 Trent, Louise, Allison, Trevor.

Time Duration: 16 minutes
RELIABILITY

Total number of news observations: 4
Total time of news observation: 45.7 minutes

STORYREADING

CLASS AM

- 1) Date: 24-May-1991
Class: AM
Story: Rupunzel
Time Duration: 6.3 minutes
- 2) Date: 27-May-1991
Class: AM
Story: Snow White
Time Duration: 17.4 minutes
RELIABILITY
- 3) Date: 28-May-1991
Class: AM
Story: The Elves and the Shoemaker
Time Duration: 6.2 minutes
- 4) Date: 28-May-1991
Class: AM
Story: King Midas
Time Duration: 8.5 minutes
- 5) Date: 29-May-1991
Class: AM
Story: There's No Such Thing As A Dragon
Time Duration: 5 minutes
RELIABILITY
- 6) Date: 30-May-1991
Class: AM
Story: Prince Cinders
Time Duration: 9.3 minutes
RELIABILITY
- 7) Date: 30-May-1991
Class: AM
Story: The Three Little Pigs
Time Duration: 10 minutes
RELIABILITY
- 8) Date: 3-June-1991
Class: AM
Story: Pete's Dragon

Time Duration: 3.1 minutes

- 9) Date: 5-June-1991
Class: AM
Story: If I'm the Boss
Participants: Teacher, Tania, Brandon,
Mathew, Sam, Justin
Time Duration: 11 minutes
RELIABILTY
- 10) Date: 10-June-1991
Class: AM
Story: Lady Bug
Time Duration: 5.9 minutes
- 11) Date: 11-June-1991
Class: AM
Story: Farmer Joe Goes to the City
Participants: Mark, Kyle, Olivier, Justin
Time Duration: 6.0 minutes
- 12) Date: 12-June-1991
Class: AM
Story: The Gingerbread Man
Time Duration: 4.4 minutes
- 13) Date: 12-June-1991
Class: AM
Story: Alexander and the Terrible Horrible No Good Very
Bad Day
Time Duration: 7.3 minutes
- 14) Date: 17-June-1991
Class: AM
Story: The King's Pudding
Time Duration: 3.5 minutes
- 15) Date: 19-June-1991
Class: AM
Story: Secret Birthday Message
Time Duration: 3.5 minutes
- CLASS PM**
- 16) Date: 24-May-1991
Class: PM
Story: Rupunzel
Time Duration: 9.3 minutes
- 17) Date: 27-May-1991
Class: PM
Story: Snow White

- Time Duration: 10.3 minutes
RELIABILITY
- 18) Date: 27-May-1991
Class: PM
Story: King Midas
Time Duration: 6.6 minutes
- 19) Date: 28-May-1991
Class: PM
Storytime: Rumpelstilskin
Time Duration: 7.3 minutes
- 20) Date: 29-May-1991
Class: PM
Story: There's no Such Thing As A Dragon
Time Duration: 4.7 minutes
RELIABILITY
- 21) Date: 4-June-1991
Class: PM
Story: It's Too Noisy"
Time Duration: 5.3 minutes
- 22) Date: 11-June-1991
Class: PM
Story: Farmer's Joe Hot day
Time Duration: 4.5 minutes
- 23) Date: 11-June-1991
Class: PM
Story: Farmer Joe Goes to the City
Time Duration: 3.3 minutes
- 24) Date: 13-June-1991
Class: PM
Story: Secret Birthday Message
Time Duration: 3.8 minutes
- 25) Date: 17-June-1991
Class: PM
Story: Dr. de Sotto
Time Duration: 8.8 minutes
- Total number of storyreading observations: 25
Total time of storyreading observation: 145.56 minutes

DR. WIZARD

- 1) Date: 17-May-1991
Class: AM
Participants: Teacher, Brandon
Experiment: Volcano

- Time Duration: 3.5 minutes
- 2) Date: 17-May-1991
Class: AM
Participants: Teacher Tania
Experiment: Flying Heart
Time Duration: 5.1 minutes
 - 3) Date: 17-May-1991
Class: AM
Participants: Teacher, Angela
Experiment: sugar water
Time Duration: 2.2 minutes
 - 4) Date: 22-May-1991
Class: AM
Participants: Teacher, Sam
Experiment: potato
Time Duration: 4.0 minutes
 - 5) Date: 22-May-1991
Class: AM
Participants: Kristen
Experiment: balloon static electricity
Time Duration: 2.0 minutes
 - 6) Date: 22-May-1991
Class: AM
Participants: Matthew
Experiment: line draw
Time Duration: 6.0 minutes
 - 7) Date: 24-May-1991
Class: AM
Participants: Teacher, Graham
Experiment: volcano
Time Duration: 2.6 minutes
 - 8) Date: 24-May-1991
Class: AM
Participants: Teacher, Tammy
Experiment: matches
Time Duration: 2.3 minutes
 - 9) Date: 27-May-1991
Class: AM
Participants: Teacher, Karina, Brandon,
Experiment: honey
Time Duration: 4 minutes
 - 10) Date: 28-May-1991
Class: AM

