THE VERBAL LANGUAGE WORLDS AND EARLY CHILDHOOD LITERACY DEVELOPMENT OF THREE PROFOUNDLY DEAF PRESCHOOL CHILDREN

DISSertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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Gay Su Pinnell
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Cheri L. Williams
1991
... because of my baby sister, Janene,
whose hearing loss has never been an impairment,
and for my mother ...
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CHAPTER 1
INTRODUCTION

Within the last fifteen years, researchers investigating young children's early literacy development have begun to focus on the knowledge and understandings about written language that young children possess before they experience formalized instruction. This research has produced a large body of influential literature describing the nature and importance of the early literacy development of young children (Clay, 1967; Harste, Woodward, & Burke, 1984; Snow & Ninio, 1986). This body of research strongly suggests that literacy learning is a continuous, evolving process, and that young children learn much about literacy long before they pass through the doorway of a first grade classroom. The conclusions of this research have tremendous implications for scholars in the field of child language and literacy, classroom practitioners, and parents alike. The studies have challenged the appropriateness of certain pedagogical practices that are currently widespread (Teale & Sulzby, 1987) and have suggested that particular social activities of the home are positively related to success with beginning literacy instruction in school (Almy, 1949; Heath, 1983; Snow & Ninio, 1986; Wells, 1986). The impact of these investigations on initial literacy instruction and intervention can already be attested (Pinnell, Fried, & Estice, 1990).
Statement of the Problem

While this important body of research literature exists for the normally-hearing population, very few studies are available which address the early childhood literacy development of young children who have hearing impairments. There has been very little exploration of young deaf children's pathways to literacy, because it has been largely assumed that in the early years, these children are (with great difficulty) developing an initial verbal language.

There are approximately 70,000 preschool children in the United States who have a hearing impairment (Andrews & Mason, 1984), and while there may be similarities, we cannot simply assume that the findings and implications of a body of literature based upon the experiences and knowledge of normally-hearing children apply to hearing-impaired children whose experiences with language are dramatically different from their hearing peers. These children do not have, from the moment of birth, the meaningful experiences with spoken language that their hearing peers have. Because they cannot hear the spoken language of their parents, siblings, and peers, it is with great difficulty that they make sense of the actions and interactions taking place around them. Given the nature of their experiences with language, there is a need to investigate the ways in which hearing-impaired children acquire literacy. Descriptions of hearing-impaired children's experiences with, participation in, uses of, and knowledge and understandings of language and literacy are essential if early childhood educators are to provide appropriate initial literacy instruction for young hearing-impaired children. The present study responds to this need by
exploring, in detail, the language and literacy experiences of three profoundly deaf preschool children.

**Background of the Study**

The theoretical notion that there is literacy learning before formal schooling has framed much recent literacy research, and teachers and researchers working within this perspective view children as sense-makers who actively seek to understand their worlds. Children are not passive recipients of information, but, rather, agents acting upon the world in which they live, consciously trying to make meaning of the individuals, objects, actions, and interactions they encounter (Wells, 1986).

Very young children seek to make meaning of the spoken language used within their worlds. Within the first few years of life, without any formalized instruction, young children come to comprehend and produce complex language forms through everyday interactions and experiences with their parents, siblings, and peers (Genishi & Dyson, 1984; Heath, 1983; Lindfors, 1987; Nelson, 1973; Wells, 1986). Through the need to construct meaning with others, they learn the spoken language of their speech community (Hymes, 1974).

In the same fashion, young children seek to make sense of the written language in their worlds. They see print in their homes, on television, in their communities. Virtually from birth, they witness the reciprocal relationship between people and print (Ferreiro & Teberosky, 1983; Hall, 1987). As they encounter written language, they try to “figure out how it works” (Teale & Sulzby, 1989, p. 4).
Children make sense of spoken language very early in life through everyday interactions and experiences, and they develop understandings about the form and function of written language long before they have had formalized literacy instruction. Indeed, they do so from birth. Their knowledge and use of spoken as well as written language develops naturally as they engage in social situations in which communication and understanding are means to an end.

The considerable evidence that young children acquire spoken language through natural interactions with significant persons in their lives does not apply to children with severe hearing impairments. Rather, a very different picture, which will be discussed in the next section, exists for profoundly deaf children.

**The Language Worlds of Profoundly Deaf Children**

Whereas hearing children learn language with seemingly little or no effort through an intact auditory system, the ease with which hearing-impaired children acquire language depends largely upon the severity of their hearing loss (Moores, 1982). The communication barriers imposed by a profound hearing loss often isolate the young deaf child from interactive experiences with people.

The profoundly deaf child does not hear the spoken language used in the environment, and, consequently, does not acquire spoken language with the ease or rapidity of his/her hearing peers. He/she is not able, then, to engage in interactive experiences conducive to language learning. Thus, unlike hearing children, the profoundly deaf child acquires spoken language
with great difficulty. This is, perhaps, the most significant difference between
the language experiences of profoundly deaf children and the language
experiences of hearing children.

Not only is language learning a very difficult process for profoundly
deaf children, great diversity exists within and among their language worlds.
Young deaf children's experiences with language frequently take a variety of
forms. Several different modalities may be used for communicating with the
young deaf child, and interlocutors' proficiency with those modalities often
vary widely. As well, a multiplicity of manually-represented forms of English
may be used for communication and/or instruction.

While most profoundly deaf children's language worlds are
dramatically different from those of hearing children, deaf children born to
deaf parents acquire language in ways that are very similar to hearing
children (Bellugi, 1988; Bellugi & Klima, 1972; Hoffmeister, 1982; Siple,
1982). Most often, parents communicate with American Sign Language
(ASL), a spatial, motoric language visually accessible to the young child.
Parent-child interactions take place naturally through a shared language
system of signs. Research on young deaf children's acquisition of ASL
suggests that "despite the dramatic differences in surface organization and in
modality, in almost all respects, the acquisition of spoken and signed
languages takes a remarkably similar course" (Bellugi, 1988, p. 160). Petitto
(1988) found that deaf and hearing children show strikingly similar
performance in their acquisition of personal pronouns. Meier (1982)
suggests that young deaf children's mastery of the inflections for verb
agreement in ASL appears at the same age as mastery of verb inflections
appears in hearing children's spoken language. Furthermore, the sequence of acquisition (from uninflected forms, through the use of inflections with overregularization, to mastery of the inflectional system) is the same in ASL as it is in spoken languages.

Most deaf children, however, are born to hearing parents who do not know sign language. Consequently, meaningful interaction is very limited until such time when the parents and child develop a shared language system. Many of these parents and children develop only a very limited shared system. This system may be oral/aural English, American Sign Language, or, quite often, a signed system of English (Meadow, 1968).

**American Sign Language**

American Sign Language is the only manual language not derived from any spoken language. It is a spatial, motoric language with a grammar and modality different from that of standard English (Liddell, 1980). Linguists have described ASL as having the regularity and rule-governedness of a bona fide language (Wilbur, 1979). ASL has its own mechanisms for relating visual form with meaning (Bellugi, 1988). Through visual-spatial representations, lexical units are organized spatially and temporally, and modulations of movement constitute grammatical inflections. While ASL has been influenced by English in several ways (borrowing through fingerspelling, initialization of signs, influence of English word order), it does not have a one-to-one correspondence to English. In fact, the linguistic structure of ASL differs so greatly from spoken English that simultaneous
communication in ASL and spoken English is extremely difficult to achieve (Wilbur, 1979).

**Signed Systems of English**

In contrast to American Sign Language, several signed systems of English have been developed by educators of deaf children to reflect English. They are codes based upon spoken English, which, with varying degrees of accuracy, follow English morphology and syntax (Wilbur, 1979). These manual systems are designed to permit simultaneous communication through signs and spoken English; however, speakers do not always voice as they sign (Hoffmeister & Moores, 1987). While these signed systems follow English word order and in some sense reflect spoken English, they are considerably different from English, and, according to linguists, they should not be considered formal languages as are ASL and English (Allen, 1975; Wilbur, 1979).

Signed systems of English lack the regularity and rule-governedness of true language. To illustrate, in Signing Exact English (Gustason, Pfetzing, & Zawolkow, 1980) the words although, also, and already are signed as two signs (e.g., AL + THOUGH, AL + SO, and AL + READY), while almost, which could easily be syllabicated like the others, is arbitrarily one sign. A signer of Manual English (Washington State School for the Deaf, 1972) has several options when forming verb tenses. The past tense verb walk may be arbitrarily signed WALK + PAST or WALK + e + d. Furthermore, signed words often have little representation to their spoken English counterparts. In Signed English, the noun sorrow is formed by signing SORRY + W. The
noun examination is executed using the sign for "exam" and the "tion" marker, i.e., EXAM + TION. Visually, i.e., in the receptive sense, the word is "examtion", clearly a poor representation of the spoken English word. Thus, while the signed systems were created to reflect spoken English, they lack important characteristics of formal languages.

**Oral/Aural English**

Oral/aural English is a mode of communication designed to maintain a one-to-one correspondence with spoken English. Hearing-impaired children are taught to maximize their use of residual hearing and speechread the spoken English of their interlocutors. The task of speechreading, however, is extremely difficult. Approximately fifty percent of the sounds of English are indiscriminate from other sounds (i.e., pan, ban, and man look identical on the lips), and perceiving every word in an utterance demands the skill of an experienced speechreader (Gustason, et al., 1980). Often, young deaf children grasp only major content words, misunderstanding or ignoring the supportive structure of function words (i.e., to, at, for, the). Furthermore, inflected (-ing, -ed) and plural (-s) forms are difficult to speechread and the young deaf child may perceive only the root of inflected and plural forms (i.e., walk for walked, girl for girls). Thus, while the oral/aural mode of communication is designed to reflect spoken English, the child's severely impaired audition and the physical limitations of speechreading often prohibit a one-to-one correspondence.

This presents, then, a second major difference between the language experiences of profoundly deaf children and hearing children.
Hearing children living in English-speaking homes and communities hear and speak English. Although the children's experience with and ability to use spoken language may differ, both their receptive and expressive experiences will be in English. This is not the case for very young profoundly deaf children. Although they may be reared in English-speaking homes within English-speaking communities, their experiences with and through language will only approximate English, at best, regardless of their mode of communication.

A third difference between the language experiences of hearing children and profoundly deaf children is the amount and kinds of language interactions hearing children experience as a part of their everyday activities. Parents engage their infants in extended dialogue while performing routine caretaker functions, i.e., bathing, dressing, feeding (Nelson, 1965). Young children talk to their parents, ask questions, and participate in family conversations. While their experiences may differ (Heath, 1983; Wells, 1986), most hearing children are engaged in extensive conversations with their parents from infancy.

The extent to which profoundly deaf children interact meaningfully with their parents is largely dependent upon the sharing of a common language system (i.e., American Sign Language, a signed system of English, or oral/aural English). It takes time to develop a mutual system of language; consequently, many profoundly deaf children are highly unlikely to have extensive interaction with their hearing parents during the early childhood years because of a lack of language with which to interact (Meadow, 1981).
Profoundly deaf children's experiences with language will also vary depending upon extended family and community interlocutors' abilities to communicate using the young child's mode of communication. Hearing interlocutors may find the deaf child's spoken English unintelligible or may be unable to understand the sign language used by the young deaf child. When this is the case, meaningful interaction is limited.

Furthermore, if their mode of communication differs greatly, even profoundly deaf children reared within the same community may not be able to interact with one another in meaningful ways. A profoundly deaf child who communicates through American Sign Language may have great difficulty understanding his young deaf friend who converses with oral/aural English.

To complicate matters further, when young hearing-impaired children attend school, they often increase the multiplicity of their verbal language\(^1\) worlds. The mode of communication used at home may differ from the modality used within the classroom. The mode of communication used in the classroom may differ from the modality which dominates peer group play. An individual child might experience any and all of these verbal language worlds, going back and forth between them, within the course of daily interaction. Consequently, it is not uncommon for the profoundly deaf child to navigate among multiple and diverse verbal language worlds.

Clearly, young children use both spoken and written language to explore and make sense of their worlds. They use language to learn, and thus, learn language. Language learning is an integral part of all the

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\(^1\)For purposes of this study, verbal language was defined as both spoken and/or signed language.
learning that is taking place (Donaldson, 1978; Dyson & Genishi, 1983). While most 5-year-old children have had extensive language experiences with family, peer, and community interlocutors and can be considered linguistically proficient, many profoundly deaf children of this age are still acquiring a fundamental language base with which to signify and internalize early childhood experiences and interactions and from which and with which learning will progress (Kampfe & TurecHECK, 1987; Moores, 1982; Quigley & King, 1985). Like their hearing peers, profoundly deaf children use language for learning, but the language base from which they proceed may be very different indeed (Luetke-Stahlman & Luckner, 1991). In fact, many researchers suggest that the early language experiences of profoundly deaf children have a significant negative impact on their later reading achievement (Brasel & Quigley, 1975; Hart, 1978; Quigley & Kretschmer, 1982). Research has consistently indicated that deaf adolescents have significantly lower reading achievement scores than do their hearing peers, the average reading ability being about a fourth grade level (Furth, 1966, Gentile & DiFrancesca, 1969; Trybus & Karchmer, 1977).

There are, then, dramatic differences between the early language experiences of profoundly deaf children and the experiences of hearing children. First, and foremost, profoundly deaf children acquire spoken language with great difficulty. Although they may be reared in English-speaking homes and communities, their experiences with language will only approximate English, at best, regardless of their mode of communication. Extensive conversations with family, peers, and community interlocutors are often limited by a lack of language through which to interact. Due to the
multiplicity and diversity of modes of communication, the profoundly deaf child is often called upon to navigate within dramatically different verbal language worlds. Consequently, while many preschool children can be considered linguistically proficient, most profoundly deaf children of this age are still acquiring an initial language with which to explore their worlds.

Because most young profoundly deaf children are still acquiring an initial language, the central mission of early childhood educators of young deaf children has been the support and development of the children's first language (cf. Luetke-Stahlman & Luckner, 1991). Furthermore, since deaf educators have typically adhered to the traditional notion that spoken language is the foundation for written language development, this emphasis on verbal language acquisition seemed educationally appropriate.

