LEARNING TO READ AT DAYCARE: AN ANALYSIS OF THE PRESCHOOL LIBRARY

by

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Abstract

The Preschool Library program (Wastie, 1996) was evaluated over 7 weeks for its effect on preliteracy skills of 16 3-, 4-, and 5-year olds in one daycare setting. A control group consisted of 10 4-, and 5-year olds in another daycare. Parent interviews and daycare observations provided measures of initial literacy environment. The preliteracy skills that were measured included definition production, book handling skills, environmental print awarenes and comments during storytime. Although some improvement occurred in bookskills, definitions, and storytime comments, reliable differences were not found between control and experimental groups on individual tasks. Trends across tasks however were consistently in favour of the experimental group. Possible explanations are provided as to why results did not strongly support efficacy of the program. The most likely explanation is that a control group was not adequately provided due to differences in initial literacy environments. Both groups progressed during the course of the study, likely due to support from different sources; the experimental group received support from the Preschool Library program, and the control group received support from a strong literacy environment already in place.

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CHAPTER I

Historical Perspective & Literature Review

Introduction

Traditionally, literacy in children was thought to develop upon entry into kindergarten. Recent research has demonstrated that pre-literacy skills begin in the years prior to school entry (Brice Heath, 1982; Goelman, Oberg & Smith, 1982; Harste, Woodward & Burke, 1984; Pellegrini, 1996; Weinberger, 1996). The purpose of this project is to investigate whether preschool aged children are helped to gain those skills which are known to be precursors of literacy development, by participating in a preschool library program.

The Preschool Library Program developed by Wastie (1996), emphasizes the sharing of books between child and adult. The program's emphasis is based on research which cites adult-child book sharing as one of the key components that contributes to later success in literacy. Hewison

(1988) showed that the long term effects of parental involvement in reading was greater than the effects of receiving extra reading help in school. Weinberger (1996) demonstrated that having favourite books at age 3, and parents reading to children at school entry, were significant factors in predicting children's literacy and fewer literacy difficulties at age 7. Goodman (1990) identified the conversations between mothers and their 2-year-olds during book reading as the factor which facilitated literacy. Bus, van IJzendoorn, and Pellegrini (1995) completed a meta-analysis of available research and showed that the frequency of book reading to preschoolers links to emergent literacy and reading achievement. Roth, Spence, and Cooper (1997) found that family literacy patterns, as measured by questionnaires taken by parents of Kindergarten children, was a significant predictor of reading comprehension in First Grade.

Wastie's (1996) Preschool Library Program was shown to increase book sharing time between the children and their families in one multicultural preschool. The current project evaluates the Preschool Library Program as it is conducted again, this time with young children in a daycare setting. Specifically, the current project asks the question: do children handle books, produce definitions, spontaneously produce comments at storytime, and comprehend print in reduced context, following participation in the

Preschool Library Program at a higher level than they would have done without this intervention?

The skills measured in the current project are those which are thought to be early indicators of literacy. One measure, bookskills, investigates knowledge of and familiarity with books. Research has shown that this familiarity with books is a necessary early step in using books, and in turn, use of books predicts later literacy success (Weinberger, 1996). Another measure, environmental print awareness (Gillam & Johnston, 1985), demonstrates children's comprehension of print that has decreasing amounts of contextual information present. The ability to move from highly contextualized to decontextualized language must develop in order for children to fully comprehend the meaning found in printed words (Snow, 1983). The ability to understand and decontextualize language becomes even more crucial in higher grades as children's books contain fewer pictures to provide support for the meaning of the printed text. Definitions are a measure of a child's ability to produce conventional, explicit, literatelike oral language (Watson, 1985). And finally, children's oral comments during story time are analyzed for their extended use of new information in alternate contexts. These types of comments reflect a literate bias in oral language (Watson, 1997).

This set of preliteracy skills will be required when a child reaches Kindergarten. Programs like the Preschool Library attempt to provide the input necessary for children

to learn such skills. However, little prior research has been conducted which evaluates the effects of such intervention across preliteracy skills. In the current study, the Preschool Library Program is evaluated using the above measures, which are intended to represent a collection of early reading skills and areas of knowledge, in order to determine whether the Preschool Library positively influences children's developments in literacy.

Literature Review

Three areas of literature will now be reviewed in order to establish the theoretical ground for the present research project. First, exposure to books and experience with them in the years prior to school entry will be explored as they act as predictors of later literacy success. The effect of the home literacy environment will be discussed as a critical component of early book exposure. I will then discuss children's development of the understanding that print has meaning. This discussion will focus on comprehension of print and its relationship with decreasing context and the symbolic nature of print. Finally, literate features of oral language will be defined and identified as components of early stage literacy.

Use of Books

Exposure and accessibility to books is a necessary precursor for competent use of books and print. The ability to use books and print in order to communicate and extract knowledge is an expectation made of children during their school years. If these skills can begin to be learned by children prior to school entry, either in a home environment or at preschool or daycare, these children may be more likely to succeed at the style of learning from books which is valued in the school system and in a literate society.

Clay (1979, 1985 as cited in Garton & Pratt, 1989) identified the concepts that children must understand in order to read and write. She included conventions about the orientation of a book and the directionality of print (e.g., left to right for English), metaphonological knowledge like identification of letters, words and punctuation, and the concept that printed words contain the message encoded in books. Some children may bring knowledge of all the above concepts to the task of learning to read, while others may start with some concepts missing, and only learn them during the course of literacy learning. Individual differences may exist which result in some children requiring explicit instruction to learn the concepts while other children can learn them through repeated informal reading experiences. For educators, knowledge of children's levels of understanding of these concepts may provide insight into

how ready they are to learn to read, or how far into the process of learning to read they already are.

Although access to books occurs upon school entrance, opportunities exist for children to become familiar with books and print before they are of school age, which may allow them better chances for successfully learning to read and write. Weinberger (1996) conducted a study that utilized parent interviews, and standardized and non-standardized language tests to explore relationships between assessment results at age 3 and reading skills at ages 5 and 7. She found that having favorite books at age 3 was a predictor of reading higher level books at age 7. The study suggested that having favorite books was a direct indicator of "children's access to materials, interactions with parents, and children's own inclinations through making choices" (Weinberger, 1993, p.18, as cited in Weinberger, 1996). In this same study, membership at the public library at age 3 was found to be related to the level of books being read by the child at age 7. These results suggest that if children are not given the access to books and the opportunities for interactions around book reading, they may be falling behind their peers in the early stages of building foundations for literacy. Schools provide exposure to books and instruction in the use of books, but by kindergarten opportunities for literacy have already been missed. Therefore, the home may provide the literate

environment which can expose children to books prior to school entry.

The home literacy environment involves the presence of print and literacy materials (e.g., paper and writing utensils, books, letters, lists), the modeling of literate behaviours (e.g., making a list to remember later, reading a newspaper, writing a letter to someone, reading a sign or set of instructions, reading a novel), and the accessibility of the literate environment to the child. Print is almost always present in the environment (e.g., in packaging, signs) but its presence doesn't guarantee that a child will master its meaning. Certain characteristics of the home environment can make the role of print explicit and increase the chance that a child will become aware of it. Books can be on a shelf that the child can reach. Parents can model a literacy activity by reading the newspaper before the child has gone to bed rather than after. Also the use of reading and writing as skills for transmission of knowledge can be demonstrated to a child in an explicit way.

Shapiro (1996) examined the relationship between children's home literacy environments, as measured by the Home Literacy Environment Index (HLEI), and their emerging awareness of literacy. Shapiro found relationships between parent scores on the HLEI and their 3-year-old children's scores on concepts of print tasks (book orientation, print direction, and letter and word concepts), and between parent scores on the HLEI and 4-year-olds' scores on environmental

print identification tasks where children must identify familiar product logos with full, and then reduced, contextual support.

Reading books to children makes explicit some components of literacy. Some aspects of book use are similar each time a book is read. A book is held upright, read from front to back, and pages are turned one at a time. Other components of book use can change. A book can be read in different rooms of the house or at preschool or daycare. The same book can be read by different adults or children. Their styles will differ, but all adults and older children will use the book in a similar way. Snow and Goldfield (1983) discuss book reading as a context which can satisfy those requirements which make language learning within a familiar routine possible. Snow and Goldfield suggest that the book acts as a constant, well defined situation. The constancy allows a child to recognize that the situation has occurred previously, giving the child opportunities to attempt to say what she has heard said in previous book reading situations. It is also likely that utterances will be repeated by an adult as the story is told, giving the child repeated chances to extract meaning from the utterances. Consider one of the more common components of home literacy environments, reading to children at bedtime. How is it that this practice leads to improved preliteracy skills? A child is repeatedly exposed to a book. The story may change slightly or even dramatically each time. The

words may be read verbatim or the story may be told by the pictures. Throughout the book reading instance then, the language learner searches for the sameness of the situation. With more experiences, the child is able to draw on more of the potential of the book reading event. Without demonstration (and even instruction) of how a book is to be used, a child may not discover which are the regularities and which are the dynamic components of reading.

Other studies have also found the link between reading at home and literacy success. Bus et al. (1995) conducted a meta-analysis of the available literature involving the frequency of joint book reading with preschoolers and toddlers, and reported that "parent-preschool book reading is related to outcome measures such as language growth, emergent literacy, and reading achievement" (Bus et al., p.15). This latter finding is particularly interesting since Bus et al. conducted their study with the belief that book reading contributes to a child's understanding of the discourse of written language; a discourse which includes story structures and a register of more complex syntax and different conventions than oral language. Thus, they expected that the effects of book reading would be primarily, increased language development (language becoming more literate) and, only secondarily, improved reading achievement.

Bus et al. (1995) did not examine quality of joint book reading, so the studies included in the analysis only

consider effects of frequency. However, it is likely that some elements of parental style of reading are related to the frequency of reading, so that parents who read more often develop a style which is more supportive of literacy development. Further, the meta-analysis concluded that the effects of joint book reading were not determined by the socio-economic status or the literacy levels of the parents. Bus et al. conclude that books create the central component that contributes to success in reading, and that without combined parental support, books are not fully accessible to preschoolers. According to the study, the effects of joint book reading are strongest when the children are youngest. As children become able to read in a conventional way, the strength of the effects lessens.

Goodman (1990) analysed the book sharing episodes of mothers and their 2-year-olds to investigate the quality of parental style of book reading and its effect on acquisition of literacy. She suggested that it may not be enough for adults to read to children, but that the quality of the interactions surrounding book reading may be critical. Goodman cites strategies such as developing and explaining the story schema, and focusing attention jointly, as the factors that provide the support necessary for children's literacy learning. According to Goodman it is the transactional nature of book reading that makes it an ideal learning scenario for developing the skills which will contribute to literacy success.