Participants: Justin
Experiment: Dancing Raisins
Time Duration: 2.2 minutes

- 11) Date: 30-May-1991
Class: AM
Participants: Teacher, Philip, Brandon
Experiment: sound
Time Duration: 4.4 minutes
RELIABILITY
- 12) Date: 30-May-1991
Class: AM
Experiment: Magnet
Participants: Teacher, Olivier
Time duration: 4.0 minutes
- 13) Date: 21-May-1991
Class: PM
Participants: Teacher, Stephanie
Experiment: Colors
Time Duration: 5.2 minutes
- 14) Date: 21-May-1991
Class: PM
Participants: Teacher, Louise
Experiment: sound
Time Duration: 5.8 minutes
- 15) Date: 21-May-1991
Class: PM
Participants: Teacher, Trevor
Experiment: matches
Time Duration: 4.2 minutes
- 16) Date: 29-May-1991
Class: PM
Participants: Teacher, Allison
Experiment: Egg and vinegar
Time Duration: 3 minutes
RELIABILITY
- 17) Date: 30-May-1991
Class: PM
Participants: Teacher, Derrick, Louise, Ryan, Jordan,
Lindsay, Alex, Adam, Trenton
Experiment: Parachute
Time Duration: 5 minutes
RELIABILITY

Total number of Dr. Wizard observations: 17

Total time of Dr. Wizard observation: 53.62 minutes

Total number of observations (with computer, constructive play, dramatic play, news, storyreading and Dr. Wizard): 85 recordings

Total time of observation (all activities): 571.78 min. (9 hrs 43 min.)

Appendix L
Definitions-Observation Categories

CODING SCHEME

I TOPIC CODING

Topic is defined as: a subject or content in a conversation. According to Dickinson (1991) talk about the present supports contextualized strategies whereas talk about the past and future, analytical and didactic talk support decontextualized strategies.

1) PRESENT TALK

Present talk is defined as talk which focuses on the present; on the here and now. It is classified as follows:

a) Actions/objects: PRE:ac

This category includes comments, questions, attention-directing utterances referring to objects, pictures or people immediately present. Descriptions of actions as they are taking place or immediately after completion, talk about emotions, expressing feelings or stating personal needs are also part of this category.

Examples of feelings

-talk about bodily sensations "I'm cold." "I'm tired."
 -talk stating personal needs or preferences "Can I play with you?" "I don't want to play".

Examples of objects and actions

-questions referring to objects "What is it?"
 -comments referring to objects "This does not fit in the box."
 -questions referring to people "What is John doing?"
 -comments referring to people "Look at Mary."
 -identifying actions "What are you doing?" "I'm painting a castle."
 -directing actions "Give me the pencil." "Don't forget your book".

b) ownership: PRE:ow

This category includes talk about ownership of objects.

Examples

"This is my computer." "I have two books."
 "The car belongs to David."

c) Rules: PRE:ru

This category includes explanations or comments about actions or words that include consideration of rules or norms of behavior.

Examples

"We can't all play this game, there's not enough space."
 "Sh! Be quiet so everyone can listen to the story."

d) off-topic: PRE:off

This category includes comments that are not relevant to the present activity or task. It includes talk referring to other topics or activities presently in the classroom, or interruptions by others (children or teacher) who are not involved in the present task.

Examples

A group of three children are building a castle in the play area and one child overhears another child in the arts and crafts comment about drawing a big car. The child in the play area may say to his peers "I'm going to draw a bigger car". This utterance would be coded as off-topic.

2) ANALYTICAL TALK

Analytical talk is defined as talk towards logical reasoning.

a) cognition: ANA:CO

This category refers to talk about world knowledge, cause and effect statements, analysis of objects or events, making connections between objects and events, justifying judgements. Hypothetical guesses, and analytical questions on how to carry out a task are also included in this category.