Traditionally, early childhood educators believed that spoken language was the foundation for written language development (Teale & Sulzby, 1987). Not surprisingly then, educators and researchers of young deaf children have focused their attention on the children's development of verbal language. Consequently, an early childhood literacy perspective\(^2\), the theoretical notion that both spoken (verbal) and written language develop from birth, has rarely been taken with young deaf children. To date, there has

\(^2\) For purposes of this study, an "early childhood literacy perspective" was defined as the theoretical notion that both spoken and written language develop in an integral fashion from birth. The term signals a belief that young children (even 1 and 2 years of age) are in the process of becoming literate. The perspective ascribes legitimacy to children's earliest literacy concepts and behaviors. Researchers working within an early childhood literacy perspective investigate young children's literacy learning from linguistic, social, and/or cognitive orientations. The popular term "emergent literacy" was reserved for those investigations taking a cognitive stance.
been very little exploration of their pathways to literacy. Pioneering research from this perspective has begun to investigate young hearing-impaired children’s environmental print knowledge (Ewoldt & Saulnier, in press), early reading development (Maxwell, 1984), and development of writing (Conway, 1985; Ewoldt, 1985; Rottenberg, 1991).

The present study extends these pioneering efforts by exploring, in great detail, both the verbal language worlds and the concurrent early childhood literacy development of three profoundly deaf preschool children. These three children, whose verbal language worlds reflect the variation, multiplicity, and diversity of the language experiences of young deaf children, participated as informants for individual case studies. Naturalistic observation, participant observation, informal interviews, and informal assessments were used to explore the children’s experiences with participation in, uses for, and knowledge and understandings of language and literacy. Intensive case study provided a thorough, well-organized explication of the possible pathways for young deaf children’s verbal language and early childhood literacy development. The research was, in part, grounded within an early childhood literacy perspective. This perspective will be developed in the next section.

An Early Childhood Literacy Perspective

All researchers working within an early childhood literacy perspective embrace the theoretical notion of the child as an active constructor of meaning. The young child learns spoken language, and in a very similar way, before he/she begins formal schooling, constructs meaning
of literacy in an effort to make sense of his/her world. Language and literacy learning are integral processes, occurring simultaneously as the young child seeks to construct meaning of his/her world. Thus, observations of young children behaving in literate ways, i.e., pretending to read, improvising narrative texts for stories, scribbling or marking on paper, are viewed as demonstrations of the children's personal constructions of literacy (Harste, Woodward, & Burke, 1984).

Working within this theoretical framework, early childhood literacy researchers have addressed the construction of literacy from the young child's linguistic, social, and/or cognitive development. Focusing on the child's linguistic understandings, Goodman's (1984) research lends strong support to the notion that young children's development of "initial literacy" is very similar to their development of oral language. Based upon their explorations of 2- to 6-year-old children's initial literacy learning, Goodman and Altweger (1981) assert that young children seek to make sense of written language just as they seek to make sense of oral language. Young children know that both spoken and written language communicate a message, and, in seeking to understand that message, they develop control over the strategies of comprehension and production.

Furthermore, Goodman asserts that young children's awareness of the phonologic, syntactic, semantic, and pragmatic systems of language, developed through their use of spoken language, contributes to their understanding of the orthographic and graphophonemic systems of written language. Moreover, Goodman suggests that young children exhibit a growing awareness of how linguistic principles operate differently under the
constraints of oral and written language. Thus, for Goodman, young children's linguistic understandings provide a means through which initial literacy learning is examined and explored.

Some early childhood literacy researchers focus on the children's construction of meaning as it takes place within purposeful activity through social interaction (Dyson, 1981, 1989; Miller, 1990; Rowe, 1989; Taylor, 1983). As children interact in meaningful ways with other readers and writers and various and multiple texts, they come to understand a great deal about the form, function, and uses of print. Both the experience with print and the social dynamics through which the experience takes place are considered extremely important to understanding the young child's construction of meaning (DeFord, 1984; Harste, Woodward & Burke, 1984). It is in this sense that researchers posit literacy as a socially-constructed process.

This perspective on literacy learning has been characterized as a "social construction of literacy" perspective (Cook-Gumperz, 1986). The perspective bases its tenets upon writings from sociolinguistics and cultural anthropology. Literacy is defined as a group's (i.e., a family, a classroom, a community) ways of using written language to serve social purposes. In this sense, literacy is group specific. Children become literate as they embrace the group's ways of interpreting and using written language through participation in the social interaction of everyday life. Investigations of early literacy from this perspective often examine the purposes for which young children use written language (Dyson, 1981, 1989) and/or the patterns of social interaction through which young children become literate (Heath, 1983).
In her studies of young children’s development of writing, Dyson (1981, 1989) foregrounds the social aspect of literacy learning. As the children in Dyson’s studies created stories at the writing table of their preschool classroom, they talked with one another, sharing their own experiences, interests, concerns, frustrations, and personal needs. Through talk, children frequently sought contribution to or critique of their work. The talk was very much a part of the writing, often enhancing it, investing the visible symbol with meaning. For these children, literacy and their social worlds were inextricably bound, and as they interacted socially they constructed knowledge and understandings of written language. So, while Dyson’s investigations led to profiles of the children’s developmental understandings of print, they highlighted the social construction of early literacy learning.

Early childhood literacy researchers with a social construction perspective believe that many of these meaningful experiences with print are embedded within the flow of everyday life, a part of the day-to-day activities young children experience at home, at school, or within the community. Many times these experiences are directed toward a goal beyond the literacy event itself (Taylor, 1983). Thus, literacy learning is not confined to the classroom setting, but rather takes place through a variety of events which occur naturally throughout the ebb and flow of daily life. These experiences with print are not always readily apparent, and researchers must often locate literacy events that reside within the household, classroom, or community setting. Researchers with a social construction perspective view literacy
learning as sociologically rooted and "understandable only when viewed within its social contexts" (Harste et al., 1984, p. 49).

This new emphasis upon the significance of context to young children's literacy learning has led many researchers with a social construction orientation to document young children's literacy learning in light of home, school, and community influences (see Dyson, 1981, 1990; Heath, 1983; Taylor, 1983). These researchers are taking these multiple and varying influences into account as they seek to interpret children's demonstrations of their developmental knowledge and understandings of literacy. Doing so is imperative if we are to truly advance our understanding of young children's acquisition and development of literacy.

Researchers who investigate young children's literacy development from a cognitive perspective have been called "emergent literacy" researchers. The term "emergent literacy" was coined by cognitive psychologist Marie Clay (1966) in her initial investigations of the early reading behaviors of 5-year-old children in New Zealand. The assumptions of this orientation to literacy and learning are largely those of cognitive/developmental psychology and developmental psycholinguistics. Literacy is viewed as a body of cognitive knowledge about written language and a set of processes for using that knowledge that gradually develop over time. Researchers working from this perspective seek to identify the knowledge and the cognitive processes of young children. There is some attention to the order of acquisition, i.e., developmental stages, and the environmental conditions which best support children's learning.
Ferreiro (1984, 1985) took a cognitively-oriented, Piagetian stance in her investigations. Trying to develop an explanatory theory for young children's literacy development, she looked for evidence of young children's constructive processes. She was interested in discovering the hypotheses children make about social objects, which in this instance was written language, and she was particularly interested in their original ideas. Ferreiro believed that these original constructions were influenced by the child's intellectual abilities. Viewing the construction of literacy as a cognitive domain, she was particularly interested in the logic young children impose upon the physical form of written language. Ferreiro suggested that as young children construct their knowledge of written language, they transform print in ways that have meaning for them. Through her focus on cognition, Ferreiro's studies have advanced our understandings of the evolution of young children's ideas about written language.

While Goodman, Dyson, and Ferreiro addressed young children's literacy construction from different perspectives (e.g., the linguistic, the social, the cognitive), these orientations are not totally distinct. A number of researchers merge these perspectives and seek to understand the interaction of linguistic, social, and cognitive factors in early literacy learning.

Whatever the orientation, researchers assert that investigation of literacy learning must proceed from the perspective of the young child. Investigating literacy learning from the child's point of view has allowed early childhood literacy researchers to gain more insight into the process of early literacy learning and has been very useful in accounting for young children's early reading and writing development (Teale & Sulzby, 1989).
This early childhood literacy perspective has dramatically changed the way educators and researchers view children, and, over the last fifteen years, it has become a bona fide research perspective for investigating young children's language acquisition and early literacy development (see Teale & Sulzby, 1987). Working within this perspective, investigations have taken place across a variety of contexts, and a variety of research methods have been employed to examine and make visible the complex dimensions of young children's literacy acquisition and development. Because this investigation examined language and literacy learning in multiple contexts and utilized multiple research tools, the next section will explicate the multiple perspective taken.

Toward A Multiple Perspective

The contexts (i.e., home, school, community setting, clinical site, etc.) explored and the research methods employed to investigate young children's construction of literacy have been many and varied. In this section, I will describe the various approaches taken by early childhood literacy researchers.

Research Methods

A clinical interview approach, based upon Piaget's method of critical exploration, is, perhaps, best represented by Ferreiro (1984, 1985) and her colleagues in their investigations of children's cognitive organization of written language. More than thirty 3-, 4-, and 5-year-olds participated as research informants. As researchers interviewed the children, they often
directed the children's production and/or interpretation of texts, e.g., children were asked to "put something with letters" on their drawings or on magazine figures the researchers had glued on paper. Researchers asked the children questions about their responses, and then they asked them to explain any contradictions that occurred. From the findings, Ferreiro posited three developmentally-ordered levels of written language competence in young children. The research suggests that children's construction of written language reflects logical understandings of print at each developmental level.

More naturalistic procedures have been used by researchers represented by the team of Harste, Woodward, and Burke (1984). In their examination of the construction processes involved in young children's literacy learning, the researchers used naturalistic interviews to engage children in specific literacy tasks (e.g., reading environmental print, writing, drawing, telling a story), but they adopted a policy of allowing the child to follow his/her own lead, always supporting the child's endeavors. Children were viewed as research "informants." Harste et al. demonstrated that the processes young children use in the construction of literacy are not unlike the strategies used by "more experienced language users" (p. 69).

More naturalistic still is the ethnographic orientation employed by several early childhood literacy researchers who investigate children's construction of literacy within their homes and community settings. Taylor (1983), Cochran-Smith (1984), and Heath (1983) each represent this approach within a different setting.
Taylor (1983) used ethnographic fieldwork in her exploration of literacy learning within the family context. For three years, she visited regularly in the homes of six families, observing their everyday interactions, talking with parents and children, and sharing with them her own life experiences. Taylor's work revealed that young children's literacy acquisition and development is not only influenced by, but influences, family life.

Cochran-Smith (1984) also used ethnography in her case study of preschool children's early socialization into literacy. For eighteen months, the researcher observed in a community nursery school exploring the ways in which very young children and adults interact with print. As a participant observer, Cochran-Smith participated in the daily activities of the nursery school. Focusing on group storyreading, she described the ways in which the teachers "socialized their children into particular patterns of literacy" (p. 1) by helping them develop the knowledge needed to understand print.

Heath's (1983) use of ethnography over a ten year period in three communities of the southern Carolina Piedmont afforded the kinds of observations and the depth of investigation necessary to discover community cultural variations in young children's literacy learning among the three groups. These differences had consequences for the children's success with school literacy.

The use of ethnography has not only increased our understandings of young children's literacy development, it has proved powerful in providing insight into the influence of home and community cultural customs and values on young children's construction of literacy.
Case study methodology has been used by many early childhood researchers to investigate the literacy learning of young children (Baghban, 1984; Bissex, 1980; Bussis, Chittenden, Amarel, & Klausner, 1985; Graves, 1973; Hoffman, 1981). Dyson's (1981) initial investigation of the role of oral language in the writing processes of kindergarteners is a classic example of the power of case study research.

Although Dyson collected data on a large group of kindergarteners, her primary focus was on gathering intensive data on five case study children. The five children selected reflected the kindergarteners' range of developmental writing levels. Since a major question of the study addressed developmental levels, this variety among the children was considered essential. The case study children demonstrated the importance of talk as an integral part of their early writing processes; they illustrated ways in which young children use oral language during their writing. Case study methodology allowed Dyson to posit theoretical interpretations regarding young children's process of developing control over written language.

In summary, a variety of research methods, used within a variety of contexts, have been employed by early childhood researchers to investigate young children's construction of literacy. Each approach has proved useful in providing certain types of information. Taken collectively, the studies have greatly advanced our understanding of young children's early literacy construction within various and multiple contexts.
Explorations Across Contexts

Early childhood researchers, particularly those with a social construction perspective, have emphasized the importance of context to young children's construction of literacy. In light of the multiplicity, diversity, and variability of young deaf children's verbal language worlds, it is particularly important to look across contexts in investigations of their early language and literacy learning. Young profoundly deaf children have to piece together meaning from the multiple worlds they experience across contexts. What meaning are they making of language, given this multiplicity, diversity, and variability?

While the early childhood literacy perspective asserts that proficiency with oral language is not a prerequisite for written language development, educators have long suggested that, for hearing children, oral language strongly supports their interpretation of written language (Teale & Sulzby, 1989). What, then, are the possibilities for young profoundly deaf children to make meaning of written language given their multiple, diverse, and varying worlds of verbal language—which do not appear to support one another or the development of written language?

Early childhood literacy research has clearly demonstrated that hearing children do construct meaning of the written language in their worlds. It does not seem logical to assume that young profoundly deaf children are completely ignoring the world of written language—a world which is probably the most consistent form of language they experience in their early years. Rather, since many profoundly deaf children are very visually-oriented, it
seems reasonable to assume that they may be more attuned to or have a stronger orientation to written language.

Recent pioneering investigations provide reason to believe that young deaf children are, in fact, paying attention to and making sense of the written language in their worlds. What is lacking, however, are in-depth explorations of the whole world of language for young profoundly deaf children, i.e., investigation across various contexts and across written and verbal modalities. Case studies of early literacy are typically either school-based or home-based and rarely cross both boundaries (Sulzby & Teale, 1991). A multiple perspective approach provided a powerful avenue for this needed exploration.

**Toward a Multiple Perspective**

In this investigation, I looked across contexts and combined several research methods in a multiple perspective approach to investigate the whole worlds of language for three profoundly deaf preschool children. While the theoretical framework for this investigation was qualitative, naturalistic, and interpretive, a multiple perspective provided the needed "whole language" look. That is, a variety of research tools were used across multiple contexts to fully explore the children's worlds of verbal and written language.

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3 Strauss & Corbin (1990, p. 68) warn that "use of borrowed concepts can have a grave disadvantage [since they] often bring with them commonly held meanings and associations." The term "multiple perspective" is used here only in the sense that I have used multiple research methods to investigate across multiple contexts in interfacing the social and cognitive perspectives on early childhood literacy.
Case study methodology, ethnographic in orientation and principle, was the primary research methodology. The language experiences of the three children selected for intensive case study reflected the multiplicity, diversity and variability young deaf children typically experience. In keeping with an ethnographic orientation, naturalistic observations, participant observation, and informal interviewing techniques were used for data collection in both the children's preschool classrooms and in their homes. In addition, informal assessments (Clay, 1979; Harste, Woodward, & Burke, 1981) provided a probing look at the young children's developmental understandings of written language.