As is clear from the above studies, there are differences in the degree to which people take information from books and create literate environments, differences which may be influenced by cultural values. Brice Heath (1982) studied three American communities' use of literacy with their preschoolers. The mainstream culture style expects children to become adults who will function in a literate society, using literacy as a means of communication and knowledge expansion. Mainstream parents typically use techniques such as "scaffolding" (Cazden, 1979, as cited in Brice Heath, 1982) during book interactions. Such interactions take the following form: the parent asks a question, e.g., "what is X?"; the child responds with attention or a vocal answer; then, the parent provides a label or verbal feedback to the child's response. This interaction is mastered at the age of 2 years in many mainstream cultures, and acts as preparation for the sequence used in classrooms: teacher initiates, student replies, teacher evaluates (Mehan, 1979). This feedback pattern also encourages the child in understanding the picture (and the word) as a representation of, but not the same as, the real life object it is naming.

Brice Heath (1982) describes the process of "making sense from books and relating their contents to knowledge about the real world" (p.49) as a culturally specific form of learned behaviour. It is demonstrated in Brice Heath's study that not all cultures value this way of learning from

books. One community in the study valued an oral tradition of storytelling over a written form. It is typically, however, the style of learning which is valued in schools, and it is often expected that children will arrive at kindergarten with this style of book use already engrained. Perhaps it is the responsibility of the schools not to make this assumption, and to provide a learning environment that values all learning styles while explicitly teaching those styles which have not been learned in the home cultures, thereby creating a balanced atmosphere where children can draw on numerous styles of gaining knowledge. Until this paradigm shift occurs, educational interventions may be needed.

One study attempted to enhance the literacy environment of children in their homes, and demonstrated a long term effect on children's reading levels. The Haringy Project (Hewison & Tizard, 1980, as cited in Hewison, 1988) initially demonstrated that following a two year intervention period, 6-to 8-year-old children whose parents were asked to listen to their children read were reading better than a group of children who acted as a control group and therefore received no intervention. A follow up evaluation of reading skills (Hewison, 1988) when the children were 11 years old revealed that the children who had received extra parental involvement were still reading better than their peers who had not received intervention. This effect three years after the implementation of

intervention was not present for a group of children from the original study who received supplementary reading instruction in small groups from a qualified teacher. This finding suggests that parental involvement was the necessary factor for the children in the study to maintain reading proficiency at least up until entry into secondary schools at the age of 11.

There may also be an opportunity for educators to offer children the style of learning from books which will be valued in kindergarten before they arrive there, that is, in preschools or daycares. At the preschool or daycare a literate environment can be created which may or may not be present in the child's home. Further, literate behaviour can be modeled and made explicit. The questions remain, whether this exposure would adequately prepare a child who has not previously had a strong literacy environment for the literate orientation of the kindergarten classroom, or whether it would enhance the experience of the child who already experiences models of literate behaviour at home? The present study begins to address these issues.

Meaning in Print

To learn to read, a child needs to make the connection between what she sees on a page and what she hears spoken to her. Further, she must understand that a printed word is another representation of some spoken word, and she must

figure out which spoken word it is. Meaning needs to be assigned to the words, and presumably, the meaning which was intended by the writer will be understood by the reader (Garton & Pratt, 1989). So a combination of literacy skills which have to do with decoding and literacy skills which have to do with reconstructing meaning need to be taught to the child. Children are usually well on their way to learning language at the time when they undertake literacy learning, and much of the knowledge they have about spoken language can be applied to the reading process. Once literacy learning begins, the ongoing processes of learning spoken language and learning written language will interact and influence each other.

Before further discussion of what it is that children learn about literacy and how they learn, an attempt will be made to explain why they learn to be literate. What motivates children to engage in the task of learning how to understand and produce written text? Harste, Woodward, and Burke (1984) argue for intentionality as an assumption which underlies the attempts of potential readers and writers. Intentionality is an expectation held by a child who approaches written marks, that those written marks hold meaning; that someone wrote them with an intended message in mind. Even before a child has the ability to discern what a mark or sign means, the child, early on, has to develop the understanding that it means something. This knowledge then drives the child to search for the meaning, to find patterns

and unity within the sign, and to progressively focus in on the parts of the sign which hold the meaning. The goal of such a search is the linguistic content or the message of the sign.

Harste et al. (1984) used a variety of tasks in order to study the early skills preschool age children were mastering en route to becoming literate. One task utilized environmental print, the host of signs, labels and packages which children see in their environment on a regular basis. Harste et al. discuss the environmental print task as one which demonstrates the child's progression toward understanding the content or meaning contained in the sign. The signs used by Harste et al. included information other than print. For example, the Crest toothpaste was enclosed in a box with the logo "Crest" written on it in red and blue block letters, as well as various other swirls and lines. When a child is presented with the Crest logo, Harste et al. would argue that the assumption of intentionality holds, and the child is aware that the sign has meaning. As the child strives to find the meaning, early attempts may yield interpretations such as those recorded by Harste et al., "toothpaste," "cavities" and "toothbrush." All of these interpretations reveal an understanding that the logo contains a message and the message has to do with brushing teeth to fight cavities. As a child accumulates more experiences with print she will make distinctions about what

she sees and will learn to hone in on the print as the message carrying part of the logo.

A theoretical perspective which advocates for developmental stages would dictate that the child learns to hone in on the print with the help of experiences which reduce the amount of context present and simplify the message. Harste et al. (1984) disagree with this theoretical stance, arguing instead that children learning literacy are engaging in the same processes as adult readers. Language is always present within a context, so there is no reason to remove context, even if that were possible (Harste et al. argue that it is not), in order for children to find meaning. Children will find meaning based on their assumption that meaning was intended by the writer. The context is not seen by these authors as an intrusive variable, but rather as an integral part of the message (Harste et al., p.151).

Reeder, Shapiro, Watson and Goelman (1996) take a developmental perspective, but would agree with Harste et al. (1984) that the ability of a 3-year-old to recognize environmental print is a literacy skill. Harste et al. would say the child is finding meaning with the resources she has, in the same way that an adult would read environmental print and find meaning by utilizing mental resources. Reeder et al. (1996) would say that the 3-year-old child who recognizes environmental print is using a process which will be transformed over the course of

development into the process that an adult uses when reading environmental print. The difference between the two views revolves around whether the process used by the 3-year-old is the same as, or different from, that used by the adult.

Regardless of this difference in their views on environmental print, both sets of researchers argue that eventually children learn to find meaning in decontextualized print. As a symbol, written language can mean different things to different people, depending on a person's purpose in discovering meaning from print and on one's experience. Initially, as was demonstrated in the Crest example, very young children have been seen to have some understanding of the social function of print. Later in children's development, they are expected to come to an understanding of the symbolic nature of print (Harste et al., p.149). This knowledge would be demonstrated by an understanding that the print alone can stand for the object, even when contextual clues like pictures and coloured print are removed.

Researchers like Harste et al. (1984) refer to decontextualization of language as the recognition of printed text apart from its physical context. Snow (1983) extends this meaning. According to Snow, decontextualization of language refers to information and meaning being extracted from its local text context. As Snow explores what children must know in order to be successful with literacy, she identifies the

decontextualization of language as a critical feature of literacy which may be overlooked for some children. Snow discusses separate sets of skills which must be acquired by children: (i) decoding and drawing meaning, and (ii) extension of that meaning into other scenarios, i.e., being able to use the knowledge gained from print. Some literacy promoting activities may not actually facilitate the use of decontextualized language. The fact that a child has not acquired such skills may not be apparent at the demand level of the primary grades. However, a deficit in the skills of decontextualized language use may pose a problem in higher grades when the demands of schoolwork change. Fewer pictures are present in reading materials; thus the text is the only information from which the student can draw meaning. Students are required to take meaning from text and to elaborate on it, either by utilizing the information within some other context, providing an opinion on or rating the information relayed, or reorganizing the information to make it applicable to a task. Students can only accomplish these types of information application if they have first been able to extract the information from the context within which it is presented.

An example of the importance of literacy learning which includes a focus on decontextualization of language is given by Brice Heath (1982) in her account of three communities in the South Eastern United States. Each of the communities is literate, though each places a different value on literacy,

and in turn, relays different information to their preschool aged children about literacy and its function in life. Brice Heath describes one community in which literacy is valued and encouraged but decontextualization of language is not. Brice Heath's fictionally named community of Roadville is one in which books are read to children and children are asked questions about the books' stories. However, it is not a common practice in Roadville to assist children in extending the events in stories to be compared with similar events in the children's lives. Without opportunities to shift new information into different frames of reference, children's knowledge gained from books tends to be static and rote. Once these children begin school, they typically experience some success in the literacy tasks of primary grades, being able to sound out words and take some meaning from the words sufficient to answer questions with information taken directly from the text. However, by Grade Four, these children are unable to function independently in the more complex literacy tasks expected of them such as comparing events, imagining alternate outcomes to stories, or taking information learned in a certain context and applying it to another context. In Roadville, children who are taught to read without being taught to understand language regardless of contextual information cannot keep up with literacy based school lessons by Grade Four.

In the same study, Brice Heath (1982) describes another community, Maintown, in which preschool aged children are

called upon to take information from books and to explore the information by drawing parallels with life experiences. Initially Maintown children learn to label in response to questions like "what is X?", then they learn to talk about the information in response to questions like "why did it happen?", or "what made it good?". Given this practice with using the information found in books to do different things, it is not surprising that these children do not experience the same declining performance by Grade Four as do Roadville children. Rather, the Maintown children are able to take the information found in books, decontextualize it, and set it in a new context in order to construct new scenarios. This decontextualization of language is expected in higher grades in school and may be responsible for the failure of some children to achieve school success beyond this point.

This project will look at early phases of decontextualization of language, including the ability to recognize print when its physical context is removed, and the ability to extract meaning from language in its original context and extend the meaning in an alternate context.

Literate Language

Literate language is a third crucial component of literacy. To become an adept reader, a child must learn to use language in the way required in written text. During the preschool years we begin to see a literate bias in the

way some children use oral language. For example, the use of endophoric reference to refer to a referent makes oral language more explicit and is a requirement of written language. This literate bias has been described as "literate language," a term that refers to the style of discourse found in written language, the language of the classroom, and the literate features of oral language.

Reeder et al. (1996) further use the term to describe the general construct of literacy at the preschool level. In this view, the construct is different at different developmental stages. Conventional notions of literacy reflect an adult version of literacy. Literate language conveys what preschoolers know of literacy. This theoretical perspective suggests that literacy exists across developmental stages, but in different forms at different stages. The term literate language will be adopted for the purpose of the present study to indicate those features of language which are considered to develop into conventional literacy in older children and adults. One of the values in studying literate language is to observe the progression children are making toward learning to use language in its written form.

What indicates a literate bias? Features such as spontaneous oral discourse, book reading discourse, and definitions have been studied by Reeder (1996), and based on these measures the researcher proposes a path taken by children who are developing literate language. As reviewed

above, children initially comprehend written language based on the context in which it is presented with very little differentiated awareness of the linguistic information present. In an intermediate step, they comprehend written language based on the text presented, with a new appreciation of and attention to the linguistic information in the message, and less attention given to the contextual information. Finally, children integrate both the linguistic information present (text) and the surrounding information (context) in order to comprehend language (Reeder, p.78).