Examples

-hypothetical guesses such as "I think you have to place the wheel on the truck"
 -analytical questions "How do you play this game?"

b) Language: ANA:la

This category includes the discussion of the meanings of words.

Examples

"The cat is an animal"

3) NON-PRESENT ACTIONS AND OBJECTS

This category refers to talk about topics which are not observable in the environment (e.g. past and future events and actions, distant objects and persons, abstract matters) and excludes conversations about inner states.

a) Non-present past: NPR:pa

Comments or questions referring to actions, objects, pictures, people not present. Talk about past actions not in narrative form. A reference being made to a present experience (this reference could be connected to a past ongoing event, making a reference outside the present time frame. For example, a child may say "I like shopping." to another child and he/she may respond by saying "I went shopping with my mom to buy a new nintendo game."

b) Non-present pretend: NPR:prd

This category refers to talk about pretend actions or objects. For example, a child holding a block may say "This is my telephone."

c) Future: NPR:fu

This category refers to discussion of events, actions or objects that are about to happen.

Examples

"The blocks will fall down."

"Mary is going to the fair tomorrow."

d) Non-present off-topic: NPR:off

This category refers to comments or statements that are non-present and not relevant to the present activity or task. It includes talk referring to events, objects or actions not present in the classroom.

Examples

A boy playing with legos might say to another child "I have a pet turtle."

4) DIDACTIC TALK

Didactic talk is defined as talk used or intended for teaching or instruction. It includes the following:

a) symbols: DID:sy

This category includes talk reference to print and numbers or engaging in routines involving letters and numbers (e.g., counting, spelling words) and sounding out letters or words.

b) Books

This category includes talk referring to books or their content. It is classified in sub-categories:

i) Label:DBO:la

Naming or describing objects or events in books.

ii) Mechanics:DBO:me

How books work and information about books (e.g. This book is called "The Three Little Pigs").

iii) Vocabulary:DBO:vo

Discussion of the meaning of words presented in a book.

iv) Predicting: DBO:pr

Talk about what the book will be about, events not pictured or described are predicted (e.g. "What do you think is going to happen?").

v) Analysis: DBO:an

Talk that examines characters or the connections between events, interpreting characters' actions or feelings, events or objects.

vi) Text-Reader Links: DBO:li

Comments that link directly to previous experiences either elicited explicitly by the each other or volunteered by the children, relating the book to the child's real-world experiences (e.g. "I have the same book at home"). This category

also includes personal comments such as "I like this book."

II SPEECH ACT CODING

A speech act is defined as the function of speech or utterances. Specific speech act codes such as providing explanations were expected to result in more efforts to make referents clear and to communicate novel information, resulting in more decontextualized talk.

1) Direct control: DCL

These are statements which direct hearer's attention to an object, person, and events to the environment, call attention to hearer by name, suggest actions, command hearer to do something, indicate disapproval of actions.

Examples

"Look at my picture" (direct hearer's attention to an object).

"Try using this piece of paper." (suggest actions)

"Sam!" (child or teacher calling out hearer by name).

"Don't touch that." (command hearer to do something).

2) Negotiation: NEG

This category refers to allocate roles, moves and turns in joint activities, to agree or promise to do something, ask or grant permission, or resist efforts of other to get speaker to get to do some action.

Examples

"When I finish this game it's your turn."

"When do I have a turn?"

3) Warm engagement: WEN

Indicate approval of hearer or demonstrate affection, offer help use humor, or being polite.

Examples

"Thank you for your help."

4) Information: INF

This category includes explanatory talk, explain or justify actions, inform hearer or oneself how to carry act, inform

hearer of some fact about the physical or social world, stating fact, an idea, opinion, reason which could involve the speaker, e.g. "I don't think he wants to play" or stating facts that do not involve the speaker such as "The bird has no wings".

5) **Real question or response**: REA:qu or REA:re

Request for information not known by the speaker. Response for information thought to be known by the person being questioned.

Examples

"What did you do last night?"
"Are you scared?"

6) **Test question or response**: TES:qu or TES:re

This type of question determines whether the hearer knows information that is known to the speaker, or marks a response to a test question.

Examples

"What color is the boy's hat?"
"What is the first letter in this word?"
"Guess how many toys I have?"

7) **Open-ended question/response**: OPE:qu or OPE:re

Open ended questions refer to questions with many possible responses asked in order to gain information, or responses to such questions.