A multiple perspective permitted me to interface the social and cognitive perspectives on early literacy learning. Exploration of the children's verbal language and literacy learning in both their homes and preschool classrooms highlighted the children's social construction of literacy. The informal assessments detailed the children's personal, cognitive constructions of literacy. In this sense, I viewed each child from the social as well as the cognitive perspective and interfaced the two to arrive at the fullest picture of his/her experiences with verbal language and early literacy development. A multiple perspective contributed to understanding the process of literacy construction from the children's perspectives.

**The Significance of an Early Childhood Literacy Perspective**

The work of early childhood literacy researchers foregrounds a theoretical framework which presents literacy learning as a continuous process beginning at birth. Children are viewed as active constructors of
knowledge who seek to make sense of the spoken and written language used in their homes. Literacy learning is presented as personally-constructed by the young child as well as socially-constructed through interaction with others. Family practice, educational settings, and community cultural customs and values are understood to support or constrain the young child’s construction of literacy. Working within this theoretical framework, early childhood researchers investigate young children's literacy learning from the perspective of the child within various and multiple contexts of learning. This perspective affords a fresh look at early literacy construction and portrays young children as active literacy learners.

Rationale

The purpose of this study was to investigate the verbal language worlds and early childhood literacy development of three profoundly deaf preschool children. The study was framed within the early childhood literacy perspective, and the children's verbal language and literacy learning was investigated in light of their experiences both at home and in the preschool classroom. Multiple research tools were employed to provide both an in-depth as well as a broad look at the children's social and cognitive constructions of literacy.

The present study contributes to the theoretical nexus between developmental theory and educational practice. Discovering the ways in which profoundly deaf children experience and use literacy and exploring their knowledge and understandings of written language advance our present understandings of the processes involved in very young children's
early literacy development. Understanding the processes of early literacy development will inform the pedagogy of educators who have traditionally been stymied in helping profoundly deaf children achieve greater levels of literacy. This investigation offers guidance to both educators and parents of hearing-impaired children in terms of the kinds of experiences and activities that support initial literacy development.

The study refines and advances general developmental theory by investigating the early childhood literacy development of young children whose experiences with spoken language differ in significant ways from the experiences of children described in the larger body of research literature. Several recent investigations have explored the universality of early literacy learning in light of the diversity of young children's experiences with language and literacy (Anderson & Stokes, 1984; Heath, 1983; Taylor & Dorsey-Gaines, 1988). These studies suggest that young children's experiences with language and literacy both in their homes and in instructional settings influence children's acquisition and development of literacy. The present study builds upon this exploration of diversity.

The primary strategy of this investigation was to determine the ways in which the three children experienced, participated in, and used verbal language and literacy both at home and in the preschool classroom and to describe the young children's demonstrations of literacy knowledge and understandings from within these frameworks. An early childhood literacy perspective informed the research while intensive case study, with an ethnographic orientation, provided a systematic means for investigating the children's verbal language and literacy learning.
Working within the framework described above, the investigation addressed the following questions for the three case study children:

1. What is the nature of the world of verbal language for these profoundly deaf preschool children?
   a. How is verbal language experienced at home?
   b. How is verbal language experienced within the preschool classroom?
   c. How do the children participate within these verbal language worlds?

2. What is the nature of the world of literacy for these profoundly deaf preschool children?
   a. How is written language experienced and used at home?
   b. How is written language experienced and used within the preschool classroom?
   c. How do the children participate in and use written language within these literacy worlds?
   d. What literacy knowledge and understandings do the children demonstrate as they participate within these worlds?

3. In light of their verbal language and literacy worlds, what knowledge and understandings about written language do the children demonstrate in clinical and naturalistic interview settings?
Definition of Terms

Deaf. The term deaf is used in this study to refer to individuals who have profound (<96 dB PTA) hearing losses (Martin, 1986). The term hearing impaired refers to individuals whose hearing losses range from slight to severe (16-95 dB PTA). The term hearing impaired is also used to refer to both deaf and hearing-impaired individuals in instances where persons with hearing losses are referred to as a collective group.

Oral/Aural Instructional Approach. In the oral/aural instructional approach, children receive language input through speechreading (lipreading) and amplification of sound. Teachers and children express themselves through speech. Most often, gestures and signs are prohibited (Moores, 1982). Children are taught to speechread and to rely on their residual hearing (use of audition) to understand the communication of others.

Total Communication Approach. In 1976, the Conference of Executives of American Schools for the Deaf posited the following definition of total communication: "Total communication is a philosophy requiring the incorporation of appropriate aural, manual, and oral modes of communication in order to ensure effective communication with and among hearing impaired persons" (cited in Gustason & Zawolkow, 1980).

Simultaneous Communication. When speakers use simultaneous communication, they speak as they sign. Simultaneous communication is often used in total communication instructional approaches.
CHAPTER II
REVIEW OF LITERATURE

The purpose of this study was to investigate the verbal language worlds and early childhood literacy development of profoundly deaf preschool children. The primary focus of the investigation was early literacy learning, and given the fact that most deaf students typically achieve only a fourth grade reading level (Quigley & Kretschmer, 1982), there is a grave need for these kinds of investigations. Because young children use language to make sense of literacy and through literacy experiences learn language, this investigation explored both language and literacy. There is clearly a reciprocal relationship between the two: Literacy is learned through language, and language is learned through literacy (Snow & Ninio, 1986).

The ways in which young children experience and learn about literacy are deeply embedded within communication patterns in the home and community. Through talk about everyday events and affairs of life, children learn about the nature of print and its social uses. A community’s ways of using printed materials are not always separable from the ways its young children learn language; in this sense, it is difficult, if not impossible, to separate early literacy learning from language acquisition.

In this investigation, the study of language was delimited to an exploration of the children’s experiences with, participation in, and uses of
verbal language. The study focused on the ways the children experienced, participated in, and used language in social interaction to make meaning of their worlds, particularly their literacy worlds.

Relevant to this study are the bodies of literature which describe deaf students' reading achievements, traditional notions of early literacy, the early childhood literacy perspective, and pioneering investigations into the early childhood literacy of young deaf children. Each will be reviewed here for discussion.

The Literacy Achievements of Deaf Students

The body of research literature describing the literacy achievements of deaf students paints an inauspicious picture. The literature consistently demonstrates that the reading achievement of deaf students is significantly lower than that of their hearing peers (Furth, 1966, Quigley & King, 1982; Trybus & Karcher, 1977).

The Center for Assessment and Demographic Studies (CADS) at Gallaudet University has regularly provided comprehensive information on the reading achievement levels of deaf students in the United States. In a 1972 CADS study, DiFrancesca (cited in Quigley & Kretschmer, 1982) reported scores for approximately 17,000 deaf students between the ages of 6 and 21 years on subtests of the Stanford Achievement Test. Results indicated that the average growth per year of schooling was only 0.2 grade levels, and at age 19, the highest mean grade equivalent score on the Paragraph Meaning subtest was only 4.3.
In a 1977 CADS study, Trybus and Karchmer reported reading scores for approximately 7,000 deaf students and found similar results. Only 10% of the best reading group, students 18 years of age, could read at or above the eighth-grade level. The median reading level at age 20 years was a grade equivalent of only 4.5.

Later studies, reporting scores from administrations of the Special Edition for Hearing Impaired Students of the Sixth Edition of the Stanford Achievement Test (SAT-HI), consistently confirmed the lower reading levels of deaf students (Quigley & Kretschmer, 1982; Wolk & Allen, 1984). Studies with deaf adults have found similar reading achievement levels. Using scores achieved on the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test from their last year in school, Hammermeister (1971) found that seven to thirteen years after leaving school, 60 deaf adults scored significantly higher on the word meaning subtest but not on paragraph meaning, indicating that although vocabulary had increased, the ability to read connected discourse had not.

Deaf children born to deaf parents tend to achieve higher levels of literacy than do deaf children of hearing parents. Vernon & Koh (1970) compared 32 deaf children of deaf parents to 32 deaf children of hearing parents. The groups were matched for sex, non-verbal intelligence, chronological age, and years of school since age 5.5. The children with deaf parents had been exposed to manual communication from birth. Academically, these children were superior in reading, vocabulary, and written language, scoring higher on both the word and paragraph meaning subtests of the Stanford Achievement Test. Results indicated an average
general achievement level of 1.44 grades higher than the children with hearing parents. Later investigations have found similar results (Brasel & Quigley, 1975; Serwatka & Fetsko, 1983).

While deaf children of deaf parents tend to achieve higher levels of literacy than do deaf children of hearing parents, their overall achievements do not match those of their hearing peers. Research has consistently shown that deaf students age 16 or older have significantly lower reading scores than hearing students of similar ages (Babbini & Quigley, 1970).

Educators have typically assumed that deaf students' lower reading achievement was primarily due to their early language deprivation (Brasel & Quigley, 1975; Furth, 1966; Hart, 1978). This assumption was based upon traditional educational theory, the reading readiness perspective, which suggested that oral language was a prerequisite to written language learning.

**The Traditional Orientation: Reading Readiness**

The deaf students depicted in the studies just reviewed were educated during a time period when the prevailing educational theory focused upon the development of oral language as a prerequisite to written language learning. Very little emphasis was placed upon literacy instruction until the students had attained some measure of spoken or signed language.

This theoretical perspective, the traditional notion of reading readiness, is an educational viewpoint currently dominant in much of early childhood education (Freeman & Hatch, 1989; Shannon, 1989; Taylor, 1989) and influences pedagogy for both hearing and deaf children. The primary
assumption of the reading readiness perspective is that young children are not ready to learn to read or write until they have attained a mental age of 6.6 years (Morphett & Washburne, 1931) and that literacy is a product of the educational experience which is learned through highly-sequenced, teacher-directed instruction. Literacy learning is defined as the young child's response to literacy instruction.

Within this theoretical stance, literacy is viewed as a set of sequential skills (e.g., visual and auditory discrimination, letter recognition, sound/symbol correspondence, etc.) that children must learn in hierarchic fashion to benefit from conventional modes of reading instruction (McGee & Richgels, 1990; Morrow, 1989; Teale & Sulzby, 1987). The area of instructional concern is reading. Writing is postponed until children learn to read. Reading instruction primarily focuses upon the formal aspects of reading rather than its functional uses.

Inherent within the reading readiness perspective is the "oral language supremacy assumption" (Harste, et al., 1984) which suggests that proficiency in oral language is a prerequisite to young children's literacy development. Based upon this assumption, researchers in the 1960's studied the relationships between children's oral language and other language processes, particularly reading. Studies by Strickland (1962) and Loban (1963, 1976) suggested that children who could manipulate "moveables" (clauses of a sentence that may occur in different positions) had control over language and eventually scored higher in reading achievement. Loban argued that competence in spoken language was a basic prerequisite for competence in reading and writing. Ruddell (1965) examined the
relationship of oral language structure and readability of basals and asserted that reading comprehension is a function of the similarity of the language structures appearing in the basal and the oral language structures used by children.

With the designation of oral language proficiency as a prerequisite to written language learning, early childhood educators called for a more deliberate approach to the teaching of oral language. Consequently, oral language instructional activities of all kinds typically preceded reading and writing activities throughout early childhood curricula (Harste, Woodward & Burke, 1984). The assumption was that, since oral language is a basic skill, special emphasis should be placed on it in preschool and kindergarten programs.

Following the tenets of the reading readiness perspective, educators of young deaf children have traditionally emphasized the acquisition and development of oral or signed language as a prerequisite to literacy instruction. In her book, Teaching Reading to Deaf Children, Hart (1978) maintained that the "oral unit" must be mastered before the "written unit" is introduced. Hammermeister and Israelite (1983), in their language experience approach to literacy, asserted that young deaf children must develop communicative competence in either oral or signed language before any instruction in reading can begin. As recently as 1986, in their instructional model for teaching young deaf children about "prereading," Andrews & Mason (1986, p. 210) suggested that "competency in one's native language is considered to be critical for reading acquisition. ... Literacy acquisition begins [when children] realize that written language is an
extension of their understanding of oral language." Luetke-Stahlman (1986, p. 220) agrees when stating that deaf children need "a strong first language on which to build ... literacy skills."

These assertions have posed quite a challenge for educators whose young students often lack competence in either spoken or signed language. Consequently, early childhood educators of young deaf children have typically focused their attention on the children's acquisition of oral or signed language to the exclusion of reading and writing instruction.

Historically, the reading readiness perspective has dominated pedagogy and research in early childhood education. Consequently, there was a dearth of information about the reading and writing of young preschool children. Within recent years, however, research on early childhood literacy has burgeoned and called into question the tenets of the reading readiness perspective.

**From Reading Readiness to Early Childhood Literacy**

As early as the mid-1960's, Durkin (1966) was conducting research that focused upon precocious readers, children who had learned to read at home, prior to formal school instruction. Durkin conducted two longitudinal studies in which she identified forty-nine "early readers." Through interviews in the children's homes, she learned that the parents of these early readers read to their children and provided a wide variety of print for the children to explore. Parents answered the children's questions about texts that were read and provided information about letters, words, and spellings.
Using similar techniques, Clark (1976) conducted an in-depth study of 32 children who were fluent readers upon school entry. There was great variety in the children's backgrounds, but, when interviewing in the children's homes, Clark found many sources and types of print available to and used by all the children and their parents. In addition, Clark found that each child had "extended and positive interaction with an adult," interaction which often involved books but seldom involved formal reading instruction (Clark, 1984, p. 124).

Goodman and Altweger's (1981) environmental print studies indicated that very young children were, in fact, learning a great deal about written language prior to formal schooling. The 3-, 4-, and 5-year-old children who participated in the study were of varying ethnic and socioeconomic backgrounds and attended a day care center in which there was minimal direct teaching. In the Print Awareness Tasks, the researchers presented the children with environmental print in gradually less contextualized form (e.g., in the first task the whole label was presented; in the last task the name of the item was presented in black ink on white index cards). The environmental print included labels from an array of household, toy, and food products as well as street signs mounted on tag board. The Tasks were designed to reveal the children's awareness of environmental print and use of contextual supporting cues.

Results of the study indicated that all of the children were aware of print in their environment, with the older children performing higher than the younger. As well, the children were aware that the print, and not the supporting context, communicated the message. However, the more context
supporting the print, the greater frequency of appropriate responses. Other print awareness studies (Harste, et. al, 1984; McGee, Lomax, & Head, 1988) found similar results.

In terms of writing, as early as mid-1930, Hildreth (1936) conducted a study of the name-writing ability of young children ages three to six. Parent interviews revealed that children often asked for the spelling of their names, and parents provided not only the spelling but suggestions on how to form the letters. Hildreth suggested that the children wanted to learn to write when they saw others doing so.