An increasing ability to decontextualize language may also be detectable in the comments children make. As children develop the ability to pull the linguistic information out of a surrounding context and do something with that information, they can incorporate more of this decontextualized information in the comments they make. Initially, a child, upon hearing a story, may only comment on the story events and the characters in the story. However, as a child develops her skills at extracting linguistic information and at subjecting the information to further thought, she may begin to draw links between the story character's experiences and her own experiences. She may also be able to think about and comment on the act of reading as the teacher reads the story. Such comments would reflect her expanded abilities with language, and specifically, a literate bias in her language. A story

reading event provides opportunity for such literate language to be used.

Watson and Olson (1987, cited in Watson, 1996) had previously argued that certain features of language, e.g., word definitions, come about as a child becomes literate. Watson (1996) extends this argument and notes that it is these features of discourse which can predict a child's emerging literacy. She observed and analyzed the discourse occurring during book sharing of parent-child dyads. She found that it was not necessarily direct teaching by the parent that was related to the development of literacy skills, but a responsive and literate style of conversation, including talk about absent references, i.e., decontextualizion of linguistic information, specific labeling, and lack of negative feedback.

Goelman (1996) likewise found that features of the spontaneous oral discourse of preschool aged children, those which were considered to constitute a literate bias, were correlated with certain aspects of early literacy. Goelman analyzed features of child and adult talk during book reading and during symbolic play. The features studied were: (a) the use of psychological verbs such as know, feel or say, which indicate a speaker's ability to think about language, thought and affect; (b) the use of cohesive devices such as endophora, both forward reference within a sentence and backward reference within a sentence, which indicates the use of explicit linguistic reference; and (c)

the presence of cognitive demands, such as demands for labeling, description, recall (specifically, recall of a story) which requires access to narrative discourse, and explanation, which requires an articulation of causal links and linguistic links. This latter category also included demands which probed knowledge of literacy and its conventions. Goelman found that these literate features of a child's discourse were correlated with a child's knowledge of symbol concepts (environmental print awareness), print concepts (book and print orientation and word boundaries), and story concepts (use of linguistic devices and multiple story components while telling a story aided by a picture). The same children who scored high on the literacy measures were using literate features in their spontaneous talk.

Watson (1985) described the acquisition of word definitions as a move to a literate register. Definitions provide a good instance of a component of language learning in which the child learns to follow a conventional pattern of relaying information. This follows along the lines of literate language in that a definition must be made explicit for the listener, even though, in a typical scenario, the request for a definition is made by a teacher or parent who then becomes the listener. The adult listener knows the answer and often has the particular form of the answer in mind when asking the child for the definition. So the child must learn to provide the information in a manner which is conventional and explicit, both features of relaying

information by way of written message, when the reader is not present at the same time and place as the writer. Watson describes the stages which children go through in their rendering of a definition, each step becoming more explicit and more conventional than the last. The hierarchy proposed by Watson for definition development is as follows:

1. NP1___ (e.g. cats eat food).
2. NP1 is ___ (e.g. a cat is furry).
3. NP1 is NP2 (e.g. a cat is something that has fur).
4. NP1 is NP2sc [sc = superordinate category] (e.g. a cat is an animal with four legs).

(Watson, 1985, p. 191)

Watson (1985) argued that children's progression through the forms of definition indicates that they are paying increasing attention to the form of the answer used in a literate society. The samples of discourse between preschoolers and adults, which Watson dubs "teacher talk" (p.193) evidence the fact that children are encouraged to transform their definition style to match convention. Adults ask "what is X?", and then further probe for conventional definitions by following up a child's response "I have one," with "But what *is* X?" and "What does X do?" Thus children are encouraged to become more and more explicit in their use of language, a skill which will serve them well in their writing and reading.

Summary

Three areas of preliteracy have been explored. Book handling, which demonstrates familiarity with books, is developed based on exposure to books, typically in the home or school environment. Meaning in print is comprehended when children are able to decontextualize the print from its physical context, as well as the meaning from the print. Literate language represents the features of children's oral language that are moving toward the explicit and conventional type of language used in written text. The Preschool Library program is expected to influence all of these areas of preliteracy. As books are brought home by children, the home literacy environment is affected. When the books are read to children by teachers and parents, book handling behaviours are modeled for the children. As well, during these readings, an optimal language learning situation is created, where adult-child discourse facilitates literate language use.

What do children say during story time? What types of comments are made, and what do the comments reveal about their language abilities and development of literate language? The ability to decontextualize language is evidenced in comments which compare the story the child is hearing with the child's own experiences. The child is able

to take an event from the story, remove it from the context of the story (i.e., extract the linguistic content), see it as an event which could happen to someone else, perhaps herself or the people she knows, and search her own memories for experiences that are similar. Once she has found a matching experience, she can compare it with the event from the story and decide what parts are the same, and what parts are different. Furthermore, she may be able to recall what happened next in her experience, what resulted from the remembered event. This could lead to a prediction of what might happen next to the character in the story. A teacher could facilitate this kind of comparison of real events to story events with questions which prompt memories, such as; "Did this ever happen to you?" and "What did you do next?", "What do you think (the character) will do next?".

In the above hypothetical description of story time conversations between adult and child, the child is encouraged to use the information comprehended from the text. The story time conversation has been documented by researchers (Cochran-Smith, 1986; Snow, 1983; Snow & Goldfield, 1983; Watson, 1996) and has been argued to be an ideal situation for language facilitation, particularly for the skills of language decontextualization. Note the similarity between the style of conversation described above and the style of conversation described earlier as classroom talk (Mehan, 1979). By the time children reach school there is some expectation that they will be able to participate in

the teacher-student exchanges of Question/Response/Evaluation. The early experience gained by preschoolers at story time will help prepare them not only for the thinking processes and literate language skills required for reading at school but also for the form of conversation within which the learning will occur.

Given the potential of the Preschool Library program to influence preliteracy skills, the current project asks the question: Do children who participate in the Preschool Library program show more improvement than a control group in handling books, producing conventional definitions, expanding comments to alternate contexts, and comprehending print in reduced context?

CHAPTER II

Method

The preliteracy skills of preschool aged children were evaluated in the context of a preschool library program, using a pre and post measure research design. Participants were preschool aged children at two daycares. Children from one daycare constituted the experimental group and children from another daycare constituted the control group.

Preschool Library

Preschool Library lasted for a period of seven weeks. Books were brought in to the experimental daycare to provide a library within the daycare. Second copies of each book were available as part of a book lending library, from which children could choose books to borrow each week.

Preschool Library was conducted one morning a week at the experimental daycare. One primary librarian ran the library with the assistance of the experimenter. Upon arrival at daycare, children and their parents signed in books they had taken home, and comments about the books were recorded by the primary librarian and the experimenter. During regular activities of the morning session at the daycare (circle time, snack time, outdoor time, arts and crafts time, free play time) the primary librarian read books from the library to the children. Near the end of the morning session, the children selected and signed out the books they would take home for that week. Books from the library were also read at the daycare during the week by the daycare teachers. Refer to Wastie (1996) for details of the Preschool Library.

The experimenter acted as primary librarian for one of the weekly sessions of Preschool Library; however, she did not read books with the children. During this session the experimenter only signed in books that were returned by children, assisted children in choosing books, and signed out the books for children to take home. In order to control for the amount of time spent by the experimenter at the experimental daycare during the seven weeks of Preschool Library, and the resulting familiarity with the children, the experimenter spent 90 minutes each week at the control daycare, participating in outdoor play time.

Participants

Participants in the present research project included 26 preschool-aged children and their parents. Evaluation of preliteracy skills of children in an experimental group (N=16) and children in a control group (N=10) consisted of three components: observations, parent interviews, and preliteracy/language tasks including a definition task, a bookskills task, and an environmental print awareness task. All children attended one of two daycares in the Mount Pleasant area of Vancouver. Both daycare groups included children for whom English was a second language, children who had been accepted into special needs designated spots, and children who, although not designated, were identified by teachers at the daycares to have some special needs with respect to behaviour and language issues. The group of children from the experimental group was roughly matched as a group with the children from the control group in terms of composition based on age range, and English as a second language. None of the children in either group had attended kindergarten.

The 16 children in the experimental group all attended Nanook YMCA Day Care. The children's ages ranged from 36 to 73 months, with a mean age of 51.1 months and a standard deviation of 11.8. For analysis purposes this group was divided into two groups by age (48 months and older and under 48 months), resulting in a mean age of 59.7 months,

standard deviation 7.8, for the older group, and a mean of 40.1, standard deviation 4.4, for the younger group. Four children in the group were learning English as a second language.

A control group consisted of 10 children within a similar age range from Mount Pleasant Child Care Centre. The ages of the Mount Pleasant Centre children ranged from 42 to 65 months with a mean age of 56.8 months and a standard deviation of 7.4. Three children in the control group were learning English as a second language.

Procedures

Parents of children were interviewed prior to the library program to establish the home literacy environment of each child. Preliteracy skills were measured before and after the Preschool Library program. The behaviours used to measure preliteracy skills were (a) comments and questions uttered during a story telling event, (b) providing a definition for an object, (c) book handling, and (d) interpretation of environmental print. Preschool Library book lending occurred once a week, and children and their parents took books home for one week intervals. During the seven weeks of Preschool Library, parents and teachers were encouraged to read to the children as often as possible. Following the final week of Preschool Library, the children's preliteracy skills were re-evaluated.

Parent Interviews

Interviews were conducted with the parents in order to establish an estimate of the amount of exposure each child had to books and literacy promoting activities prior to the introduction of the preschool library program. An attempt was made to determine both those activities that the child participated in and those activities that were modelled by the parents. Interviews also attempted to identify attitudes of parents toward literacy learning. Examples of interview questions include the following: What printed material is in your home? What reading/writing activities occur in your home? (Refer to the complete question list in Appendix A.)

Parents of children in the experimental group were interviewed during the week prior to the start of the Preschool Library. Parents of children in the control group were interviewed during the following week.

Interviews lasted approximately ten minutes each and were conducted at the daycares, at times which were convenient for the parents (e.g. as they picked up their children at the daycares). The experimenter conducted the interviews using a checklist of questions and manually recorded answers to the questions as the interviews proceeded.

At the time of the interview the experimenter attempted to answer any general questions parents had about the Preschool Library or the preliteracy tasks; however the exact nature of the language and preliteracy tasks was not revealed. This was done in order to ensure that parents did not inadvertently or otherwise train their children to perform the experimental tasks.

The answers to the interviews were compiled for each daycare and recorded as percentages of each type of answer given per daycare.

Observations

Observations were made of the children during a typical story time interaction with a familiar adult in order to establish the types of utterances the children made during these interactions. The observations were made before and after the Preschool Library program in order to determine whether a shift occurred in the types of comments made by the children which would indicate a move toward literate characteristics of language.

Children in both groups were observed by the experimenter during story telling at the daycares, and their utterances were recorded and coded. A teacher from the daycare told the story in each case and was not given any special instructions about story telling for this task. The teacher was told that the experimenter wished to record a

typical story time event in order to observe all comments made by the children. The teacher wore a remote microphone, which transmitted to the tape recorder. The experimenter monitored the microphone and also recorded comments such as children's names and explanations of the interactions that would later assist in analyzing the recorded utterances. During all observation periods the experimenter was located in an inconspicuous area of the daycare and did not interact with the children.