Examples

"What happened to the car?" would be coded as an open ended question.
"The car fell off the cliff." would be coded as an open ended response

8) **Close-ended question/response**: CLO:qu or CLO:re

Closed-ended questions refer to questions with only one or two possible answers (yes/no questions, choice questions with limited possible responses) or responses to such questions.

Examples

"Can I play with you?" would be coded as a close-ended

question

"No." would be coded as a close-ended response.

9) **Clarifying question:** CLA:qu or CLA:re

Clarifying questions refer to questions contingent on a previous utterance that seeks clarification of some part of it.

Examples

"We went to the park." "Where did you go?" would be coded as a clarifying question.

10) **Reading:** RTX

The actual reading of a book or a text.

Example

"Once upon a time there was a princess w^ho lived in a castle".

11) **Evaluation:** EVL

This category refers to evaluation of objects, actions, situations or people. This includes praise or negative observation, as well as evaluative comments addressed to children by the teacher.

Examples

"I'm good at this game".

"You are right".

"This is easy".

12) **Paralinguistic responses:** PAR

This includes nonlanguage speech such as gestures (e.g "Frank shakes his head") would be coded as a paralinguistic response.

13) **OTHER:** This category includes the following:

i) **singing:** OTH:sin

To produce musical sounds or notes this include whistling, humming sounds, and mimicing computer sounds.

ii) Communicative or interactive markers: OTH:cm

Talk used to manage the interaction, responses filling required slots in turn-taking exchanges but which lack specific semantic content, reactions to the task at hand, sound effects produced while playing, and salutations.

Examples

- words such as "ah, oh, oops, eeecch.
- salutations such as hello, goodbye

iii) Repetitions: OTH:re

This category includes echoing the prior speaker or repetition of utterances and acknowledging children's utterances by repeating them.

*Note all questions were double coded as being real/open, real/closed and test/open, test/closed.

Appendix M
Coding Tally Sheets

Tally Sheet For Topic Coding

Date: _____

Activity: _____

Class: _____

Children: _____

Time Duration: _____

Present Talk		Total
actions		
ownership		
rules		
off-topic		
Analytical Talk		
cognition		
language		
Non-Present Talk		
past		
pretend		
future		
off-topic		
Didactic Talk		
symbols		
Book Talk		
label		
mechanics		
vocabulary		
predicting		
analysis		
text-reader links		

Appendix N
List of Transcribed and Coded Data

DATA: TRANSCRIBED AND CODEDI CHILD-CHILD INTERACTIONS**COMPUTER**

- 1) Date: 28-May-1991
Class: PM
Computer Game: Picture Chomper
Participants: Lindsay, Ryan, Louise
Time Duration: 11.2 minutes
- 2) Date 30-May-1991
Class: PM
Computer Game: Picture Chomper
Participants: Ryan, Trent, Jordan
Time Duration: 6.5 minutes
- 3) Date: 3-June-1991
Class: AM
Computer Game: Picture Chomper
Participants: Kristen, Alison, Karina
Time Duration: 11 minutes
- 4) Date: 4-June-1991
Class: AM
Computer Game: Picture Chomper
Participants: Tania, Tammy
Time Duration: 9.1 minutes
- 5) Date: 6-June-1991
Class: AM
Computer Game: Magic Spelling
Participants: Mark, Sam, Olivier
Time Duration: 10.5 minutes
- 6) Date: 10-June-1991
Class: PM
Computer Game: Magic Spelling
Participants: Adam, Craig, Jordan
Time Duration: 10.5 minutes

Total number of observations: 6
Total time of observation: 58.8 minutes

CONSTRUCTIVE PLAY

- 1) Date: 21-May-1991
Class: AM
Play: Magnetic Castle

- Participants: Justin, Olivier
Time Duration: 10 minutes
- 2) Date: 21-May-1991
Class: PM
Play: Magnetic Castle
Participants: Lindsay, Brooke
Time Duration: 8.5 minutes
- 3) Date: 11-June-1991
Class: PM
Play: Legos
Participants: Alex, Ryan
Time Duration: 5 minutes
- 4) Date: 14-June-1991
Class: AM
Play: Legos
Participants: Justin, Olivier, Kyle, Brandon
Time Duration: 10 minutes

Total number of observations: 4
Total time of observations: 31.5 min.