Later, Clay (1975) analyzed writing samples, spontaneously-produced both at home and in school, of children 4.10 to 7.0 years of age. Her analysis detailed the complexity of the writing process and outlined what young children come to know as they learn to write. As well, Clay identified specific principles which young children appear to follow in their early writing. The two most critical principles are the sign concept, i.e., that letters and letter-like shapes carry a message, and the message concept, i.e., that what is spoken can be written down.

These studies of early readers and writers strongly challenged the theoretical notion of reading readiness by focusing attention on young children, many of whom were not yet six years of age, who had learned a great deal about reading and writing prior to formal schooling. The studies shifted the focus of both research and pedagogy from teaching to learning. By the 1980's, some researchers were beginning to express doubt about the assumed relationship between oral language skill and reading and writing development. Reviews (Gray, Saski, McEntire & Larsen, 1980; Hammill &
McNutt, 1980) of a large number of studies conducted in the 1960's and 1970's indicated that correlations between specific grammatical skills and measures of reading and writing were generally low, suggesting that written language achievement may not be dependent upon oral language competence (see Pinnell & Jaggar, 1991). In addition, current linguistic theory suggested that written language was more closely related to aspects of meaning than to the sound patterns of speech (Smith, 1975). Furthermore, studies in the early eighties (e.g., King & Rentel, 1981; Scollon & Scollon, 1981; Sulzby, 1981) focused on indications that young children acquire both oral and written language during the preschool years.

From these lines of research, a number of implications were drawn that not only placed considerable doubt on the reading readiness perspective and the oral language supremacy assumption but also indicated that very young children were constructing knowledge of written language through experiences with the environment, in their homes and community settings. It was clear from these studies that children's early experiences with print played a significant role in their literacy learning. It seemed important to explore the nature of those environments as well as to begin studying children's reading and writing development in progress through observational studies rather than through retrospective designs. Studies of home and preschool literacy learning became important avenues for investigation of early childhood literacy. Several studies which influenced the theoretical and methodological framing of this investigation will be reviewed here.
Studies of Family Literacy

The significance of the home environment for early literacy learning is documented in Taylor's (1983) investigation into family literacy. The study highlights the ways in which young children's early experiences with print are influenced by both their parents' and older siblings' experiences.

Through in-depth interviews with the parents, Taylor found that the early childhood experiences, personal biographies, and educative styles of the parents helped to shape their children's early experiences with reading and writing. One father, who, as a young child had found it very difficult to read, was actively intent upon "making it fun for his children to play with print" (p. 12). Another father, who spoke of not being read to as a child, expressed how important he felt it was for his children to listen to stories. Parents' memories of their own early experiences with print influenced their interpretations of and attitudes toward their children's present experiences.

Taylor suggests that the young children first developed their awareness of written language in the home, where they were "surrounded by the print of their parents" (p. 32). None of the parents were consciously seeking to teach their children to read, yet they often read to their children and interpreted environmental print for them, print that was embedded in social situations and had functional uses in the home and community.

Not only were the parents' personal experiences influential, the older siblings' literacy activities helped to shape the younger children's early experiences with print. Younger siblings listened to older siblings read, and at times, the older siblings read to their younger brothers and sisters or showed them how to print letters of the alphabet. As well, the school
experiences of the older siblings were brought into the home. Younger siblings watched their older brothers and sisters completing homework assignments. At times the younger children, saying that they, too, were doing homework, would draw pictures while their older brothers and sisters worked. School was part of family life, and it shaped the literacy experiences of the younger children in ways that the first born children had not experienced.

While the children's literacy experiences were shaped by their parents and older siblings, all the children independently explored written language. They read a host of print in the home, from cereal boxes to children's magazines. They drew pictures or wrote everyday, "reinventing" writing forms through individual constructions of written language. Literacy activities sustained peer group play and social organizations. Taylor found that the children had a myriad of social uses for print in their daily lives.

In this study, literacy was "a part of the very fabric of family life" (p. 87), and the young children were absorbing, synthesizing, and initiating literacy within their homes. As Taylor points to the ways in which family values and literate practice influence young children's early literacy learning, she highlights the complex layers of context through which young children's experiences are filtered.

Heath (1983) has also investigated early literacy learning in young children's homes. As a part of her ethnographic investigation of cultural variation and aspects of learning behavior in three communities of the southern Carolina Piedmont, Heath investigated young children's uses of oral language and the ways in which parents socialize their children into literacy. Studying a black working-class, a white working-class, and a
mainstream middle-class community, Heath found that each community had its own values and conventions for uses of oral language and literacy that differed from those of the other communities and, in some cases, from that of the school.

In the black working-class community, children used oral language to demonstrate their uniqueness and individuality. Adults valued verbal adroitness, and children often used stories and playsongs to display their skill in this kind of language interaction. Storytelling was a primary means for children to gain attention and parade their individual strengths and victories. The children's stories were based upon actual events but maintained little chronicity, and fictionalized details comprised a majority of the story content. Such was the art of a good storyteller, and being a good storyteller was valued in the community. Consequently, children were often highly competitive and aggressive in their storytelling, using sound effects and gestures to maintain the audience's attention.

Adults in the community did not read to their children, nor did they provide their children with books. Consequently, there was little or no occasion to talk of the stories in books. Nor was there an accumulation of reading materials found in the children's homes. While literacy was a part of the community, it was primarily functional; print that came into the home was read, then discarded. When these children entered school and were asked to engage in specific naming tasks and labelling activities, their performance was low. These kinds of interactions were not consistent with the children's experiences at home.
Children in the white-working class community also told stories, but the stories were very different from those valued in the black working-class community. These children told stories that were factual and had little exaggeration; the stories maintained a strict chronicity and often ended with a summary or moral. In this sense, storytelling in the white-working class community was more like storytelling experiences in school.

Unlike children in the black-working class community, children in the white working-class community were surrounded by print. Parents provided their children with books; they read to them, focused their attention on the illustrations, and questioned them about specific items and events of the story. Book-reading events tended to focus on numbers, letters of the alphabet, and names of items. When the children were very young, parents valued active verbal responding during book-reading events. By age three, however, these parents began to limit their children's participation to low-level, literal retelling elicitations. Parents did not encourage their children "to move their understanding of books into other situational contexts or to apply it in their general knowledge of the world about them" (p. 61). Consequently, the children initially did well in school, where literacy tasks consisted primarily of labelings and simple skill activities, but they failed to progress as the frequency of these kinds of activities declined.

In the mainstream community, talking was of critical importance. Mothers engaged their young children in numerous question and answer routines, and children were trained to act as conversational partners and information-givers. Throughout the preschool years, questions were the most frequent type of talk mainstream mothers addressed to their young children.
The mainstream children were frequently read to from a very early age, in some cases, six months. During these book-reading events, parents would engage their children in interactions that were very similar to typical primary grade reading lessons, i.e. asking for specific information about characters or events in the story. Active verbal responding was encouraged, and, not surprisingly, parents valued informativeness in the children's interactions around print. In discussions about the books, parents tended to help children relate story content to events in the children's lives. In addition, the children were asked to create their own imaginative stories or recount personal experiences. By the time these children entered school they had "developed habits of performing which enable[d] them to run through the hierarchy of preferred knowledge about literacy" (p. 56).

Clearly, there were differences in the patterns of discourse and the literacy interactions among the three communities. While all three communities took part in literacy events, and included their children in these events, there was great variability in the kinds of events that took place and the talk that supported these events. These differences had consequences for the children's success in classroom discourse and literacy learning. The uses of language and the orientations to literacy of the children from both working-class communities were not consistent with those needed for success at school learning tasks. In contrast, the patterns of discourse and the literacy interactions found in the mainstream families were similar to those of the school. Consequently, these children tended to have higher achievement in school than did the children from the other two communities.
Heath’s investigation demonstrates that families have their own "ways with words," ways that are not always consistent with those of the school. The school’s definitions of literacy and ways for using language actually limited some of the children’s access to full participation in school-based literacy—and, ultimately, in the larger society. In these instances, language and literacy learning becomes problematic for young children.

While Taylor and Heath investigated the family/community environment as a context for literacy, other researchers have focused upon particular parent-child interactions that contribute to young children’s early literacy development. The contribution of storybook reading has received considerable attention in early childhood literacy research (Miller, et al., 1986; Snow & Ninio, 1986; Sulzby & Teale, 1987; Yaden, et al., 1986). Many of these investigations have focused upon the language and social interaction that surround storybook reading and how this interaction contributes to early literacy development. These studies indicate that parent-child interaction around books contributes to the acquisition of such literacy knowledge as learning how to hold books and turn the pages, recognizing letters, and understanding that print carries the message.

In their investigations of shared book readings, Snow and Ninio (1986) identified several features of the interactions that contribute to young children’s early literacy learning. They found that mothers’ speech to their young children during book reading is more complex than during free play with toys. As they discussed the stories, mothers not only asked what and where questions, but also how, what then, and why questions designed to elicit a full understanding of narrative sequences, motives, and
consequences. During the course of repeated readings, the parent-child interaction shifted from labeling the people and objects involved, to discussing the events in the story, to discussing the precursors and consequences of those events.

Snow and Ninio also identified a gradual shift in interactional roles for the participants. Initially, the mother controlled the introduction of specific topics about the pictures in the book and provided most of the information about those pictures. After six to ten readings, however, the child assumed this responsibility. Gradually, the child assumed other aspects of the adult's role as well, often asking questions of the adult that had initially been asked of him/her. The parent provided a kind of scaffolding, a facilitative framework within which the child was gradually able to assume responsibility of a majority of the interactions.

Snow and Ninio suggest that while these shared book experiences contributed to the children's early literacy development, they were an "ideal routine for language learning" (p. 118). The interactions were much like dialogues, having a structured turn-taking sequence which provided opportunities for routinized exchanges. Transcriptions of the storyreading events documented child language development as it occurred within the book reading situation. Well's (1986) research also indicates that shared book experiences contribute to young children's oral language development and emerging literacy.

Recent early literacy research has focused upon independent storybook readings, or reading reenactments, in which young children read books in ways that are not yet conventional reading. Young children reenact
or "read" books spontaneously demonstrating literacy behaviors which indicate their developmental knowledge and understanding of print. Researchers suggest that these behaviors often grow out of interactive parent-child storybook readings and appear to be an integral part of learning to read (Sulzby, 1988; Sulzby & Teale, 1987).

One general conclusion from family literacy studies is that literacy is deeply embedded in the culture of the family and community, functioning primarily as an aspect of human activity rather than a set of isolated skills. The vast majority of time, literacy mediates an activity (e.g., paying bills, transmitting information, being entertained, interacting socially) rather than being its goal. The studies also suggest that family and community values placed upon particular uses of language and orientations to literacy have great consequence for young children’s learning. As well, the research indicates that particular social activities of the home, e.g., storybook reading and reading reenactments, contribute to young children’s repertoires for oral language and literacy learning.

Studies of Preschool Literacy

Several studies of preschool literacy learning have supported the findings of the family literacy studies. In a detailed ethnographic study of a community nursery school, Cochran-Smith (1984) demonstrated how community cultural values, parental values, and school values provided multiple layers of context through which the young children came to know a great deal about print. Cochran-Smith described the ways both parents and teachers "socialized their children into particular patterns of literacy by
helping them develop the literary and social knowledge needed to understand print" (p. 1). These adults were "making readers of children" (p. 2) long before formalized literacy instruction.

While teaching the children to read and write was not the purpose of the nursery school, reading and writing were interwoven with many daily activities throughout the nursery-school day. Through these literacy events, the children learned that reading and writing were integral parts of their world and could be used to accomplish many of their own purposes and goals. As well, they learned about the form of written language and developed the "mechanical competences" to encode printed messages.

A major focus of the investigation was storybook or "rug time" reading, a pivotal event in the organization of the nursery-school day. In her monograph, *The Making of a Reader*, Cochran-Smith (1984) describes three types of interaction sequences occurring during rug time that contributed to the young children's literacy development. Readiness interactions provided the children with information on the ways "readers" prepared for and behaved during storyreading. "Life-to-Text" interactions were aimed at helping the children use their own experiences and knowledge of the world to make sense of texts. Conversely, "Text-to-Life" interactions assisted the children in applying the contents (e.g., its message, problem, or theme) of books to their own real-life situations.

These interactional sequences, or the routine of rug-time storyreading, provided a scaffold for the young children's learning, i.e., this is the way you become a reader. Like the family literacy studies, Cochran-Smith's investigation demonstrates how particular conventions for using
written language in preschool settings influence what young children come to know about print.

While Cochran-Smith’s investigation highlights the ways in which adults socialize young children into literacy, Rowe (1989) foregrounds the role of social interaction among peers in her investigation of the literacy learning of 3- and 4-year old preschool children.

As the children participated in self-selected literacy activities at the writing table, they learned about written language through conversation and text production. Rowe suggests that the children took on author and/or audience perspectives. As authors, the children asked for information about the writing process and/or requested that more “expert” authors evaluate their work. They asked questions to check their own current hypotheses about literacy. As audiences, the children challenged each other’s current literacy knowledge, provided suggestions for clarifying an author’s meaning and/or offered assistance in the production of texts. When reflecting on their own texts, children learned to shift from the author role to the audience role. These strategic shifts in stance guided the children’s text production activities.

Through their social interaction the children were exposed to new literacy experiences, and they confirmed and/or revised their existing knowledge or formed new literacy knowledge to be shared among the group. The children, with their peers and teachers, developed understandings of the content, processes, and purposes of literacy in the preschool.

Like the family literacy studies, preschool literacy studies suggest that adults hold values for particular patterns of literacy and often socialize
their children into these literate ways of knowing and behaving. The studies also indicate that young children take charge of their own literacy learning, learning through social interaction and using social interaction to support their individual constructions of literacy.

**Pioneering Research: The Early Childhood Literacy Development of Hearing-Impaired Children**

The early childhood literacy perspective has brought to research a fresh way of looking at young children's literacy development, and, in recent years, some researchers and educators of young deaf children have turned from the reading readiness perspective to examine more closely the tenets of the early childhood literacy perspective.

Until recently, reading readiness was the only perspective taken in research endeavors and the education of young deaf children. In the last decade, however, some educators have challenged the assumptions of this perspective, raising questions about current educational practice in classrooms for young deaf students (Soderbergh, 1985; Rottenberg, 1991). They have have begun to explore the universality of the assertions of the early childhood literacy perspective. If its tenets hold true across diverse populations, the early childhood literacy perspective could have great implications for the education of very young deaf children. If, in fact, proficiency in verbal language is not a prerequisite to written language learning, and, if very young children are learning about reading and writing prior to formal schooling, an alternative approach to the education of preschool deaf children may be needed.
While several recent investigations have explored aspects of young deaf children's reading and writing development (Andrews & Mason, 1984; Henderson, 1976), only a few studies have taken an early childhood literacy perspective.