Observations of story times took place on two consecutive days. Observations lasted for the duration of one story telling event (one book was read). This procedure was carried out during the week before the start of Preschool Library for the experimental daycare, and during the following week for the control daycare. The procedure was repeated during the final week of Preschool Library for the experimental group and during the following week for the control group.

Utterances made by the children during these observation periods were coded in the following manner. Utterances that were directly about the story being told were coded as S. Utterances which were related to the story but involved an expansion to another topic or to personal experience were coded as E. Utterances that involved talk about books or about the act of reading were coded as R. All other utterances such as those directed at other

children or other activities in the daycare, but not apparently related to reading or to the story were coded 0.

Preliteracy tasks

A set of preliteracy measures was administered by the experimenter for each child in the experimental group during the week prior to the preschool library and for each child in the control group during the following week. The same set of preliteracy measures was again administered by the experimenter for each child in the experimental group during the week immediately following the final week of Preschool Library, and for each child in the control group during the following week. Each testing session lasted between 20 and 30 minutes. During a session, the experimenter administered the definition task, the bookskills checklist, and the environmental print awareness task to a child. The sessions occurred in an area of each day care which was normally used for quiet activities.

Definitions.

A definition task was administered in order to assess the child's ability to use language in a conventional manner, reflecting a literate bias in the child's language. This literate bias may in turn be a reflection of experience in joint book reading with an adult (Watson, 1996).

When a child entered the testing area, the experimenter held up an opaque cloth bag containing a book. The experimenter told the child that a surprise was in the bag and asked the child to guess what it was. The child was given as many hints as were necessary for him/her to guess that a book was in the bag, e.g., the child was allowed to feel the bag and peek inside the bag, and if necessary, the experimenter whispered to the child that it was a book. The experimenter asked the following set of questions in order to encourage the child to give a definition of the word 'book': "What is a book?" "What ***is*** a book?" If at this time the child has not mentioned any function associated with the book, a further probe was given: "What is a book ***for***?" The probes for this definition task were based on Watson (1985).

This task was video recorded, so the experimenter did not manually record the child's definition. Consent for videotaping was obtained within the general consent form signed by each parent. Each child was encouraged for any answer given.

Bookskills checklist.

A checklist was administered in order to assess the child's ability to handle a book in a conventional manner and to identify certain components of a book. These skills reflect a growing familiarity with books and are believed to

be required before conventional reading can occur (after Clay, 1972, 1985, as cited in Garton & Pratt, 1989).

In this task, the experimenter gave the child a number of instructions involving a book. Each instruction was given twice, worded slightly differently each time. In these alternate instructions meaning was maintained but the reworded version of the instruction allowed a greater chance that the child would understand the vocabulary used.

The experimenter began a session by stating to the child, "We're going to look at a book." The experimenter handed a book to the child, upside down and backwards and said, "Show me the cover of the book." If the child did not turn the book upright, the experimenter turned the book upright. The experimenter then said, "Where is the name of the book?" Next, the experimenter said, "Show me the first page we read." If the child had not spontaneously opened the book by this point, the experimenter opened the book. The experimenter then said, "Show me a word," then, "Show me a picture." Then the experimenter said "Show me how you read a book." The experimenter observed the child for behaviours such as pointing to words or mimicking reading words, moving fingers and/or eyes from the top to the bottom of the page, moving fingers and/or eyes from the left to the right of the page, turning pages in a conventional manner (in the correct direction, one page at a time), and telling the story based on the pictures.

After each instruction set, the examiner waited for a 10 count then noted the child's response. The instruction was only repeated once if the child indicated that she/he did not hear the instruction, or if the child asked for a repetition. See Appendix B for the complete bookskills checklist used by the examiner during administration of this task. The child's responses were manually recorded on the checklist form by the experimenter during the task. This task was also videotaped to assist in confirmation of the child's responses during analysis of the responses. Consent for videotaping was obtained within the general consent form signed by each parent.

Environmental print awareness.

A task of recognition of familiar print in the environment was administered in order to assess the child's ability to interpret printed messages with fewer and fewer contextual cues. This skill reflects an ability to identify print as the meaningful component of the message and is a precursor to understanding printed language (Goelman, 1996).

The environmental print awareness task used in the present experiment was based on the non-verbal task described by Gillam and Johnston (1985). Children were shown six items of high frequency environmental print, each one presented along with a four item product array. The stimulus products used for this task were: Crest toothpaste

presented on a toothbrush, Jell-O in a bowl, Coca-Cola in a clear glass, a Band-Aid adhered to a card, Smarties on a plate, and Cheerios in a bowl. Each item was presented under three different conditions. The conditions were as follows: Condition 1 - Print was presented as it appears in the environment. For example, an entire empty box of cereal was presented. Condition 2 - Print was presented in the same form as it appears in the environment but without the packaging context. For example, the name of the cereal was cut out from a box of cereal and the cut-out name was presented, glued on a 26.5 cm x 12 cm coloured piece of poster board. Condition 3 - Print was presented without environmental context. For example, the name of the cereal was typed in plain black print on a 15 cm x 10 cm white cue card and the card was presented to the child.

In each condition the child was asked to match the print to the item it represented, given a choice of four items. The child was asked, "What goes with this?" The child was required to choose the item by pointing to it or by placing the print in front of the matching item. At any given time, items other than the four being presented were hidden from the child's view, by placing them under the presentation table which was covered with a floor length table cloth. In between presentations, while the experimenter was changing the array of items on the presentation table, the child sat in a chair which was placed approximately 2 metres away from the table, and was

instructed to close his or her eyes. When the new array was ready, the experimenter instructed the child to approach the table and look at all of the things on the table. Then the task instruction was given.

Children were verbally encouraged to point or choose. One training trial was given prior to the test items in order to familiarize the children with the task. The training trial stimulus item was milk, with foils not including any of the test stimulus items.

Spatial arrangement of the four items was randomized so that no pattern in the placement of the correct choice item was apparent.

Each child was presented with the six stimulus items in a different order for each experimental condition. This was done to control for any effects of children remembering the order of presentation of items. A Latin Square rotation was used so that each child was presented with one of three orders. This was done to control for the order of presentation of an item affecting how that item was perceived by the child.

When a child was invited to participate in the tasks and indicated unwillingness, he or she was not required to participate at that time. The child was invited back at another time by the experimenter and by the daycare teacher. If the child declined the invitation, then he or she was excluded from the experiment. Three 3-year-olds from each daycare were excluded in this way.

Scoring

Scoring for the comments during story time was done by totalling the numbers of each type of comment and calculating percentages for each total.

Definitions were scored according to Litowitz's (1977) levels for children's definitions. Litowitz's scoring system takes into consideration the content of the definition as it moves from individual experience to socially shared experience, and the form of the definition as it moves from actual predicates to hypothetical predicates to conventional adult definitional forms. Criteria for each level defined by Litowitz are given below along with examples for each type of response taken from the current project.

Level 1: "a non-verbal statement or a verbal statement which is semantically empty"(p.294). Behaviours include gestures and deictic language.

Ex: "Like that one." (points)

"Book."

Level 2: "word associations to the original stimulus word"(p.294). Responses are verbal statements that cannot be the same as the stimulus word and cannot be semantically empty.

Ex: "Looking."

"A Barney."

"Read."

Level 3: "concrete example of actual experience associated as a predicate to the stimulus word"(p.295). Responses are more complete in form but only refer to idiosyncratic meaning, not socially shared meaning, or consist of a listing of attributes or associations.

Ex: "A story book and I got a Dalmatian one."

"In English."

"A book from the library."

Level 4: Some awareness of a definitional form (a set predicate) and a beginning abstraction from the individual experience towards general social information. Responses include hypothetical situational forms 'you could...', 'when you...', or early approximations of definitional forms such as 'an x is for y ing'.

Ex: "A book that opens page and you read and have pictures on them."

"It's to read."

"For reading."

Level 4+: Beyond level 4 but does not yet reach full Level 5.

Ex: "A book is for reading."

Level 5: pure Aristotelian definition.

Ex: A book is an object used for reading.

Children at Level 1 were awarded one point, children at Level 2, two points, etc.

The bookskills checklist was scored as follows: Questions 1 and 2 (orienting to the front of the book) were awarded a total of one point if the child answered both questions correctly. Question 3 (orienting to the starting page) was awarded one point if answered correctly. Questions 4 and 5 (identifying a word and a picture) were awarded one point if both were answered correctly. Question 6 was awarded one point for demonstrating each of two specific behaviours; turning pages appropriately and telling the story by the pictures. A total of two points could be awarded for question 6.

The environmental print task was scored by awarding one point for each item identified correctly, for a total of 18 points, or 6 points per condition.

CHAPTER III

Results

Daycare Observations and Parent Interviews

It was important to determine for the children in the present study, what preliteracy training and encouragement was already occurring before the start of the study. To this end, (a) the daycares were observed by the experimenter for literacy activities and literate surroundings and (b) parent interviews were conducted which asked questions pertaining to home literacy practices. These observations helped to determine whether important differences existed between the two daycare groups before the onset of the Preschool Library.

Observations at the Daycares

Observations of the daycares conducted prior to beginning the treatment program helped to establish the

literacy environments that existed in the daycares. During the initial observations, teachers at the daycares were aware of the general nature of the present project (an early literacy program), but were not specifically aware that an observation of the literacy environment was being conducted.

Observations at the experimental daycare. Upon initial survey, no books were visible at the daycare. After a brief search, a milk crate was found on a low shelf. The crate contained catalogues and magazines for toys and baby products. The crate was covered with a heavy board. A bookshelf was also found in the corner of the daycare. The bookshelf was not initially visible due to an easel/marker board that had been pushed in front of the shelf, which covered approximately 3/4 of the shelf. The shelf contained approximately 10 books including counting books, Sesame Street board books, and books about trucks. Most of the books were torn and worn.

Posters on the walls containing small print displayed aspects of Filipino culture, which was the culture of the month at that time.

A teacher at the daycare was observed to give a book to a child at a table. The teacher attempted to assist the child with page turning, but the child resisted, cried, and pulled the book away from the teacher.

Observations at the control daycare. Two bookshelves were observed at the daycare, each half full of books, totaling approximately 35 books. Books included mainly large, hardcover story books (stories about animals, emotions, counting, trains, dinosaurs, classic fairy tales, bedtime, bottles, etc.). Some of the books were property of the public library. Some books were stored in clear plastic bags and included audiocassettes of the stories. Near the bookshelves was a listening centre with an audiorecorder and four sets of headphones. Children's story books were also present in a crate by the door to outside.

Two posters of the alphabet were present on the walls.

The children were instructed to choose a seat for reading time. Prior to this, one child had been selected to take books from the shelves and place one book at each seat around the tables. Children selected seats and some children traded books. The teacher guided the children in a singing activity, during which time the children were allowed to silently look at their books. One child put a book on his head and the teacher took the book from his head, put it on the table in front of the child and opened it. Some children asked adults (the teacher not leading the singing, the researcher) to read the books to them, but they were instructed that only silent reading was allowed at that time. One child began to cry in response to the instruction.

It was apparent from the initial observations, that the control daycare was an environment with more books accessible to children. Also, the children at the control daycare demonstrated familiarity with quiet reading time activities, suggesting that these were a regular part of the daycare routine. Overall, the children in the control daycare appeared to receive more literacy oriented activity than the children in the experimental group.