DRAMATIC PLAY

- 1) Date: 4-June-1991
Class: AM
Participants: Justin, Sam, Graham
Play: Monster Castles
Time Duration: 17 minutes
- 2) Date: 4-June-1991
Class: PM
Play: Kidnap
Participants: Derrick, Lindsay,
Allison, Alexander, Jordan, Ryan
Time Duration: 6.5 minutes
- 3) Date: 5-June-1991
Class: AM
Play: dollhouse
Participants: Tammy, Brandon
Time Duration: 8 minutes
- 4) Date: 11-June-1991
Class: PM
Play: Telephone, Mother and Child
Participants: Louise, Allison
Time Duration: 9 minutes

Total number of observations: 4
 Total time of observation: 40.5 minutes

II TEACHER-CHILD INTERACTIONS

NEWS

- 1) Date: 27-May-1991
 Class: AM
 Participants: Teacher, Philip, Angela, Brandon,
 Olivier, Sam, Tammy, Justin, Megan, Erin, Kristen, Kyle
 Time Duration: 14 minutes
- 2) Date: 27-May-1991
 Class: PM
 Participants: Teacher, Adam, Jordan, Louise, Stephanie,
 Alexander, Ryan, Brooke, Michelle, Allison, Craig,
 Derrick, Lindsay, Trent
 Time Duration: 6.7 minutes
- 3) Date: 4-June-1991
 Class: PM
 Participants: Teacher, Ryan, Lindsay, Adam, Jordan,
 Craig, Stephanie, Alexander, Brooke, Michelle, Trent,
 Louise, Allison, Trevor.
 Time Duration: 16 minutes
- 4) Date: 10-June-1991
 Class: AM
 Participants: Teacher, Justin, Tania, Olivier, Brandon,
 Graham, Philip, Shelly, Angela.
 Time Duration: 9 minutes

Total number of observations: 4
 Total time of observation: 45.7 minutes

STORYREADING

- 1) Date: 27-May-1991
 Class: AM
 Story: Snow White
 Participants: Teacher, Megan, Brandon,
 Sam, Kristen, Olivier
 Time Duration: 17.4 minutes
- 2) Date: 27-May-1991
 Class: PM
 Story: Snow White
 Participants: Teacher,

Time Duration: 10.3 minutes

- 3) Date: 29-May-1991
Class: AM
Story: There's No Such Thing As A Dragon
Participants: Teacher, Children
Time Duration: 5 minutes
- 4) Date: 29-May-1991
Class: PM
Story: There's no Such Thing As A Dragon
Participants: Teacher, Children
Time Duration: 4.7 minutes

Total number of observations: 4

Total time of observations: 37.4 minutes

DR. WIZARD

- 1) Date: 27-May-1991
Class: AM
Participants: Teacher, Karina, Brandon,
Time Duration: 4 minutes
- 2) Date: 29-May-1991
Class: PM
Participants: Teacher, Allison
Time Duration: 3 minutes
- 3) Date: 30-May-1991
Class: PM
Participants: Teacher, Derrick, Louise, Ryan,
Jordan, Lindsay, Alex, Adam, Trenton
Time Duration: 5 minutes
- 4) Date: 30-May-1991
Class: AM
Participants: Teacher, Philip, Brandon
Time Duration: 4.4 minutes

Total number of observations: 4

Total time of observation: 20.4 minutes

Total number of observations transcribed and analyzed: 26

Total time of observation: 234.3 minutes.

Appendix O
Conventions for Transcription

The CHAT Transcription System

The Form of Files

There are specific requirements for the form of a file:

1. The first line in the file must be an @Begin header line
2. The last line in the file must be an @End header line
3. An @Participants header line must be included, listing three letter codes for each participant, the participant's name, and the participant's role (e.g. JOH John Child).
4. Lines beginning with an asterisk * indicate what was actually said. This line should include only one utterance. When a speaker produces many utterances in a row, each utterance should be on a separate line.
5. After the asterisk a three letter code in upper case letters should be written to identify the participant who was the speaker of the utterance being coded. After the three letter code comes a colon and then a tab.
6. Lines beginning with the % symbol contain codes and commentary on what was said. This must be a three letter code in lower case letters and it is followed by a colon and then a tab.

The Form of Utterances

There are certain ways in which words and utterances should be written:

1. Utterances should end with a period, an exclamation mark or question mark.
2. Commas should be avoided.
3. Upper case letters should be used only for proper nouns such as "I".
4. Unintelligible words which cannot be identified phonetically should be transcribed as xxx.
5. Pauses are transcribed with the # symbol.

Note: For more details on the CHAT transcription system see MacWhinney (1991). THE CHILDES PROJECT: Tool for Analyzing Talk. Hillsdale, NJ: Erlbaum.