Ewoldt (1985) was among the first educator of the deaf to test the theory that learning to read and write develops "naturally" (Goodman & Goodman, 1979). She investigated the early literacy development of ten 4- and 5-year-old hearing-impaired preschool children. All but one child had a severe-to-profound or a profound hearing loss. Ewoldt selected children whose parents were also hearing-impaired and used American Sign Language with their children. The investigation focused primarily on the young children's written language development.

Ewoldt observed the children in their free-writing periods and engaged them in specific assessment tasks similar to those used by Harste and colleagues (1983). Ewoldt found that the major patterns of the writing process identified by the Harste group in their work with young hearing children were present in the writing of the hearing-impaired children. Like their hearing peers, these hearing-impaired children demonstrated the organizational principle, the generativeness principle, and the intentionality principle as they wrote (Clay, 1975). Their writing often, but not always, intended a message. As well, many of the children used fingerspelling and sign language to plan, direct, or monitor their writing. This use of directive language, "language through which future actions appear to be controlled and directed," was identified by Dyson (1983, p. 28) in her investigation of the writing development of kindergarten children.
Ewoldt's investigation indicated that literacy was, in fact, developing naturally for these hearing-impaired children. The children had received no formal literacy instruction, but they demonstrated a great deal of knowledge about written language.

During the study, Ewoldt inadvertently found that the children were attending to print in the environment, particularly their classmates' names or the colors of crayons. Consequently, she became interested in the extent to which young deaf children attend to and make meaning of environmental print. In a second study, Ewoldt and Saulnier (in press) investigated 3- and 4-year-old preschool children's knowledge of environmental print. The 28 children who participated in the study had severe to profound hearing losses and were beginning their first year in preschool. Seven of the children used the oral/aural method of communication; the remaining 21 used sign language. All of the children's parents were hearing.

The investigators designed an environmental print awareness task similar to that of Goodman and Altwerger (1981) with adaptations for hearing-impaired children. Results of the investigation were strikingly similar. All of the children recognized print in one or more phases of the awareness task. The older children performed significantly better than did the younger ones, and all the children performed higher with more contextual support. As well, the study indicated that ethnic, racial, and socioeconomic differences and type of school program (i.e., oral or total communication) did not affect the children's ability to read environmental print. The results of the investigation led Ewoldt to argue that deaf children, like their hearing agemates, attend to and learn from environmental print. She argued further that "the
pervasiveness of environmental print in our society and the concomitant knowledge it affords children should be one strong basis for facilitating early reading efforts in school" (Ewoldt & Saulnier, in press).

While Ewoldt's research focused on younger children, Conway (1985) investigated the writing development of 5- and 6-year old hearing-impaired kindergarteners. His primary interests were the purposes for which children wrote and the ways in which the rules that shape writing emerged during free-choice writing activities.

Seven children, with varying degrees of hearing loss, participated in the study. Five of the children were beginning their third year in school. Using a naturalistic approach, Conway observed the children during their free-choice writing periods, interviewing them about their written work. Data analysis revealed that the purposes for which the children wrote fell into two broad categories: message-related and nonmessage-related. These purposes corresponded to those identified by Ewoldt (1985) in her investigation of the writing of hearing-impaired preschoolers, by Dyson (1981) in her study of the writing development of hearing kindergarten children, and by Taylor (1983) in her studies of family literacy.

Results also indicated that as the children participated in free-choice writing experiences, they explored, refined, and integrated their emerging knowledge of written language. Their development in writing was closely tied to their daily experiences. Conway suggests that for these children, "writing emerged early and was evolving as a purposeful activity that could be used to fulfill personal and sociocultural needs" (p. 104).
Maxwell (1983, 1984) reported the first case study of a young deaf child's natural development of reading. While investigating language acquisition in a deaf child of deaf parents, Maxwell (1983) found that Alice and her parents read books on a regular basis. As well, Alice frequently explored books on her own, sometimes "por[ing] over them for as much as an hour at a time" (1983, p. 299). Maxwell was "overwhelmed" by what the young child knew about books.

While Alice's parents frequently read stories to her, they did not consciously try to teach her to read. Much parent-child interaction, however, revolved around books or storytelling. Through this interaction, Alice learned to independently read the books her parents read to her. For Alice, learning to read was a natural outgrowth of experiences with books in daily social interaction with her parents.

The most recent investigation supports the findings of each of the earlier studies as well as the studies of early literacy development in hearing children. In an in-depth, ethnographic investigation of the early literacy development of seven preschool hearing-impaired children, ages 3.4 to 5.0, Rottenberg (1991) found that the children's knowledge, understandings, and uses of written language emerged through daily experiences with print and social interactions with adults and peers. These children had limited oral or sign language and had received no direct literacy instruction, yet their knowledge of written language was extensive. Literacy learning was important to the children, and they made great efforts to engage in literacy events in the preschool, often choosing literacy and literacy-related events over other free-play activities.
Rottenberg's study is timely and thought-provoking; she suggests that neither the children’s oral or sign language was a key element in their literacy development. Rather, as the children developed proficiency with literacy their oral and/or sign language abilities grew. They used both their drawings and writings to give meaning to their limited oral and/or sign language. Rottenberg suggests that the young children's varied communication systems (i.e., speaking, listening, reading, writing, fingerspelling and signing) were developing simultaneously, each one supported by growth in the others.

While these pioneering investigations supported the findings of existing studies of early childhood literacy development in hearing children, and while they provided insight into the literacy experiences and knowledge of young hearing-impaired children, they did not explore the nature of the children's experiences with verbal language as a part of early childhood literacy development. Nor did they investigate literacy learning across multiple contexts.

The present study was designed to do both. I not only investigated profoundly deaf preschool children's early literacy development across multiple contexts, I explored the nature of the world of verbal language within those contexts.

**Chapter Summary**

The low reading achievement of deaf students continues to be a major concern of educators of deaf children. Traditional perspectives on literacy learning, which suggest that verbal language is a prerequisite to written language development, have assumed that these low levels of
achievement are attributable to early language deprivation. The early childhood literacy perspective calls into question the assumptions of earlier perspectives and provides a fresh look at early childhood literacy learning.

Pioneering research into the early literacy development of young hearing-impaired children suggests that they, like their hearing peers, learn a great deal about literacy prior to formal instruction and that this learning is not dependent upon proficiency in either oral or signed language.

To date, research has not investigated in depth the nature of verbal language in the lives of young hearing-impaired children who are becoming readers and writers. Studies have primarily focused upon literacy development without exploring the children’s experiences or participation in verbal language. As well, existing studies have primarily been bound to one context, either the home or the preschool classroom. This study investigated both verbal language and early literacy development across multiple contexts.
CHAPTER III
METHODOLOGY

The purpose of this study was to investigate the verbal language worlds and early childhood literacy development of three profoundly deaf preschool children. The study explored the ways in which these profoundly deaf preschool children experienced, participated in, and used verbal language and literacy within their homes and preschool classrooms. Additionally, the study investigated the children's knowledge and understandings of written language. Given the nature of the research problem, the theoretical perspective framing this research, and the nature of the questions to be explored, an interpretative case study investigation was conducted.

Rationale for Interpretive Case Study Design

It was necessary to investigate the nature of the children's experiences with, participation in, and uses of verbal language and literacy under natural conditions, i.e., as the events occurred within the homes and preschool classrooms. Case study research is a form of inquiry that by definition usually occurs under naturalistic conditions, allowing an investigation "to retain the holistic and meaningful characteristics of real-life events" (Yin, 1989, p. 14.) Case study research seeks to explore the
phenomena of interest in context, holistically, and in great depth and detail. For these reasons, naturalistic case study methodology was used for this investigation.

Case study research is often used to break new ground; it provides for an in-depth investigation resulting in a thorough, well-organized picture of the dynamic nature and complexity of phenomena (Isaac & Michael, 1971; Patton, 1990). The study of the verbal language worlds and early childhood literacy development of hearing-impaired children is a new area of investigation and, thus, can be categorized as pioneering work that requires such a methodology.

In naturalistic case study, the researcher is the primary instrument for data collection and analysis. Data are mediated through the researcher, the human instrument (Merriam, 1991). Consequently, case study research is not only naturalistic but interpretivist in nature.

**Approach to the Study**

The goal of interpretive research is to expose and describe the meanings individuals make of social situations (Erickson, 1986). The researcher tries to uncover the meanings that participants assign to events and to understand how those meanings shape learning and behavior. In the attempt to understand and report the participants' meanings, the interpretative aspect of the research comes into play.

In case study research, the investigator provides a thick, comprehensive description of the case, a description that is well grounded in the data. In so doing, the investigator provides an opportunity for the reader
of the case report to vicariously experience the setting and determine the basis upon which the investigator made analytical interpretations. In a sense, the reader is provided the opportunity to co-analyze the case (Erickson, 1986) and develop naturalistic generalizations from the case report to other known contexts (Lincoln & Guba, 1985).

For this study, in an effort to ensure thick, comprehensive description, an ethnographic orientation to data collection and analysis was employed. This orientation provided a theoretically driven, systematic means for investigating the ways in which the children experienced and participated in language and literacy events\(^4\) with family members and members of the preschool classroom.

An ethnographic orientation is interpretivist in nature in that it takes into account the perspectives of members of a social group, foregrounding the beliefs and values that influence their ways of knowing and behaving. As researcher, my use of an ethnographic approach provided a way to focus on the beliefs and values the parents and classroom teachers held for particular modes of communication and uses of verbal language as well as the values they placed upon the role of literacy in the lives of the three case study children.

\(^4\) Anderson & Stokes (1984), p. 26) have defined a literacy event as "any action sequence involving one or more persons in which the production or comprehension of print plays a significant role." Their definition was used for purposes of this study.
Gaining Access

The Preschool selected as the site for this investigation was the only preschool for hearing-impaired children in the university city. I made my initial contact with the administrator of the program in February, six months prior to the date the research was to begin.

I observed at the Preschool for four months and conducted a pilot investigation of one profoundly deaf child's early childhood literacy development. This study provided insights into the kinds of data that could be collected, the most appropriate tools for data collection, the kinds of analysis procedures that would be useful, and appropriate roles for me as a researcher.

At the end of the pilot study, I submitted a case report to the administrator and discussed with him the possibilities of dissertation research. In late July, he accepted my formal research proposal, and the investigation officially began in September.

The Settings: The Children's Homes and the Preschool

This investigation took place in two settings: the children's homes and the Preschool all three children attended. A description of the children's homes is included in the introduction of each case study child.

The Preschool was an urban, early childhood intervention program serving hearing-impaired children three to seven years of age. The primary purpose of the program, as stated by the administrator, was to "support the children's acquisition of L1," that is, their first language. The Preschool began operation in December, 1967, to serve the educational needs of
children deafened through the rubella epidemic of 1964. During the term of the investigation, over 30 faculty and supporting staff members (audiologists, speech-language pathologists, psychologist, counselor, aides, etc.) served the educational needs of the 63 children in attendance.

The Preschool was structured into three levels, Preschool I, Preschool II, and Kindergarten. Two instructional options, oral/aural English or total communication (Pidgin Sign English), were available at each level. Within each level, children were grouped into individual classes of four to eight children based upon mode of communication, language ability, and number of years in the program. The curriculum for the Preschool I and II levels was developed by teachers and administrators within the program. The Kindergarten curriculum was based upon that used by the local, urban school system.

One of the goals of the program was to provide opportunities for the children to construct reality through direct interaction as an explorer and experimenter with the environment. Another goal was for the children to develop the skills necessary for competency in English. Thus, the auditory, language, speech, and speechreading skills believed to be necessary for competency in English were emphasized. As well, the expectation was that the children would develop skills preparing them for future school experiences.⁵

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⁵ This information was taken from the Preschool's written statement of philosophy. To maintain the anonymity of participants, the document will not be cited.
Selection of Children

The following criteria were used to select the children:

1. The child must be profoundly deaf and demonstrate no other handicapping conditions.
2. The child must indicate a willingness to interact with the researcher, and the researcher must be able to understand and communicate with the child.
3. The child's parents must be willing to participate in the study.
4. The classroom teacher must be willing to participate in the study.

During my initial observations, the staff audiologist provided me a list of all the profoundly deaf children enrolled at the Preschool. I observed each child and, based upon the stated criteria, selected three case study children. In order to build upon the recent exploration of diversity in early childhood literacy learning, and because young deaf children's experiences with verbal language are dramatically diverse, I chose three children to represent in some sense the verbal language worlds typically experienced by hearing-impaired children. That is, the verbal language experiences of the three case study children reflected the multiplicity, diversity, and variability typically experienced by profoundly deaf children.

The Case Study Children

All three of the children were profoundly deaf (see Table 1) and each had hearing parents. The children wore hearing aids during all waking hours and received private speech therapy and/or auditory training lessons once a week. All three children had outgoing personalities and appeared to be leaders in their classes at the Preschool.
Table 1. Pertinent demographic information for the three case study children

<table>
<thead>
<tr>
<th>Name</th>
<th>Sue</th>
<th>Andrew</th>
<th>John</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age beginning/ending</td>
<td>3.11/4.5</td>
<td>5.0/5.6</td>
<td>5.10/6.4</td>
</tr>
<tr>
<td>SAT, <strong>aided</strong>, in sound field</td>
<td>60</td>
<td>45</td>
<td>50</td>
</tr>
<tr>
<td>PTA, <strong>unaided</strong></td>
<td>R=98, L=99</td>
<td>R=112, L=111</td>
<td>R=99, L=95</td>
</tr>
<tr>
<td>Amplification</td>
<td>Phonic Ear 600 PPC</td>
<td>Phonic Ear 600 PPC</td>
<td>Phonic Ear 600 PPC</td>
</tr>
<tr>
<td></td>
<td>(binaural)</td>
<td>(binaural)</td>
<td>(binaural)</td>
</tr>
<tr>
<td>Level in Preschool</td>
<td>Preschool I</td>
<td>Preschool II</td>
<td>Kindergarten</td>
</tr>
<tr>
<td>Number of years in school</td>
<td>First</td>
<td>Third (retained)</td>
<td>Third</td>
</tr>
<tr>
<td>Classroom modality</td>
<td>Oral</td>
<td>TC</td>
<td>Oral</td>
</tr>
<tr>
<td>Primary/secondary</td>
<td>Oral/TC</td>
<td>Oral/TC</td>
<td>TC/Oral</td>
</tr>
<tr>
<td>modality at home</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child's use of sign</td>
<td>Limited PSE*</td>
<td>Proficient PSE</td>
<td>Proficient PSE (signed to from birth)</td>
</tr>
<tr>
<td>language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents' use of sign</td>
<td>Extremely limited PSE</td>
<td>Limited PSE</td>
<td>Proficient PSE</td>
</tr>
<tr>
<td>language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siblings</td>
<td>None</td>
<td>Younger hearing</td>
<td>Older profoundly deaf</td>
</tr>
<tr>
<td>Sibling's use of sign</td>
<td>Extremely limited</td>
<td>Proficient PSE</td>
<td>PSE</td>
</tr>
<tr>
<td>language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional schooling</td>
<td>Rural community</td>
<td>Urban neighborhood</td>
<td>Affluent suburb</td>
</tr>
</tbody>
</table>

*PSE = Pidgin Sign English
Sue

Sue was 3.11 years old when the study began. She was in Preschool I, and it was her first year in the program. Her parents, Alan and Jordan, chose the oral/aural English instructional option at the Preschool, and spoken English was the primary mode of communication used in the home. Sue, however, learned signs through social interaction and play with her peers at the Preschool, and she often used these signs when communicating with her classroom teacher, Elizabeth (a proficient signer) and her parents who knew a few signs as well. Sue was an only child, and she and her parents lived in a rural community approximately 35 miles from the mid-sized university city and the Preschool.