Parent Interviews

Interviews were conducted at the daycares prior to the training program in order to help determine the literacy environment already established for the children in their homes. Questions on the questionnaire were open-ended. The answers to the questionnaires were grouped, and percentages were calculated for each type of response. Answers for parents from each daycare are given in Table 1.

The data from the interviews reveal that all parents in the present study read to their children. This reading is typically done at bedtime. A range of activities exist which parents consider to be reading and writing activities, and all parents indicated on the interviews that at least some such activities are experienced by the children at home. Some parents from each group indicated that they think reading should begin at school, others at home.

Table 1

Responses to Parent Interviews.

		Experimental (%)	Control (%)
What languages are spoken in your home?	English only	17.6	50
	Other only	17.6	25
	English plus one other	52.9	25
	English plus two others	11.8	0
What reading materials are in your home?	Children's books only	5.9	16.7
	Adult's books only		
	Both	82.4	83.3
	None	11.8	
Where should children learn to read and write?	At home	35.3	8.3
	At school	23.5	25
	Home and school	29.4	66.7
	Everywhere	11.8	
When should children learn to read and write?	Five or older	41.2	50
	Under five	47.1	33.3
	When ready	11.8	16.7
Do you read to your child?	Yes	100	100
	No	0	0
How often?	Daily	58.8	75
	2-6 times per week	35.3	25
	Once per week	5.9	
At what times?	Bedtime	94.1	100
	Other	11.8	8.3
What reading activities occur in your home?	ABC's	35.3	58.3
	Computer	5.9	16.7
	Practice with siblings	23.5	16.7
	Exercise books	5.9	41.7
	Audio tapes	5.9	16.7
What writing activities occur in your home?	Colouring	64.7	50
	Write name	11.8	33.3
	Watch adult write	5.9	8.3
	Practice with siblings	5.9	16.7
	Write letters to send	11.8	8.3

Differences between the interview responses for the two groups which are notable include: from the experimental daycare, 17.6% of children as compared to 50% from the control daycare are monolingual English speakers; 11.8% of responses from the experimental daycare as compared to 0% from the control daycare indicated that homes contained no reading materials; 35.3% of responses from the experimental daycare as compared to 58.3% of responses from the control daycare identified ABC's as a reading activity conducted in the home; 5.9% of responses from the experimental daycare as compared to 41.7% of responses from the control daycare identified working with exercise books as a reading activity conducted in the home; 11.8% of responses from the experimental daycare as compared to 33.3% of responses from the control daycare identified name writing as a writing activity conducted in the home.

The above sets of results established a baseline environment from which the children started. Although no statistical tests were conducted, both the observational data and the interview data seem to indicate that children in the control daycare had access to a more literate environment.

Preliteracy Skills

The present research project used four types of task to measure change in the preliteracy skills and knowledge of

the children in order to address the research question.

Research Question: Did children in the treatment group improve performance on tasks related to preliteracy skills more than children in the control group?

Specifically,

1. Did children in the treatment group improve in reading decontextualized print?
2. Did children in the treatment group improve in book handling and reading like behaviours?
3. Did children in the treatment group improve in giving definitions?
4. During story time at daycare, did children in the treatment group make more comments that expanded on the story content?

Scores from the environmental print task, the bookskills checklist and the definition task were analyzed by Group across Times 1 and 2 using a series of 2-way repeated measures ANOVA. Since the current project took place over a relatively short time period and was intended to be an initial look at the effect of the training program, it was important to capture any change that occurred. Moreover, the cost of a Type 1 error was judged to be low. For these reasons, a p value of 0.1 or less was considered to be significant. Groups were defined by age range and membership in the experimental or control daycare. The

children over 48 months in the experimental daycare were put in Group 1, Older Experimental (OE). The children under 48 months in the experimental daycare were put in Group 2, Younger Experimental (YE). The children over 48 months in the control daycare were put in Group 3, Older Control (OC). Since only one child in the control daycare was under 48 months, he was dropped from the age group analyses. In each ANOVA, Group (3) was treated between subjects and Time (2) was treated within subjects. Other details of the analysis varied by task and are described below.

Environmental Print

1. Did children in the treatment group improve in reading decontextualized print?

The environmental print task was conducted to measure children's ability to read or recognize a familiar printed message with differing amounts of contextual information present with the message. It was expected that the decreasing levels of context would make the messages progressively more difficult for the children to read. It was also expected that the two experimental groups, having received the training program which included exposure to books at the daycare and at home, would improve more than the control group from Time 1 to Time 2.

The environmental print task yielded three sets of scores, each out of a maximum of six. The three scores

represented children's performance on the high, medium and low context tasks.

Means for the ANOVA for Groups across Time for the total environmental print scores are presented in Table 2.

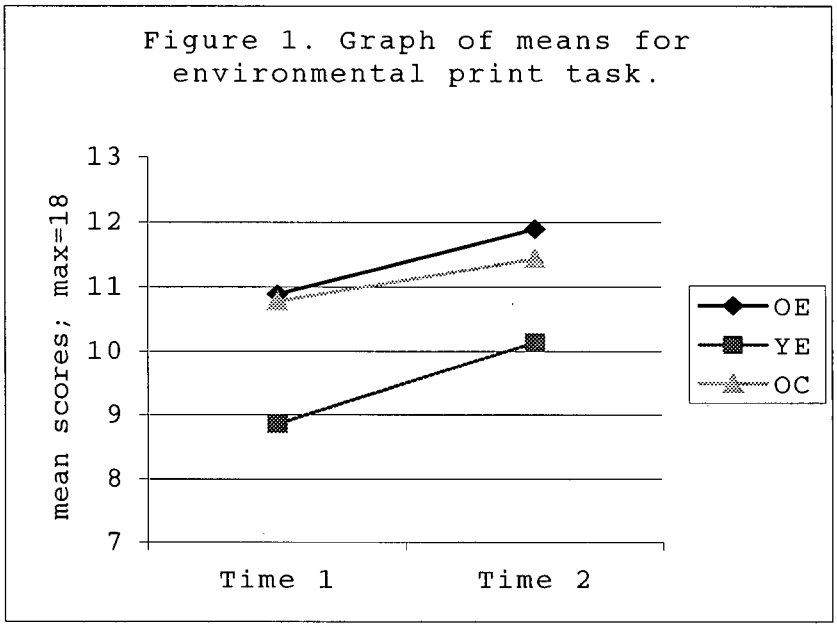
Table 2

Mean Total Score for Environmental Print Task by Group.

Groups	Time 1	Time 2
1-OE	10.89	11.89
2-YE	8.86	10.14
3-OC	10.78	11.44

The results indicate a significant effect of Time, $F=7.79$; $df=1,22$; $p=0.005$ (1-tailed); a significant effect of Group, $F=2.05$; $df=2,22$; $p=0.08$ (1-tailed); and no interaction, $F=0.25$; $df=2,22$; $p=0.39$. The results above are represented in graph format in Figure 1.

As illustrated in Figure 1, the younger group, YE, represented by the dark grey line, performed below the two older Groups, OE and OC. All Groups performed better at Time 2 than at Time 1, suggesting a practice effect or general developmental progress. The black line on the graph, which represents OE, has a steeper slope than that of OC, the light grey line. This may reflect greater



improvement on the part of OE, but this result proved to be statistically unreliable.

The data from the environmental print task was next analyzed by components in order to determine whether effects of training were present on any parts of the task.

The means for the ANOVA for Groups across Time for the scores on parts a, b, and c of the environmental print task are presented in Table 3.

Separate analyses for parts b (medium context) and c (low context) of the environmental print task revealed no significant effects. However, as can be seen in Table 3, it was the low context condition that was primarily responsible for the trend towards an intervention effect seen in the total scores.

Table 3

Mean Total Score for Environmental Print, High, Medium and Low Context Tasks by Group.

Groups	High context		Medium context		Low context	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
1-OE	5.78	6.00	4.22	4.22	0.89	1.67
2-YE	4.57	5.43	3.29	3.57	1.00	1.14
3-OC	5.89	6.00	4.11	4.33	0.78	1.11

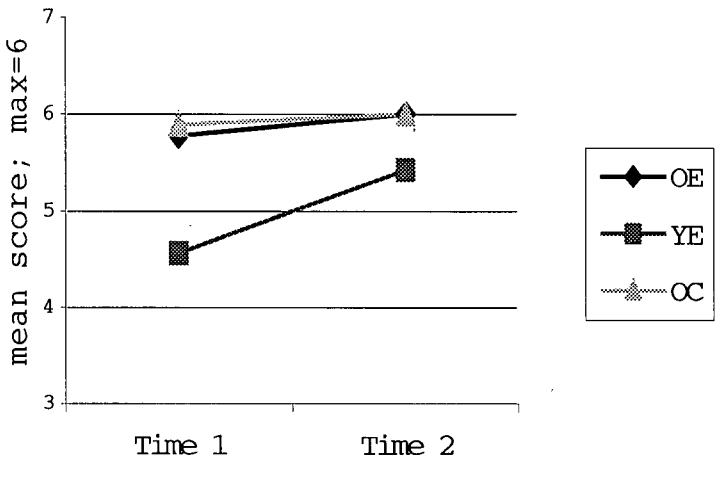
The results for part a (high context) indicate a significant effect of Time, $F=7.56$; $df=1,22$; $p=0.006$ (1-tailed); a significant effect of Group, $F=2.73$; $df=2,22$; $p=0.04$ (1-tailed); and a significant interaction, $F=2.39$; $df=2,22$; $p=0.063$ (1-tailed).

The results from part a are represented in graph format in Figure 2.

As portrayed in Figure 2, the results indicate a ceiling effect for the two older groups, OE and OC, for this part of the task. The graph also portrays that all Groups improved on this part of the task from Time 1 to Time 2, but improvement for the YE group was greater than that seen in the older groups.

The scores for the environmental print task were also analyzed across context condition at Time 1 in order to establish whether the performance in the three context

Figure 2. Graph of means for environmental print task part a (high context condition).



conditions actually represented a developmental sequence.

The means for the ANOVA for Groups across level of context on the environmental print task is represented in Table 4.

Table 4

Mean Total Score for Environmental Print Task by Context.

Groups	High context	Medium context	Low context
1-OE	5.78	4.22	0.89
2-YE	4.57	3.29	1.00
3-OC	5.89	4.11	0.78

The results indicate a significant effect for Context, F=162.21; df=2,44; p=0.00; a significant effect of Group, F=1.95; df=2,22; p=0.08 (1-tailed); and a significant interaction, F=1.76; df=4,44; p=0.08 (1-tailed). The results are given in graph format in Figure 3.

Figure 3. Graph of means for environmental print task across context conditions.