Sue's "best friend" at the Preschool was in the total communication instructional option, and at recess the girls communicated through Pidgin Sign English and gestures. Thus, while spoken English was the primary mode of communication used in her preschool classroom and at home, sign language was the modality that dominated Sue's peer group play.

Andrew

Andrew was 5.0 years old at the beginning of the study. He was in Preschool II, in the total communication instructional option, and it was his third year in the Preschool program. When Andrew entered Preschool I, his mother, Cathy, had chosen the oral/aural instructional option, and Andrew continued in this instructional option through his first year in Preschool II.

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6 Key informants chose their own pseudonyms or asked the researcher to do so.
Andrew did not make satisfactory progress in his acquisition of language through the oral/aural option, however, and the instructional staff recommended that he be retained in Preschool II and moved to the total communication instructional option. Thus, although Andrew was in Preschool II, it was his third year in the program.

When the study began, Andrew was already a proficient signer (Pidgin Sign English). Since Andrew had been in the oral/aural option for two years, however, his mother did not know sign language. When Andrew was placed in the total communication classroom in September, Cathy enrolled in her first sign language course, Pidgin Sign English. Consequently, spoken English often dominated interaction in the home, with Cathy signing as much as was possible. Andrew frequently taught his mother individual signs for words. Andrew's younger brother, Bradley, learned signs from both his mother and from Andrew. Andrew and his family lived in an urban neighborhood of the city just a few miles from the Preschool.

Although spoken English was the mode of communication used most often in Andrew's home, the modality was very slowly moving toward total communication as Cathy and Bradley learned sign language. Andrew's peer group play, like Sue's, was dominated by Pidgin and ASL-like sign language. His classroom interactions were always in total communication (Pidgin Sign English), his teacher, Anna, being an adept signer.
John

John was 5.10 years old when the study began, and he was in an oral/aural English kindergarten class. It was his third year in the program and in the oral/aural instructional option. John was a proficient signer, however, having been signed to from birth by his parents, Henry and Mary, and older, profoundly deaf sister, Whitney. When Whitney was identified as profoundly deaf at eight months of age, Mary and Henry decided to use sign language as their mode of communication. By the time John was born, they were proficient signers, and in a very real sense, John experienced and learned language naturally, similar to the language learning of a hearing child or a deaf child of deaf parents.

John and his family lived in an affluent suburb outside the city, and John was mainstreamed two afternoons a week into a regular kindergarten classroom near his home. For the first semester of the school year, John was mainstreamed without an interpreter; during the second semester, an interpreter was added. The interpreter's primary responsibility was to interpret whole group instruction. She only intervened during social peer group interaction when John called upon her to do so.

Clearly, John navigated in diverse verbal language worlds. He experienced oral/aural English in both of his kindergarten classrooms, yet he would, at times, sign to his teacher, Denise (who knew sign language). In his mainstreaming situation, an interpreter provided Signed English for his instructional needs. His peer group play was dominated by Pidgin and ASL-like communication at the Preschool and spoken English and gestures in the
mainstreaming situation. John's interactions at home were primarily in total communication (Pidgin Sign English).

Sue's, Andrew's, and John's experiences with verbal language reflected the multiple, diverse, and varying verbal language worlds typically experienced by hearing-impaired children. At the beginning of the investigation, Sue and her parents knew very few signs. Andrew was a proficient signer, but his mother and younger brother knew only a small number of signs. John and his family were proficient signers. Although their parents were hearing, the three children's experiences with verbal language were dramatically different from one another.

**Procedures**

Following an ethnographic orientation, qualitative field procedures were employed. As researcher, I moved from passive observer to participant observer during the data collection period, at times moving back and forth between the two roles. The following sections describe the qualitative methodology employed.

**Data Collection and Time Frame**

Field work began in September and proceeded through February, with occasional home visits and telephone conversations made during the spring and summer months (see Figure 1). Observations were made on a regular basis; I visited in each child's classroom from one to five times each week and in each child's home once a month throughout the course of the investigation.
### Data Collection Schedule and Time Frame

<table>
<thead>
<tr>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fieldnotes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(classroom observations)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audiotapes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(classroom observations, home visits)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Videotapes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(classroom observations, home visits)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal assessments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations in mainstreaming situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviews</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written Products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photographs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artifacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informative Documents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Data Collection Schedule and Time Frame
The data for the study included audio and audiovisual tape-recordings, photographs, field notes written during passive and participant observation, audiotaped interviews of the children, their parents, and their teachers, samples of the children's written work, and artifacts from the preschool.

**Field observations.** During the months of September and October, I spent 85 hours observing at the Preschool. In the first three weeks of the investigation, I identified the three case study children and made the necessary arrangements with their parents and classroom teachers. During the month of September, my role was that of passive observer. I sat to the side or in back of the children and watched the interactions among the members of the class. I made handwritten field notes describing the kinds of verbal interactions and literacy events taking place, focusing primarily on the case study child's participation within those events. I also noted the child's demonstrations of literacy knowledge that took place during routine classroom events.

The field notes were both descriptive and reflective. In the descriptive sections, I attempted to note the details of the verbal interaction and/or literacy event, the context in which it occurred, and the participants involved. The reflective portion (labeled PN for personal note) included my own perspectives, hunches, or hypotheses about the interaction or event.

At the end of each week, the field notes were reviewed, transferred to individual data cards on the Nashoba Systems Filemaker IV data-base program and given an initial code. These codes were preliminary conceptualizations of the data which were refined several times over the
course of data collection and analysis. Figure 2 is a sample data card taken from field notes during the month of September.

<table>
<thead>
<tr>
<th>Category:</th>
<th>????</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>John</td>
</tr>
<tr>
<td>Date:</td>
<td>9/24/90</td>
</tr>
<tr>
<td>Record type:</td>
<td>Observation</td>
</tr>
<tr>
<td>Code:</td>
<td>Regulatory (?)</td>
</tr>
<tr>
<td>Context:</td>
<td>9:11 am. Children are sitting at their desks, working quietly on a readiness worksheet (concept of same/different). Teacher taking attendance.</td>
</tr>
<tr>
<td>Comment:</td>
<td>Tyler's desk is in front of John's. Tyler turns around toward John. John sees him and thinks he's copying. John signs, without voicing: &quot;Wrong, not look.&quot;</td>
</tr>
<tr>
<td>PN:</td>
<td>Tyler has deaf parents (mother is hearing-impaired, father deaf). Tyler's loss isn't as great as John's. John didn't voice. Was it because he didn't want the teacher to hear or because of who Tyler is? i.e., not really an &quot;oral&quot; child? John's utterance seemed &quot;ASL-like&quot;.</td>
</tr>
</tbody>
</table>

Figure 2. Sample data card taken from field notes in September

In October, I began to participate in some classroom activities, taking my turn as one of the students or, less frequently, assisting the teacher in some way. My role was much more participant oriented than it had been during the previous month. I continued to write field notes throughout the month of October, and I collected eight hours of audiotape. The audiotapes provided insight into the ways in which the classroom teachers spoke to the children and documented the kinds of language and literacy events that took place. Since most of the children's responses were unintelligible on the audiotape, however, this data source had limited use. My primary objective for using the audio recorder was to acquaint the case study children with mechanical recording devices before I began videotaping. When I used the audio recorder (and later the video recorder), I "wired" each child with a
remote control microphone. By the time I began videotaping, the novelty of wearing the microphone had worn off.

**Home visits.** In October I also began visiting in the case study children's homes, audio and/or videotaping the interactions that took place among the parents, the children, and myself. Each child was visited once a month, and the visits lasted from one to four hours, for a total of 25 hours spent in the children's homes. The purpose of these visits was to observe the parents and children interacting and to gain information about the child's deafness, language, and experiences with and interests in literacy.

During the first or second visit, I asked the parents focused questions (see Appendix A). Subsequent visits involved informally talking with the parents, talking with the children, and observing the verbal interaction taking place. At times, I videotaped the children and their parents playing with toys or involved in a literacy event (e.g., a parent reading books to the children, a child reading to the parents, or the children and/or parents involved in writing/drawing). All home visits were audiotaped (25 hours) and/or videotaped (8 hours). Each of these tapes was transcribed.

**Videotaping.** I began videotaping in November and continued through February, audiovisually capturing verbal language and literacy events in the preschool classrooms and in the children's homes. I observed a total of 70 hours at the Preschool during these four months, of which 38 hours were videotaped. These videotapes became a primary source of data, allowing a much greater depth of analysis than had the field notes or audiotapes (Erickson, 1986). The audiovisual recordings made possible the revisitation of language and literacy events as necessary for thick description
and explanation. Revisiting the events on videotape, I was freed "from the limits of the participant observer's embedding in the sequential occurrence of events in real time and space" (Erickson, 1986, p. 144) to examine in detail the internal structure of language and literacy events.

**Literacy assessments.** During the months of January and primarily in February, I informally assessed the case study children's knowledge and understandings of literacy using Marie Clay's *Diagnostic Survey* (1979) and the *Literacy Tasks* of Harste, Woodward, & Burke (1981). Some adaptations of these measures were necessary for each of the three children. I videotaped the administration of each assessment. This data collection technique was embedded within the naturalistic framework of the study, and the assessment results were interpreted in light of the qualitative data collected. Given the time constraints of dissertation study, these assessments were necessary to efficiently probe for the children's individual constructions of literacy knowledge.

**Observations in the mainstreaming setting.** During the month of February, I observed and interpreted for John in his regular kindergarten class. The objective of these observations was to explore the nature of John's experiences with and participation in verbal language and literacy events in this mainstreaming situation. My role was that of observer/interpreter. John's parents requested that I interpret whole group instruction and the teacher's directions to John. They wanted John to use his speech skills, and asked me to interpret peer group interaction only when John requested that I do so. Consequently, when John worked independently or in small groups, I stood to the side and observed his interactions, ready to
interpret if needed. Sometimes I moved about the room to examine the activities of John's classmates. I observed twice a week for four weeks for a total of 21 hours. While I observed, I wrote field notes, asked the children about their work, and took photographs. Each observation was audiotaped and transcribed.

Interviews. Also in February, each classroom teacher was interviewed in an attempt to investigate her beliefs about and the values she placed upon profoundly deaf children's acquisition of verbal language and literacy. I believed that the teachers' implicitly or explicitly stated values would be played out in classroom pedagogy. Questions asked included:

1. How do you think profoundly deaf children best learn language?
2. What can teachers do to support profoundly deaf children's language learning?
3. How do you think profoundly deaf children learn to read?
4. What "instructional approach to reading" is best for profoundly deaf children?
5. How do you think profoundly deaf children learn to write (compose)?

I also interviewed the administrator of the Preschool program. I believed that his philosophy would, in some cases, influence classroom practice. The teacher interviews were one hour each and the administrator's interview was two hours in length for a total of five hours of formal interview data. Each of these interviews was audiotaped and transcribed.

Written products. Throughout the course of the investigation, the case study children's written products were photocopied and included in the
data analysis. A total of 70 writing samples were collected. Each written piece was dated and a brief description of the context in which it was created was noted. In some cases, comments were made about the amount and type of adult/peer assistance. These written pieces documented the children's individual constructions of literacy and the ways in which they initiated, absorbed, and synthesized the social and educational influences on their written language development (cf. Taylor & Dorsey-Gaines, 1988).

Other sources of data. The final sources of data collected were photographs, artifacts, and informative documents. These data sources included photographs of the case study children involved in literacy events, written notes from the parents, the case study children's and their classmates' audiograms, the case study children's I. E. P. documents, a written statement of philosophy for the Preschool program, and a written statement of objectives for John's mainstreaming experience.

For ease of manipulation in data analysis, much of the data were transferred from their original source (i.e., field notes, transcriptions of audiotapes, videotapes, etc.) to records on the Filemaker IV data-base computer program. Each record was analyzed as one unit of data. The total number of records exceeded 1600. Data that could not easily be transferred (e.g., the children's written products) were included in the data corpus in their original form. Table 2 summarizes the total number of observation hours and the data sources for this investigation.
Table 2. Observation hours and data sources

<table>
<thead>
<tr>
<th>Number of Hours:</th>
<th>Data Sources:</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the Preschool</td>
<td>Videotapes (hrs.)</td>
</tr>
<tr>
<td></td>
<td>155</td>
</tr>
<tr>
<td>In the children's homes</td>
<td>Audiotapes (hrs.)</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Mainstreaming situation</td>
<td>Written products</td>
</tr>
<tr>
<td></td>
<td>21</td>
</tr>
<tr>
<td>Formal interviews</td>
<td>Photographs</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Informative Documents</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

Data Analysis Procedures

The data were analyzed inductively using the procedures and techniques related to grounded theory analysis (Strauss & Corbin, 1990). This grounded theory approach allowed me to create a concise, theoretical formulation of data that were grounded in the children’s experienced reality, their verbal language and literacy worlds. This theoretical formulation of the data provided a powerful means for understanding the children's experiences with, participation in, uses for, and knowledge and understandings of verbal language and literacy.

After I withdrew from the field, the first step in data analysis was a revisiting of the initial analyses I had conducted during the data collection phase of the investigation. Primarily, this process involved a review of the individually coded records (transferred from my field notes) on the Filemaker IV data-base computer program.