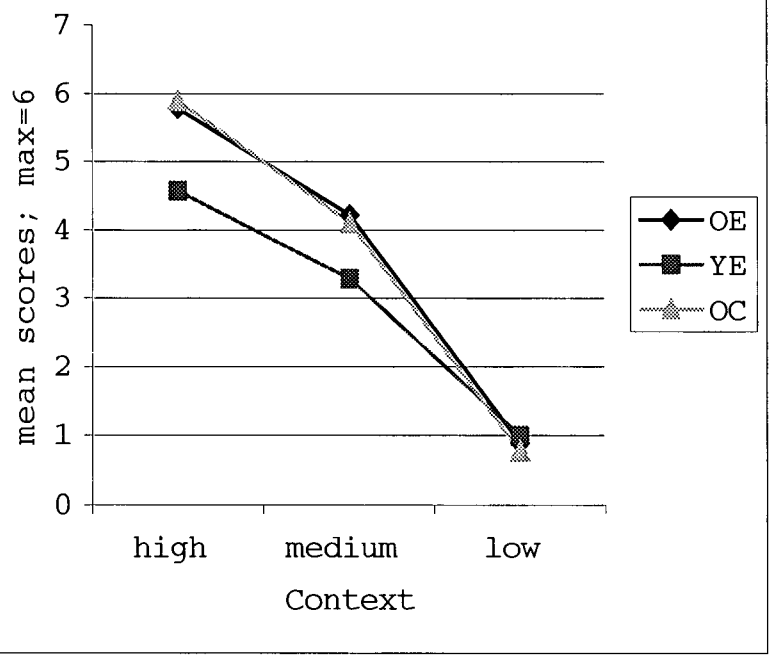


Figure 3 indicates that all three groups did better on the high context condition than on the medium context condition, and better on the medium context condition than on the low context condition. The results also indicate that the older experimental group (OE) and the older control group (OC) performed better than the younger group, and further that they were well matched in terms of their

performance at Time 1 on the three parts of the environmental print task. Floor effects on the low context condition for all three groups explain the significant interaction.

Bookskills

2. Did children in the treatment group improve in book handling and reading like behaviours?

The bookskills checklist was conducted in order to measure each child's ability to handle a book in conventional form and to demonstrate reading like behaviours with a book. It was expected that after participating in the library program with its focus on using books at daycare and at home with adults as models, the experimental group would show more improvement in bookskills than the control group from Time 1 to Time 2.

Results from the bookskills checklist yielded a set of binary scores which indicated whether a target behaviour occurred or not. Questions 1 and 2 on the bookskills checklist, which were interpreted to measure the same knowledge (orientation to the front cover), were collapsed into one score. Similarly, questions 4 and 5 were collapsed (identification of word and picture, and discrimination of the two concepts). Question 6 was scored for two specific behaviours separately: (a) turning pages appropriately and (b) telling the story by the pictures.

A reliability check was conducted for the scoring of Item 6 on the bookskills task since this item required a subjective judgement of behaviour. An independent observer (a graduate student in speech-language pathology) viewed the responses from a selection of children from each Group, at Time 1 and Time 2. This selection included 25% of the children performing the task for Item 6. The observer was naive as to the children's membership in either the experimental or control group. Also the observer was naive as to whether the children's performance was pre or post treatment. The observer scored the items and was found to match the experimenter's scoring at 96% agreement.

The means for the ANOVA for Groups across Time for the total scores on the bookskills checklist are given Table 5.

Table 5

Mean Total Score for Bookskills checklist.

	Bookskills Checklist	
Groups	Time 1	Time2
1-OE	2.67	3.67
2-YE	1.71	2.00
3-OC	3.78	4.22

The results indicate a significant effect of Time, $F=2.38$; $df=1,22$; $p=0.07$ (1-tailed); a significant effect of Group, $F=6.80$; $df=2,22$; $p=0.003$ (1-tailed); and no

interaction, F=0.34; df=2,22; p=0.36 (1-tailed). The results are given in graph format in Figure 4.

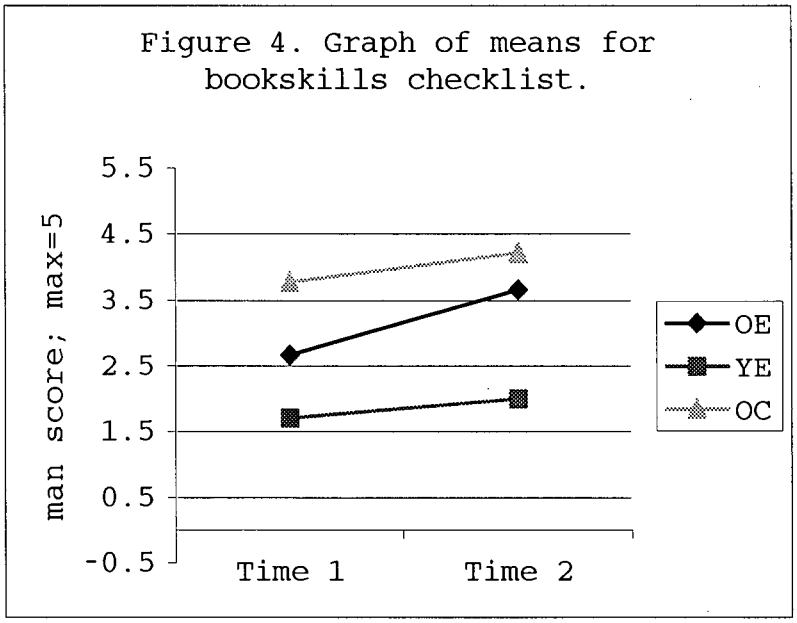


Figure 4 indicates that all groups performed better at Time 2, suggesting a practice effect or general developmental progress. The OC group performed better than the OE group, which in turn performed better than the YE group. The graph also reveals a steeper slope for the dark grey line representing OE than for the light grey line representing OC. This may suggest that OE improved more than OC, but this result proved to be statistically unreliable.

The data from the bookskills checklist was then analyzed by its separate components in order to determine whether significant change occurred within the parts of the task. Question 6 was analyzed by its individual parts; 6-

pages (does the child turn the pages appropriately?), and 6-pictures (does the child tell the story by the pictures?).

The means for the ANOVA for Groups across Time for the scores on Questions 1 and 2 (orient to cover), Question 3 (starting page), Questions 4 and 5 (words and pictures), Question 6 (turn pages, tell story by the pictures) of the bookskills are given in Table 6.

Table 6

Mean Score for Components of Bookskills Checklist by Group.

	Bookskills checklist									
Groups	Orient to Cover		Starting Page		Words & Pictures		Turn Pages		Story by Pictures	
	max.=1		max.=1		max.=1		max.=1		max.=1	
	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
1-OE	0.33	0.33	0.44	0.67	0.22	0.44	0.11	0.67	0.22	0.78
2-YE	0.00	0.14	0.43	0.29	0.14	0.14	0.00	0.57	0.14	0.14
3-OC	0.78	0.67	0.67	0.78	0.56	0.44	0.33	0.67	0.22	0.56

The results for Questions 1 and 2 (orient to cover) indicate no effect of Time, $F=0.02$; $df=1,22$; $p=0.45$ (1-tailed); a significant effect of Group, $F=5.82$; $df=2,22$; $p=0.005$ (1-tailed); and no interaction, $F=0.75$; $df=2,22$; $p=0.24$ (1-tailed).

As seen in Table 6, the OC group performed more strongly than either the OE or the YE group.

The results for Question 6-pages indicates a significant effect of Time, F=21.65; df=1,22; p=0.00006 (1-tailed); no effect of Group, F=0.71; df=2,22; p=0.25 (1-tailed); and no interaction, F=0.56; df=2,22; p=0.29 (1-tailed).

The results for Question 6-pictures indicates a significant effect of Time, F=7.65; df=1,22; p=0.006 (1-tailed); a significant effect of Group, F=2.06; df=2,22; p=0.08 (1-tailed); and a significant interaction, F=2.15; df=2,22; p=0.07 (1-tailed).

The results for Question 6-pages and Question 6-pictures are given in graph format in Figure 5 and Figure 6 respectively.

Figure 5. Graph of means for bookskills checklist Question 6 (turning pages).

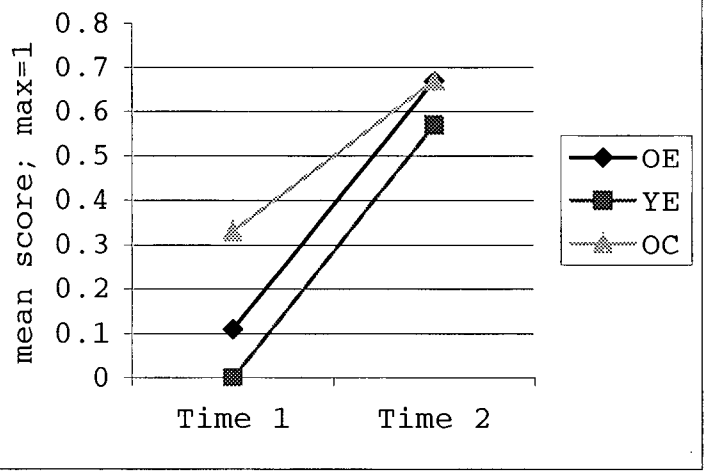


Figure 5 illustrates that all children performed better at Time 2, suggesting a practice effect or general developmental progress. The figure also portrays that the slope of the dark grey line (OE) is steeper than that of the light grey line (OC), suggesting that OE may have improved more than OC, but this result proved to be statistically unreliable.

Figure 6. Graph of means for bookskills checklist Question 6 (telling story by the pictures).

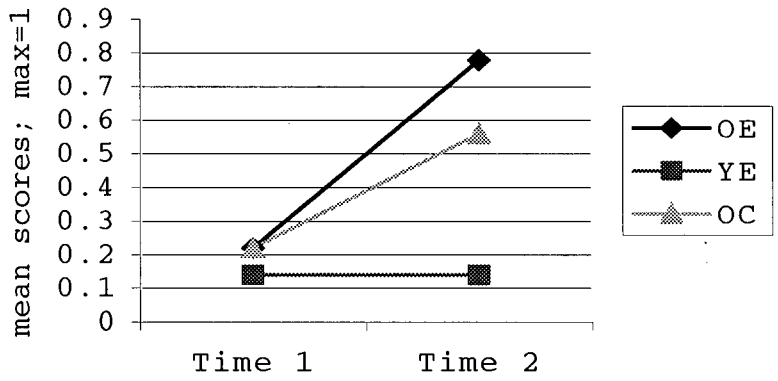


Figure 6 indicates an overall significant effect of Time, suggesting a practice effect or general developmental progress. The figure also indicates that the lower performance of the younger group accounts for both the Group effect and the significant interaction effect. Finally, the slope of the dark grey line (OE) is steeper than that of the

light grey line (OC), suggesting that the OE group improved more than the OC group.

Definitions

3. Did children in the treatment group improve in giving definitions?

A definition task was administered in order to determine the children's ability to provide a definition for an object, thereby demonstrating use of literacy based language and conventional definition form. It was expected that the children in the experimental group after receiving the training program, which focused on language use around books, would improve more than the control group from Time 1 to Time 2.

Definitions were scored according to Litowitz's (1977) levels for children's definitions as presented in Chapter 2. Litowitz's Levels take into consideration the content and the form of the definition. Levels 1 through 5 reflect a developmental sequence. No child in the current study gave a definition at Level five. Children who did not meet the requirements for Level 1 were also noted.