As in data collection, the research questions guided data analysis. As I reviewed the records, I searched for instances of the children's (1) experiences with verbal language and literacy, (2) participation in verbal
language and literacy events, (3) uses of verbal language and literacy, and (4) demonstrations of literacy knowledge and understandings. For each instance, I labeled the record with a major category:

1. Experience with Verbal Language
2. Participation in Verbal Language
3. Use of Verbal Language
4. Experience with Written Language
5. Participation in Written Language
6. Knowledge/Understanding of Written Language
7. Use of Written Language

Experiences were defined as those instances in which an adult or peer initiated a verbal language interaction or literacy event in the case study child’s presence. Participations were defined as instances in which the case study child initiated or responded to the initiations of verbal language interactions or literacy events. Knowledge and/or Understandings were demonstrations by the case study children of book-handling knowledge (e.g., turning the pages one at a time from the front cover to the back page), concepts of print (e.g., reading from left to right), reading and/or writing texts, etc. Uses were coded as either adult initiated or child initiated.

After I had labeled each record with a major category, I reviewed the preliminary codes making changes as necessary. A myriad of codes emerged as I attempted to conceptualize the data. Table 3 provides a few examples of the numerous codes that were used.
Table 3. Examples of codes used to conceptualize the data

<table>
<thead>
<tr>
<th>Experiences with Verbal Language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teacher uses incomplete sentences when speaking/signing</td>
</tr>
<tr>
<td>2. Teacher uses deliberate gestures (very similar to signing) when speaking (in &quot;oral&quot; classrooms)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participation in Verbal Language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Child imitates rather than responds</td>
</tr>
<tr>
<td>2. Child voices, signs, and gestures to communicate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Uses of Verbal Language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Child uses verbal language to regulate the behavior of others</td>
</tr>
<tr>
<td>2. Child uses verbal language to establish/maintain/discontinue relationships</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experiences with Written Language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teacher reads the text verbatim during storybook read alouds</td>
</tr>
<tr>
<td>2. Teacher revises the text significantly during storybook read alouds</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participation in Written Language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Child makes life to text/text to life connections when using written language</td>
</tr>
<tr>
<td>2. Child &quot;reads&quot; by making continuous unintelligible vocalizations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Knowledge/Understanding of Written Language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Child demonstrates left to right directionality in writing</td>
</tr>
<tr>
<td>2. Child demonstrates one-to-one correspondence while reading</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Uses of Written Language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Adult uses written language to organize the day's/week's/month's activities</td>
</tr>
<tr>
<td>2. Child uses written language to communicate with adults/peers</td>
</tr>
</tbody>
</table>

Using these seven categories and the codes that emerged, I began a formal analysis of the entire data set. This formal analysis proceeded in two phases: (1) an analysis of the children's verbal language worlds at home and in their preschool classrooms, and (2) an analysis of the children's literacy worlds at home and in their preschool classrooms.
Phase I: Verbal Language. One of the goals of this investigation was to explore the nature of verbal language in the lives of profoundly deaf preschool children. If proficiency in verbal language is a prerequisite to literacy learning, then the children's experiences with verbal language become central to an investigation of literacy. If verbal language is not a prerequisite to literacy learning, then what role(s) does it play in the lives of young children who are becoming readers and writers?

This first phase of data analysis involved a systematic and thorough search through the entire data set (i.e., field notes, videotapes, transcriptions of audiotapes, etc.) for recurring patterns of the ways in which the three case study children experienced, participated in, and used verbal language in (1) their homes, and (2) their preschool classrooms. Three major questions guided this search:

1. How do the case study children experience verbal language (1) at home?
   a. How do their parents interact with them?
   b. How do their siblings interact with them?
   c. What modalities are used for communication?

(2) at the Preschool?
   a. How do teachers and other adults interact with them?
   b. How do their peers interact with them?
   c. What modalities are used for communication?

2. How do the case study children participate in verbal language (1) at home?
   a. What modalities do they use for communication?
(2) at the Preschool?
   a. With whom do they interact?
   b. What modalities do they use for communication?

3. For what purposes do the children use verbal language?
   (a) at home, and (b) at the Preschool?

   In addition to the grounded theory procedures employed, two of
   Spradley's (1980) semantic relationships were applied to the data set:
   (1) "means-end" (x is a way to do y)
   (2) "function" (x is used for y)

   The "means-end" relationship was used to explore the ways in which the
   three children experienced (x is a way to experience) and participated in (x is
   a way to participate) verbal language interactions at home and in their
   preschool classrooms. The "function" relationship was used to explore the
   ways in which the three children used verbal language (verbal language is
   used to/for y) at home and in their preschool classrooms.

   One additional question was asked in regard to the children's verbal
   language worlds. Believing that the children's experiences with verbal
   language were influenced by the values their parents and teachers held for
   particular modes of communication, I reviewed the data set asking the
   question, "What values are placed upon verbal language use at home and in
   the preschool classroom?" I searched for implicit and explicit value
   statements concerning verbal language interaction and use. Table 4
   illustrates the formal data analysis of the children's experiences with verbal
   language in the home.
Table 4. Data Analysis Procedures: Verbal language at home

<table>
<thead>
<tr>
<th>Question:</th>
<th>Methods/Grounded Theory Analysis:</th>
</tr>
</thead>
<tbody>
<tr>
<td>How is verbal language</td>
<td>(Strauss &amp; Corbin, 1990)</td>
</tr>
<tr>
<td>experienced?</td>
<td>• Transcription of all audio and</td>
</tr>
<tr>
<td></td>
<td>videotapes from home visits</td>
</tr>
<tr>
<td></td>
<td>• Identification of mode(s) of</td>
</tr>
<tr>
<td></td>
<td>communication used</td>
</tr>
<tr>
<td>How does the child</td>
<td>• Spradley, 1980</td>
</tr>
<tr>
<td>participate within this</td>
<td>means-end:</td>
</tr>
<tr>
<td>verbal language world?</td>
<td>&quot;x is a way to experience&quot;</td>
</tr>
<tr>
<td></td>
<td>• Analysis of interactional</td>
</tr>
<tr>
<td></td>
<td>patterns:</td>
</tr>
<tr>
<td></td>
<td>Parent to child</td>
</tr>
<tr>
<td></td>
<td>Parent to sibling</td>
</tr>
<tr>
<td></td>
<td>Sibling to child</td>
</tr>
<tr>
<td>How is verbal language</td>
<td>• Spradley, 1980</td>
</tr>
<tr>
<td>used?</td>
<td>means-end:</td>
</tr>
<tr>
<td></td>
<td>&quot;x is a way to participate&quot;</td>
</tr>
<tr>
<td></td>
<td>• Analysis of interactional</td>
</tr>
<tr>
<td></td>
<td>patterns:</td>
</tr>
<tr>
<td></td>
<td>Child to parent</td>
</tr>
<tr>
<td></td>
<td>Child to Sibling</td>
</tr>
<tr>
<td>What values are placed</td>
<td>• Strauss &amp; Corbin, 1990</td>
</tr>
<tr>
<td>upon verbal language use?</td>
<td>open and axial coding,</td>
</tr>
<tr>
<td></td>
<td>theoretical sampling</td>
</tr>
<tr>
<td></td>
<td>• Triangulation of data sources</td>
</tr>
<tr>
<td></td>
<td>with parents</td>
</tr>
</tbody>
</table>

In Table 5 to follow, I have detailed the formal data analysis of the children's verbal language worlds at the Preschool.
<table>
<thead>
<tr>
<th>Question</th>
<th>Methods/Grounded Theory Analysis:</th>
</tr>
</thead>
<tbody>
<tr>
<td>How is verbal language experienced?</td>
<td>(Strauss &amp; Corbin, 1990)</td>
</tr>
<tr>
<td></td>
<td>• Transcription of teacher interviews</td>
</tr>
<tr>
<td></td>
<td>• Transcription of principal interview</td>
</tr>
<tr>
<td></td>
<td>• Review of all videotapes</td>
</tr>
<tr>
<td></td>
<td>• Transcription of randomly selected</td>
</tr>
<tr>
<td></td>
<td>videotapes</td>
</tr>
<tr>
<td></td>
<td>• Identification of mode(s) of</td>
</tr>
<tr>
<td></td>
<td>communication used</td>
</tr>
<tr>
<td>How does the child participate within this</td>
<td>• Spradley, 1980</td>
</tr>
<tr>
<td>verbal language world?</td>
<td>means-end:</td>
</tr>
<tr>
<td></td>
<td>&quot;x is a way to experience&quot;</td>
</tr>
<tr>
<td></td>
<td>• Analysis of interactional patterns:</td>
</tr>
<tr>
<td></td>
<td>Teacher to child</td>
</tr>
<tr>
<td></td>
<td>Other adults to child</td>
</tr>
<tr>
<td></td>
<td>Peers to child</td>
</tr>
<tr>
<td>How is verbal language used?</td>
<td>• Spradley, 1980</td>
</tr>
<tr>
<td></td>
<td>means-end:</td>
</tr>
<tr>
<td></td>
<td>&quot;x is a way to participate&quot;</td>
</tr>
<tr>
<td></td>
<td>• Analysis of interactional patterns:</td>
</tr>
<tr>
<td></td>
<td>Child to teacher</td>
</tr>
<tr>
<td></td>
<td>Child to other adults</td>
</tr>
<tr>
<td></td>
<td>Child to Peers</td>
</tr>
<tr>
<td>What values are placed upon verbal language</td>
<td>• Spradley, 1980</td>
</tr>
<tr>
<td>use?</td>
<td>function:</td>
</tr>
<tr>
<td></td>
<td>&quot; language is used to/for y&quot;</td>
</tr>
<tr>
<td></td>
<td>• Strauss &amp; Corbin, 1990</td>
</tr>
<tr>
<td></td>
<td>open and axial coding,</td>
</tr>
<tr>
<td></td>
<td>theoretical sampling</td>
</tr>
<tr>
<td></td>
<td>• Triangulation of data sources</td>
</tr>
<tr>
<td></td>
<td>with teachers and administrator</td>
</tr>
</tbody>
</table>
Phase II: Written language. The primary objective of the second phase was to explore the nature of the world of literacy in the lives of the three case study children. This phase of data analysis required a second systematic and thorough search through the entire data set for recurring patterns of the ways in which the three case study children experienced, participated in, and used written language in (1) their homes, and (2) their preschool classrooms. In addition, this wave of analysis explored the children's knowledge and understandings of written language. Four major questions guided this search:

1. How do the case study children experience written language (1) at home?
   a. How do their parents use written language?
   b. How do their siblings use written language?

   (2) at the Preschool?
   a. Where is literacy located in the preschool classroom?
   b. How do teachers and other adults use written language?
   c. How do the children’s peers use written language?

2. How do the case study children participate in literacy events? (a) at home, and (b) at the Preschool?

3. For what purposes do the case study children use written language (a) at home, and (b) at the Preschool?

4. What literacy knowledge and understandings do the children demonstrate
   a. through their participation in literacy events?
   b. in clinical and naturalistic interview settings?
Strauss and Corbin's (1990) grounded theory procedures were also employed in this second wave of analysis, and three of Spradley's (1980) semantic relationships were applied to the data set:

1. "location for action" (x is a place for y)
2. "means-end" (x is a way to do y)
3. "function" (x is used for y)

I used Spradley's (1980) "means-end" relationship to explore the ways in which the three children experienced (x is a way to experience) and participated in (x is a way to participate) literacy events independently or with their parents and/or siblings. Spradley's "function" relationship was used to investigate the ways in which the three children used written language (written language is used to/for y) at home.

To explore the nature of literacy at the Preschool, Spradley's (1980) "location for action" relationship was used to locate literacy events within the preschool classrooms (x is a context for literacy events). Once I had identified the contexts for literacy within each classroom, I chose the two most salient contexts for an in-depth exploration of the role of literacy in the lives of the children. Using Spradley's "means-end" relationship, I examined the ways in which the three children experienced (x is a way to experience) and participated in (x is a way to participate) literacy events within these two focal contexts. Then, I used the "function" relationship (written language is used to/for y) to investigate the ways in which the teachers and the case study children used written language within these two focal contexts.
Results of the two informal assessments, Clay's (1979) *Diagnostic Survey* and Harste's *Literacy Tasks* (1984) were used to investigate the children's knowledge and understandings of written language. In addition, demonstrations of literacy knowledge/understandings that took place while the children participated in literacy events at home and in their preschool classrooms were coded.

As with verbal language, one additional question was asked in regard to the values parents and teachers placed upon literacy. I searched through the data set asking the question, "What values are placed upon literacy at home and in the preschool classroom?" I looked for implicit and explicit value statements concerning the importance of literacy in the lives of the three young children. Table 6 illustrates the formal data analysis of the children's family literacy.
### Table 6: Data Analysis Procedures: Literacy at home

<table>
<thead>
<tr>
<th>Questions:</th>
<th>Methods/Grounded Theory Analysis:</th>
</tr>
</thead>
<tbody>
<tr>
<td>How is literacy experienced?</td>
<td>(Strauss &amp; Corbin, 1990)</td>
</tr>
<tr>
<td>How does the child participate within this literacy world?</td>
<td>• Spradley, 1980</td>
</tr>
<tr>
<td></td>
<td>means-end:</td>
</tr>
<tr>
<td></td>
<td>&quot;x is a way to experience&quot;</td>
</tr>
<tr>
<td>How is literacy used?</td>
<td>• Spradley, 1980</td>
</tr>
<tr>
<td></td>
<td>means-end:</td>
</tr>
<tr>
<td></td>
<td>&quot;x is a way to participate&quot;</td>
</tr>
<tr>
<td>What literacy knowledge and understandings does the child demonstrate?</td>
<td>• Strauss, 1990</td>
</tr>
<tr>
<td></td>
<td>Open coding: identify demonstrations of literacy knowledge</td>
</tr>
<tr>
<td>What values are placed upon literacy?</td>
<td>• Strauss, 1990</td>
</tr>
<tr>
<td></td>
<td>Open and axial coding, theoretical sampling</td>
</tr>
<tr>
<td></td>
<td>• Triangulation of data sources with parents</td>
</tr>
</tbody>
</table>

In Table 7 to follow, I have detailed the data analysis procedures for the children's written language worlds at the Preschool. Because my major interest in the investigation was early literacy development, the analysis of data involved two systematic waves.
### Table 7: Data Analysis Procedures: Literacy at the Preschool

<table>
<thead>
<tr>
<th>Questions:</th>
<th>Methods/Grounded Theory Analysis:</th>
</tr>
</thead>
<tbody>
<tr>
<td>How is literacy experienced?</td>
<td><em>First Wave Analysis:</em> Spradley, 1980</td>
</tr>
<tr>
<td></td>
<td>location for action:</td>
</tr>
<tr>
<td></td>
<td>&quot;x is a context for literacy&quot;</td>
</tr>
<tr>
<td>How does the child participate within the focal contexts?</td>
<td><em>Second Wave Analysis:</em> Spradley, 1980</td>
</tr>
<tr>
<td></td>
<td>means-end:</td>
</tr>
<tr>
<td></td>
<td>&quot;x is a way to experience&quot;</td>
</tr>
<tr>
<td>How is literacy used?</td>
<td>Spradley, 1980</td>
</tr>
<tr>
<td></td>
<td>means-end:</td>
</tr>
<tr>
<td></td>
<td>&quot;x is a way to participate&quot;</td>
</tr>
<tr>
<td>What literacy knowledge and understandings does the child demonstrate?</td>
<td>Strauss, 1990</td>
</tr>
<tr>
<td></td>
<td>Open coding: identify demonstrations of literacy knowledge</td>
</tr>
<tr>
<td>What values are placed upon literacy?</td>
<td>Strauss, 1990</td>
</tr>
<tr>
<td></td>
<td>Open and axial coding, theoretical sampling</td>
</tr>
<tr>
<td></td>
<td>Triangulation of data sources with teachers and principal</td>
</tr>
</tbody>
</table>
Trustworthiness

Researchers cannot escape the influence of latent *a priori* theories or assumptions about their investigations. As the primary data collection and analysis instrument, what the researcher sees emerging from the data is a result of his/her own interpretive lens. Consequently, the investigator employs certain operational techniques to establish the trustworthiness of the investigation, i.e., to confirm with the research informants the information presented, to ensure the emic perspective. In this investigation, trustworthiness was established through prolonged engagement, triangulation, peer debriefing, and member checks.