The percentages of children from each Level at Times 1 and 2 are given in Table 7.

Experimental and control groups performed better on the definitional task at Time 2 than at Time 1. The

Table 7

Percentages of Subjects at Levels on Definitional Task.

Groups		Level 0	Level 1	Level 2	Level 3	Level 4	Level 4+
Experimental	T1	19	12.5	12.5	25	25	6
N=16	T2	12.5	12.5	12.5	6	56.5	0
Control	T1	10	10	30	10	40	0
N=10	T2	0	0	30	10	60	0

experimental group scored 25% of their responses at Level 4 at Time 1, compared to 56.5% at Time 2. The control group scored 40 % of their responses at Level 4 at Time 1, compared to 60% at Time 2. This suggests that both groups produced more Level 4 responses, and therefore more mature responses at Time 2 than at Time 1.

The data was then analysed to reveal the number of children showing changes from Time 1 to Time 2. Changes in the negative direction, no change, and changes in the positive direction are presented in Table 8.

Table 8

Numbers of Subjects That Demonstrated a Change in Level of Definition.

Groups	Negative change	No change	Positive change
OE (n=9)	1	6	2
OC (n=9)	2	3	4
YE (n=7)	2	1	4
YC (n=1)			1

(Note: The younger control group (YC) was not included in other analyses due to the small group size (n=1). It is included here to demonstrate the changes that occurred in definition Levels.)

Overall, 19% of children in the experimental group produced a lower Level definition at Time 2 than at Time 1, compared to 20% of children in the control group. In the experimental group, 44% produced the same Level definition at both times, compared to 30% in the control group. In the experimental group, 37% produced a higher Level definition at Time 2 than at Time 1, compared to 50% in the control group.

Five children, three from the control group and two from the experimental group, produced definitions at Time 2 that were two or more Levels higher than they produced at Time 1.

These results indicate that the experimental and control groups performed essentially the same on this task.

Storytime Comments

4. During story time at daycare, did children in the treatment group make more comments that expanded on the story content?

Storytime comments were recorded and scored in order to determine whether children's spontaneous comments in the daycares involved literate language, such as expansions from the story into life experiences. It was expected that for the children in the experimental group, more comments would be expansions of the story at Time 2 than at Time 1, as a result of their increased exposure to story telling and language use around books.

Comments at story times were scored as one of: S (directly related to the story), E (expanded from the direct story content), R (related to books or the act of reading), O (other). Numbers of each type of comment were accumulated over the two pre-test story times to create the Time 1 values. Similarly, numbers of each type of comment were accumulated over the two post-test story times to create the Time 2 values. This was done for both the experimental and the control schools.

The percentages of each type of comment are presented in Table 9.

Table 9

Percentages of Comment Types for Story Time Observations.

		Experimental	Control
Time 1	S-Story Related Comments	60	85
	E-Expanded Comments	5	6
	R-Comments about Reading	12	8
	O-Other Comments	23	0
Time 2	S-Story Related Comments	50	53
	E-Expanded Comments	26	24
	R-Comments about Reading	7	2
	O-Other Comments	17	20

The percentages of the E and R columns were added together for each group at each Time to form a composite total of those comment types that indicate the use of literate language. At Time 1 the total for the experimental group in the E and R columns was 17%. At Time 2, the total was 33%. At Time 1 the total for the control group in the E and R columns was 14%. At Time 2, the total was 26%. The results indicate that both groups produced a higher proportion of E and R type comments at Time 2 than at Time 1, and that performance between groups was essentially equivalent.

Preliteracy Tasks Combined Analysis

Across the eight sub-tasks analysed parametrically, environmental print part a (high context), part b (medium context), part c (low context), bookskills Questions 1 and 2 (orienting to cover), Question 3 (starting point), Questions 4 and 5 (word and picture identification), Question 6 (turn pages), and Question 6 (tell story by the pictures), seven of them revealed trends that indicated that the experimental group had improved more than the control group. Though these improvements were not found to be statistically reliable when tasks were analysed separately, it is unlikely that seven out of eight tasks would reveal the same trend simply by chance. The probability of such an event was calculated and was found to be less than 0.05, suggesting that the experimental group demonstrated more improvement across tasks than the control group.

Summary of Results

The results indicated that some differences existed between the two daycare groups at the start of the present project. Firstly, initial observations revealed that the control daycare had more books accessible to children than the experimental daycare. As well, the control daycare had

a quiet reading time as a regular activity in the daycare, whereas the experimental daycare did not.

Secondly, parent interviews indicated the following differences between daycare groups: the control daycare had a higher proportion of children who were monolingual English speakers, more homes from the experimental daycare indicated that they had no reading materials at home, the control daycare conducted more school-like reading and writing activities at home, including ABC's, exercise books, and name writing.

Results analysed separately did not reliably indicate improvement due to the Preschool Library program. However, taken together, the trends that occurred across tasks consistently favoured the experimental group, suggesting that the experimental group was affected postively by involvement in the Preschool Library program.

The following results suggested improvement that may be able to be attributed to the Preschool Library, though statistically unreliable: the total scores for the environmental print task, the high context condition on the environmental print task where the younger group showed more improvement than the older groups, the total scores for the bookskills task, the portion of the bookskills task that required turning pages, and the comments during storytime.

Certain results revealed significant differences based on age, where the younger group performed below the older groups. This pattern was present for the following tasks:

the total scores for the environmental print task, the environmental print task across context conditions, the total scores for the bookskills task, and the portion of the bookskills task that required telling story by the pictures.

CHAPTER IV

Discussion

The Preschool Library program (Wastie, 1996) was evaluated during its implementation in a daycare setting involving children between the ages of 3 and 5. Evaluation included measures of preliteracy skills, parent interviews, and observations of the daycare and of storytime. The preliteracy skills measured were those which have been shown to be linked to later reading success. The study involved a control group consisting of a daycare with a group of children roughly matched for age level. Results and analyses from the study are applied to the original hypothesis questions below:

1. Did children in the treatment group improve in reading decontextualized print?

The high context items in the environmental print task did show the experimental group improving more than the control group. However, a ceiling effect occurred for this

part of the task, making findings difficult to interpret. The control group (OC) did not show as much improvement as the experimental group (OE). However, at Time 1 they had obtained quite close to the maximum possible score for the task, making it impossible to measure further growth.

Neither the mid or low context items, nor the task taken in total yielded results that reliably indicated a greater improvement on the part of the experimental group.

2. Did children in the treatment group improve in book handling and reading like behaviours?

Upon analysis of scores for that part of the bookskills checklist involving telling a story from pictures, statistical support was not found to indicate that the experimental group improved more than the control group. Although analysis revealed an interaction effect, it is likely that the difference is present due to the lack of progress seen in the younger experimental group (YE).

The remaining components of the bookskills checklist, as well as the total scores for the bookskills checklist did not yield results which demonstrated that the experimental group had improved more than the control group.

3. Did children in the treatment group improve in giving definitions?

The results from the definition task revealed that improvement occurred across both daycare groups; however,

results did not indicate a greater improvement by the experimental group than by the control group. For both daycares more children produced a Level 4 definition at Time 2 than at Time 1.

4. During story time at daycare, did children in the treatment group make more comments that expanded on the story content?

The results from the observations of storytime, and classification of comments made during storytime revealed that improvement occurred across groups. That is, the proportion of comments which fell into the categories of expansions to personal experience, and comments on the act of reading (comments which reflected a more mature level of literate language use) was greater at Time 2 for both the experimental and the control daycares. The results did not indicate that the experimental daycare improved more than the control daycare.

Taken singly, the preliteracy tasks revealed scant evidence of efficacy of the Preschool Library program. Considered as a group, however, the results are somewhat more positive. Across tasks, the trends revealed were consistently (seven times out of eight trials) in favour of the experimental group. Due to the low probability of such a pattern emerging by chance, it is likely that the trends are evidence of the effect of the Preschool Library on the children in the experimental group.

Why did most of the measures taken singly not reveal a significant improvement by the experimental group? There are at least four possible explanations.

First, the tools chosen for measurement of preliteracy skills may not have been sensitive to the effect of the Preschool Library. This explanation is possible but unlikely, especially considering the range of measurements included. The measurements used looked for changes in skills which were considered to be obtained earlier in the course of literacy learning, such as the bookskills task of turning pages, and also looked for changes in skills which would be expected to come later in literacy learning, such as reading decontextualized print. Moreover, the measures were successful in capturing change from Time 1 to Time 2. It is possible that other types of measurement techniques, such as timing of responses, or observational judgements as to the comfort level of the child while performing the tasks may have revealed earlier changes in preliteracy precursor skills, but it seems unlikely.

Secondly, the time frame of the Preschool Library in the current project may not have been long enough to bring about changes in the areas targeted for measurement. It is possible that an effect may require a longer intervention period, so that if the Preschool Library continued for a longer time, a measurable effect may have resulted. It is also possible that an effect could appear at some time

following the 7 week intervention period. In the Preschool Library program books are introduced which stay at the daycare after the program's completion. Changes may also occur in the children's and teacher's motivation for literacy events, so that even after the completion of the Preschool Library program, children more often ask to be read to, and teachers more often choose book reading as an activity in the daycare. The Preschool Library program may also lead to individual children or the daycare as a group making excursions to the public library in order to continue the book borrowing process. The nature of the Preschool Library program allows for many ongoing effects which could not be measured within the time frame of the current project.

Thirdly, it is possible that the Preschool Library program did not bring about any change in the experimental group that would not have occurred without the Preschool Library input. This explanation is unlikely, due to evidence cited in Chapter 1 that supports the use of book reading to influence language and literacy skills of children, and also due to comments from the teachers at the experimental daycare, that many children had improved in their book reading behaviours since the start of the Preschool Library Program. Further, it would be premature at this time to accept this explanation, especially when other, more feasible explanations exist.

Finally, it seems quite possible that the control group

did not actually provide an adequate control measure. According to this explanation, the control group was not actually a no-treatment control group. They may not have participated in the Preschool Library project, but other experiences may have facilitated literacy growth. If so, it is possible that all the children in the study were receiving input related to literacy learning, and hence, developing literacy skills at an equivalent rate. Evidence in support of this explanation may be seen in the following sets of results.

(i) The parent interviews yielded some answers which indicated that the control families as a group were providing their children with literacy-rich environments. Activities which are traditionally school-like in nature were occurring in the homes of the control group more so than in the experimental group (e.g., practice with ABC's and exercise books, emphasis on children writing their own names).

Initial observations of the daycares also indicated that the children at the control daycare had more books accessible to them and participated in more book reading activities than the children at the experimental daycare.

(ii) In the total bookskills task, bookskills questions 1 and 2 (orientation to the cover), and questions 4 and 5 (word and picture identification) and the definition task, the control group scored higher than the experimental group at Time 1, suggesting that at the start of the study

the control group was ahead of the experimental group in some preliteracy skills.

(iii) Certain of the data from the preliteracy tasks yielded a significant main effect of Time, in which across groups performance was better at Time 2. Such a pattern typically indicates the effect of practice, or, more likely in the current project, general developmental progress. This pattern emerged in the total means for the environmental print task, the total means for the bookskills checklist, and the means for that part of the bookskills task that required turning pages appropriately. It may be the case that on these tasks, general developmental progress is occurring, enhanced for the control group by input from home literacy environments and daycare literacy practices, and for the experimental group by input from the Preschool Library program.

(iv) Results from observations of storytime at both daycares indicated changes in the types of comments being made by children. Recall that comments which extend the information from the story and relate the story events to personal experiences require more mature types of language skills than comments directly related to the story content. Also, comments about the act of reading or about books or print require metalinguistic knowledge. When we look at the use of the types of comments which require skills that may be considered higher level, literate language skills, it can be seen that both groups of children demonstrate a higher

proportion of these types of comments at Time 2 than at Time 1. This again suggests developmental progress on the part of both groups over the 7-week intervention period. The control group's improvement in these literate language skills may have been enhanced by input from literate home and daycare environments; the experimental group's progress may have been aided by the Preschool Library experience.

After consideration of the possible explanations just presented, it seems likely that two of them hold the most convincing arguments. First of all, the time frame of the study may not have allowed time for the effects of intervention to occur. Also, the likelihood that a control measure was not adequately provided, is strong.

What do the data tell us about the state of literacy development during the preschool years? First of all, these data indicate that there is a wide range in the level of literacy input at various daycares. This range is not surprising since it is often at the teachers' discretion to decide what printed materials will appear on the walls, the budget may determine how many books will be purchased and how often selections will be updated, and decisions concerning the schedule of activities at the daycare may be made by a board of directors. With all of these factors playing a role in building the atmosphere of the daycare, it is not a given that a daycare will provide a strong literacy environment. This state of affairs demands to be addressed,

given the importance of literacy in our society, and the potential for alleviating problems in the school years by intervening in the preschool years.

A range also exists in the literacy environments of homes. In the current study parents' responses to the question, "Do you read to your child?", indicated that 100% of parents were reading to their children. The frequency of reading was found to vary somewhat in the current study (e.g., 58.8% of parents from the experimental daycare indicated that they read daily compared to 75% of parents from the control daycare), and the quality of reading may also vary. Both the frequency and quality of reading to children has been found to influence language and literacy development (Bus et al., 1995; Goodman, 1990). Therefore even within the 100% of parents who read to their children, the degree to which a rich language learning opportunity occurs will vary from family to family. On questions other than reading to children, there was more discrepancy in parents' answers. For example, while many parents indicated in the current project that they had both children's and adults' books in their homes, some parents indicated that they had neither.

Given this discrepancy in home literacy environments, the role of the preschool or daycare becomes even more important, as does our responsibility as educators to consistently provide an atmosphere at preschool and daycare that can fill some of the gaps in children's early

experiences of literacy.

Despite the differences in literacy environments the general trend found in the present study was that children are developing preliteracy skills and literate language.

Bookskills improved for the older children in the study in the area of telling the story by the pictures. The older groups' combined mean score for this task was 0.22 at Time 1 and 0.67 at Time 2. This suggests that by the end of the study, more of the 4 and 5 year olds were using the pictures to tell the story. Also, overall, children were better at turning pages at Time 2. The mean combined score for turning pages at Time 1 was 0.14 and at Time 2 was 0.63. Children also demonstrated more general comfort upon being handed a book at Time 2. Many children immediately opened the book and began to inspect it even before instructions were given by the experimenter.

Children demonstrated generalization of skills learned in Preschool Library activities. During Preschool Library book reading behaviours were modeled by the teachers and librarian using the books in the library. Children practiced the skills by using the books themselves, and gained the most experience with those books that they took home from daycare. During the bookskills task, a book was presented which had not been in the library and with which they had no prior experience. Many children were able to use the novel book to demonstrate book reading behaviours. During the bookskills task, one child also demonstrated

knowledge of book reading postures by holding up the book to point out the pictures to the experimenter as the teachers and librarian had done.

Three-year-olds in the study demonstrated learning in the environmental print task in the high context condition. The mean score at Time 1 was 4.57 and at Time 2 was 5.43. This suggests that they were better at matching a label to the product it represented.

Four- and five-year-olds in the study showed some improvement in the low context condition. The mean score at Time 1 was 0.83 and at Time 2 was 1.39. Although this score is still quite low (maximum score was 6), it may indicate recognition of certain product names.

Children also evidenced the use of strategies to find meaning in print. During the environmental print task in the current study, a child whose name began with S knew that a word beginning with S would have to be matched to a product that sounded like his name. He said the product names out loud until he found Smarties and placed the word in front of them. Other strategies used by children included looking for clues on the card that contained the word. For example, children turned the card around so it was oriented right side up, and they looked on the back of the card for more information. Some children ran a finger along the print as they attempted to interpret the message.

It appeared in the current study that children associated learning to read with books more so than with

other instances of print. When handed a book and asked to demonstrate reading, a child responded, "I don't know how to read". The same child, during the environmental print task, commented throughout the task on *how* she knew the right answers. When she matched the Crest label with the toothbrush and toothpaste, she said, "I know this says toothbrush." So in an instance involving a book, this child claimed she didn't know how to read, and in another instance involving print but not books, she was proud to tell how she knew.

Definitions experienced growth in form and content during the course of the present project. Overall, a higher proportion of children produced a Level 4 definition for the word 'book'. This indicates beginning awareness of the conventional form of a definition, as well as the ability to move away from individual experience and extend the definition to apply to socially shared experience. For example, one child, at Time 1 produced the definition, "Like that one" while pointing to a book. At Time 2 she produced the definition, "It's to read". Her time 2 definition demonstrates knowledge of the function of a book for people in general, as opposed to her Time 1 response that only pertained to the immediate situation. The form of her response also indicates knowledge of the form of responses expected for definitions as well as for school discourse in general.

Comments made by children at storytime developed from

Time 1 to Time 2, in that more comments involved expansions of the story content to personal experience. Again, this reflects an ability to use language in a context other than that context in which it was originally encountered; that is, to use literate language.

Limitations of the Current Project

Certain methodological problems in the current project make it difficult to draw conclusions about the efficacy of the Preschool Library, and certainly limit any larger generalization of these findings. First, the length of time allotted for the intervention was likely not ideal in order to document the anticipated changes. As argued earlier, a longer intervention and/or assessment interval might have yielded a picture of greater efficacy.

Another difficulty is that the control daycare did not allow for a control group that was age-matched with the younger experimental group (YE). Because of this it was difficult to draw any conclusions about the literacy learning of the YE Group, despite the possibility that the Preschool Library intervention had some effects that were specific to younger children.

Further matching difficulties occurred due to children with ESL and special needs. It was attempted in the current study to roughly match groups for these factors based on teachers' identifications of children with behaviour and

language challenges. However, this matching was not done based on language or behaviour assessment, which would have allowed for more reliably matched Groups. Also, as has been noted, groups were not matched for baseline measures of home literacy environments, or for daycare literacy environments. Groups matched with more similar baseline measures may have yielded different results.

Finally, teachers' and daycares' values were not controlled with respect to story time comments. Comments made by children during story telling were observed on some occasions to be discouraged unless the comments had direct relevance to the story. It was often the case that comments which compared the story to personal experience were discouraged by teachers. In the current study, comments related to personal experience were considered evidence of development of literate language and were therefore valued in the eyes of the experimenter. What is valued by teachers may have impact on what occurs within the daycare, so it may be necessary to control for such factors in some way in order to measure actual change.

Educational and Clinical Implications

The current project presents data that holds implications of both an educational and a clinical nature. These are now discussed.

A longer time frame may be needed for implementation of

programs such as Preschool Library in daycare environments. The changes which were anticipated to occur due to input from the Preschool Library program involve areas of development which may require some precursor skills to be learned first. For example, a child may have to learn to sit with an adult and attend to a book reading event before being able to draw on knowledge about preliteracy skills.

It was speculated earlier that both daycare groups received literacy input; the control daycare from resources already in place, and the experimental daycare from the Preschool Library program. Under these circumstances, both groups improved their preliteracy skills. The Preschool Library may, as speculated in the current project, provide input to children that supplements their home literacy environments. For children who already experience strong home literacy environments, the Preschool Library may provide opportunities to improve even more or possibly in different skill areas.

Comments made by teachers at the experimental daycare highlight another area that Preschool Library may potentially influence. Teachers' comments suggest that fighting behaviours were reduced at the daycare, particularly in the location of the daycare designated as the Preschool Library area. Such comments are too preliminary to draw conclusions from at this time, however, future studies may explore this further.

Future Projects

Information gained from the current project provides suggestions for future projects in the area of preliteracy skills.

A similar study, employing a longer time frame may capture more change in the area of preliteracy skills.

A follow up to the current study could involve re-testing the same groups of children, on the same tasks, some period of time after the completion of intervention. It would by useful to see if improved preliteracy skills came about after a delay in intervention. It appeared to the experimenter that an increased interest in books occurred during the implementation of Preschool Library. It is possible that an increased interest would bring about a change in habits that lead to greater likelihood of success in literacy. Dale, Crain-Thoreson and Robinson (1995) suggested that parents might respond differently to children based on the interest children display in books. Parents may react to children's interest by providing instruction in preliteracy skills. So an intervention which increases children's interest in books may bring about behavioural changes in the children which translate into richer literacy environments at home.

It was noted that many components of Preschool Library, once set up, left an ongoing presence in the daycare. One copy of each book from Preschool Library stayed at the

experimental daycare. Teachers at the experimental daycare were planning to schedule trips to the public library for children after Preschool Library had ended. Attempts could be made to measure the ongoing effects of Preschool Library.

Conclusion

The present study, though only modestly successful in demonstrating the efficacy of a Preschool Library project, did provide some insights into the state of literacy learning in the preschool years, and the contribution that the literacy environment makes to this process. The measurement tools used for the current project were successful in capturing change, attesting to their validity and sensitivity. This study has set the stage for another, more carefully controlled experiment, that might more convincingly demonstrate the effects of a Preschool Library project.

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Appendix A

Interview Questions for Parents

The following questions comprised the interview given to parents in the current study:

What are the languages spoken in your home?

What kind of printed material is in your home?

Do you have subscriptions to any magazines or newspapers? Which ones?

Where do you think children should learn to read and write?

When do you think children should learn to read and write?

Do you read/tell stories to your child?

What kinds of stories? How often? At what times? In what language?

What other kinds of reading activities happen in your home?

What other kinds of writing activities happen in your home?

Appendix B

Bookskills Checklist

The bookskills checklist was administered to children in the current study according to the following set of instructions. Alternate sets of instructions are given in parentheses.

Hand book to child upside down and backwards.

"We're going to look at a book."

1. "Show me the cover of the book."
   ("Where is the front of the book?")

If not upright, turn it upright

2. "Where is the name of the book?"
3. "Show me the first page we read."
   ("Where do we start reading?")

If not open yet, open the book.

4. "Show me a word."
   ("Point to a word.")
5. "Show me a picture."
   ("Point to a picture.")
6. "Show me how you read a book."
   ("You pretend to read.")

Look for:

- -points to words or mimics reading words
- -moves fingers/eyes from top to bottom
- -moves fingers/eyes from left to right
- Tells the story by the pictures
- Turns pages appropriately