**Prolonged engagement.** Regular observation in the children's classrooms and frequent visits in their homes over an extended period of time allowed me to build rapport with the children. The home visits and frequent conversations with parents allowed me to gain their support and build trust with them as well. Prolonged engagement at the Preschool maximized the possibility of my identifying the most salient and/or atypical characteristics of the children's experiences with and participation in verbal language and literacy events.

**Triangulation.** Triangulation involves the use of data collected from multiple sources (Denzin, 1978). Analytic interpretations are cross-examined in light of all data sources, which in this study included classroom observations, home visits, interviews, audio and audiovisual recordings, and written products. The audio and audiovisual recordings were validated with field notes on days when both sources were available. Copies of interview transcripts were sent to the teachers and the administrator and copies of
home visit transcripts were sent to parents. The teachers and parents were also given a videotape that included classroom observations, informal testing sessions, and/or home visits at several points in time across the term of the study. I asked the participants to review both the transcripts and the videotape for triangulation purposes.

**Peer debriefing.** Peer debriefing is a process whereby an investigator invites peer researchers to examine his/her data and the resulting interpretations. Peer debriefers raise questions about methodology and design; they ask for clarification of, or in some cases, challenge the interpretations being made. They ask a variety of questions which probe the biases of the investigator. Peer debriefing sessions allow the investigator the opportunity to test tentative hypotheses that emerge from the data and receive advice on methodological "next steps" in the research design (Lincoln & Guba, 1985, p. 283). As well, peer researchers may provide personal catharsis as need.

During the course of this investigation, I met with a group of six researchers, graduate students who were also conducting qualitative investigations. The group met twice a month to perform peer debriefing functions as outlined above. As well, individuals within the group met periodically to provide one-on-one debriefing sessions.

**Member checking.** Member checking is a process by which the investigator's interpretations and conclusions are confirmed by the research informants (Lincoln & Guba, 1985). The case report is the investigator's reconstruction of the informants' experienced reality, and its accuracy must be verified by the informants. For this investigation, a draft of the case report
was given to the parents, each teacher, and the administrator for their member check before the final case report was written. Such negotiation of the research conclusions is essential to naturalistic inquiry (Anderson & Kelley, 1987).

Chapter Summary

Case study methodology was used to investigate the verbal language worlds and early childhood literacy development of three profoundly deaf preschool children. Data collection methods were ethnographic in orientation, and data analysis procedures were interpretivist in nature. Prolonged engagement, triangulation of data sources, peer debriefing, and member checking were used to establish the trustworthiness of the investigation.

Introduction to Chapter Four: Data Analysis

In the chapter to follow the data are presented behaviorally, that is, as I saw the events take place. The data are presented as the basis of my interpretation and conclusions, which appear in Chapter Five. I realize, however, that there is no such thing as "pure description," that even in the detailing of everyday events my own subtle analysis exists (Wolcott, 1990). In my commitment to the emic perspective, I have included numerous excerpts from the data. Consequently, the biographies have become lengthy. The reader is hereby invited to co-analyze the case studies and make his/her own interpretations.
CHAPTER IV
DATA ANALYSIS AND RESULTS: THE CASE STUDIES

The purpose of this study was to investigate the verbal language worlds and early childhood literacy development of three profoundly deaf preschool children within their homes and preschool classrooms. This chapter presents the language and literacy biographies of the three children introduced in the previous chapter -- Sue, Andrew, and John -- detailing their experiences and growth as readers and writers during the term of the study.

The biographies are constructed to highlight the consistent patterns I saw in the ways the children experienced and participated in language and literacy events in their homes and preschool classrooms. Excerpts from the data corpus are provided as evidentiary warrant of these patterns and the assertions that follow. Table 7 provides the conventions used in transcription of those excerpts.

Each biography is organized into two major sections: (1) the analysis of verbal language at home and in the preschool classroom, and (2) the analysis of literacy at home and in the preschool classroom. In each section, I discuss the case study child's (1) experiences with, (2) participation in, and (3) uses of verbal language or literacy. In the analysis of literacy, a separate subsection details each child's demonstrations of knowledge and
understandings of written language. A graphic display of data is included in each subsection, and the narrative which surrounds it describes, in detail, the patterns that emerged. A brief description of each child's personal history introduces the biography. For each child, an introduction to his/her preschool teacher and classmates and a description of the daily schedule of events precedes the analysis of verbal language in the preschool classroom.

This chapter begins with the language and literacy biography of Sue. The biographies of Andrew and John follow.

Table 8. Transcript conventions

- Speakers' names are given in the introduction to the excerpt. The first initial of each name is used throughout the transcript except in the cases where speakers have the same initials. Then the first two initials are used or the name is written out.
- Unless noted otherwise, communication in the oral classrooms is through spoken English and communication in the total communication classroom is through simultaneous speech and sign.
- ( ) are used to describe nonverbal communication or interpret for the reader what the children have signed/spoken
- (s/v) is used when the children speak and indicates that the word/utterance was both signed and voiced
- (s) indicates that the word was signed only
- (v) indicates that the word was voiced only
SUE

Sue may have been born deaf, but her parents, Alan and Jordan Tyson, tend to think otherwise. When she was 4 months old, Sue suffered from a temperature of 101 - 104 degrees for 7 days. The attending physician diagnosed Sue as having "a virus" and recommended Tylenol and sponge baths. Alan and Jordan believe that medical negligence may have contributed to Sue's profound bilateral sensorineural hearing loss.

When Sue was approximately 8 months of age, her parents began to notice that she did not respond when her name was called, and, in Jordan's words, "She wasn't entertained at all when I would try reading her a story, and there was no language developing." Alan and Jordan decided to have Sue's hearing checked after she did not react when a balloon she was playing with burst in her hands.

At 11 months of age, Sue was diagnosed as having a profound bilateral sensorineural hearing loss, and at 13 months she was fitted with hearing aids. Sue began auditory/speech training a few months later.

The World of Verbal Language

In the two major sections that follow, I will discuss Sue's verbal language worlds at home and in her preschool classroom.
**Verbal Language in the Home: An Oral/Aural Approach**

When parents learn that their child has a hearing impairment they are faced with many decisions, one of which is to determine the modality the family will use for communication and, consequently, the modality most likely to be used in instructional settings. Alan and Jordan chose the oral/aural option. Believing that Sue could learn to speak intelligibly, the Tysons committed themselves to weekly, formal auditory and speech training sessions with a trained audiologist and to the work at home that accompanied that decision.

Excerpt from Artifact: Parent's note, 11/13/90

Jordan: I thought I would never see the day she would wear her hearing aids! The first 4 months were spent walking behind her and putting them in as soon as she would take them out. Now, when she takes them out at night, she kisses them good night.

We started [auditory training] with shaking boxes with objects in them and pointing to her/our ears and smiling when we heard them. Rattling keys, shaking pennies in a jar, a can opener, and a ringing alarm clock were the first things we used to help Sue tune into sounds. The first thing I remember her turning around to look at was a cash register in a store. It was a great day!

We progressed to turn-taking and began vowel sounds. Sue's first vowel was "o" for her Cheerios! "Up for "cup" was her first word. At the time it seemed like forever to hear new vowels! Progress may have seemed very slow, but the entire time Sue was soaking up everything--we just didn't realize it!

At the beginning of the investigation, the primary mode of communication in the Tyson home was spoken English. Both Alan and Jordan primarily communicated with Sue orally; however, they used a limited number of signs that Sue's auditory/speech therapist had taught them. These were functional signs such as "stop" and "help" and signs for abstract
concepts like "later" and "maybe." So although Alan and Jordan had made an ideological commitment to an oral/aural approach, they were not opposed to Sue's learning signs, "particularly since Sue would always vocalize along with the sign."

Excerpt from Home Visit #1, 10/27/90
Jordan: It really doesn't bother me that Sue is learning to sign. It would bother me, I guess, if she wasn't vocal, but she is. She's never quiet! Never! She always trying to say something. I guess her learning to sign really doesn't concern me.

Excerpt from Phone Conversation, 3/1/91
Jordan: We made a commitment for Sue to be oral, but it doesn't mean we don't want her to sign. It is a part of her, a natural part. For Sue, it's a 50/50 between sign and oral."

Sue's Experiences with Verbal Language at Home

Given the circumstances in Sue's home, her experiences with verbal language were not purely "oral/aural" in nature. Table 9 summarizes the variety of Sue's experiences with verbal language at home.
Table 9. Sue's experiences with verbal language at home

<table>
<thead>
<tr>
<th>Both parents:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• emphasized Sue's speech and articulation</td>
</tr>
<tr>
<td>• emphasized Sue's speechreading</td>
</tr>
<tr>
<td>• emphasized Sue's use of audition</td>
</tr>
<tr>
<td>• taught Sue new vocabulary words to pronounce</td>
</tr>
<tr>
<td>• often used one- and two-word utterances when speaking</td>
</tr>
<tr>
<td>• spoke in complete sentences</td>
</tr>
<tr>
<td>• often repeated Sue's statements to make sure they had understood her</td>
</tr>
<tr>
<td>• spoke without signing or gesturing</td>
</tr>
<tr>
<td>• used gestures when speaking</td>
</tr>
<tr>
<td>• used signs when speaking</td>
</tr>
<tr>
<td>• used gestures that were actually signs (i.e., &quot;ambulance&quot; for &quot;fire truck&quot;)</td>
</tr>
<tr>
<td>• never signed without speaking</td>
</tr>
<tr>
<td>• asked Sue to teach them a sign</td>
</tr>
<tr>
<td>• understood Sue's spoken and/or signed utterances</td>
</tr>
<tr>
<td>• misunderstood Sue's spoken and/or signed utterances</td>
</tr>
<tr>
<td>• understood Sue's &quot;talk&quot; in context</td>
</tr>
<tr>
<td>• did not understand Sue's continuous vocalizations</td>
</tr>
<tr>
<td>• Father signed infrequently</td>
</tr>
<tr>
<td>• Mother signed frequently</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other adults in Sue's home experience:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• babysitter spoke in complete sentences as though Sue could understand</td>
</tr>
<tr>
<td>every word</td>
</tr>
<tr>
<td>• grandparents gestured without voicing</td>
</tr>
</tbody>
</table>

As Table 9 indicates, Alan infrequently signed to Sue. While he was not opposed to Sue's learning sign language, he rarely used signs when he spoke to her. Alan was committed to supporting Sue's acquisition of intelligible speech and speechreading skills; he was the "Oralist" in the family. Almost without exception, when Alan spoke to Sue he tapped her on the shoulder or arm to get her attention. He would always wait until their eyes met before he spoke. Although Alan infrequently used signs, he did not discourage Sue from using them when they interacted. He continually praised Sue for her attempts at and successes with intelligible speech. He
would lovingly pat her on the arm or back and say, "That was good!" or "You're a good girl."

Although she, too, was committed to Sue's acquisition of intelligible speech, Jordan used considerably more gestures and/or signs when communicating with Sue than did Alan. During a home visit toward the end of the data collection phrase of the investigation, Jordan stated that she knew approximately 65 signs. When Jordan did sign and/or gesture to Sue, her communication was always simultaneous; I never observed her sign without voicing. Jordan said that she primarily used signs when what she had to say was "important" and she wanted "to make sure Sue understood." Like Alan, Jordan continually praised Sue for her hard work at developing intelligible speech.

Throughout my visits in the Tyson home, I noticed that both parents (particularly Jordan) often spoke to Sue in two- and three-word utterances.

Excerpt from Home Visit #2, 11/17/90
Jordan, Alan, and I are talking while Sue plays in her kitchen area. Alan notices that Sue has put a toy in her mouth.
A: Take out. Take out now!

Excerpt from Home Visit #3, 12/15/90
I am getting my camera set up and Sue begins to "help" me.
Jordan: Sue, no touch! No touch.
Cheri: Sue, let me do this.

Excerpt from Home Visit, (SVT 6, #200), 2/9/91
Alan, Jordan, Sue and I are downstairs. I'm videotaping, and the three of them are playing with dolls. Sue points to her doll's face.
J: (to Alan and me) Her doll baby has makeup all over its face.
J: Sue, what happened? What happened? Did you put on? Did Sue put on?

When I asked them about this practice, Jordan explained that Sue's auditory/speech therapist had suggested that whenever possible they speak to Sue in one word or two-word phrases.

Excerpt from Home Visit #2, 11/17/90  
Jordan: When we first started therapy, Cindy (the auditory/speech therapist) said that when we talked to Sue to put one and two words together. She said if we wanted Sue to pick up a ball, say, "Sue, pick up ball," or "Ball, please," not "Sue, go pick up the big yellow ball." She told us to do whatever we could do to condense it into two or three words."

While Sue's parents often spoke to her in one- and two-word utterances, her babysitter, Barbie, did not. Jordan explained:

Excerpt from Home Visit #2, 11/17/90   
Jordan: Sue was only 12 months old, and Barbie would talk to her just like she could understand. Barbie just talked to her non-stop. She talked to her like she was an adult.

Both sets of Sue's grandparents lived nearby, and Sue saw them regularly. At the beginning of the investigation, Alan and Jordan expressed considerable concern about the ways in which Sue's grandparents (particularly the grandfathers) tried to interact with Sue. For the most part, they gestured without voicing, a practice which did not encourage Sue's use of speech, audition, or speechreading skills. During a follow-up visit in June,
Alan suggested that Sue's grandmothers used speech more often when they communicated with Sue.

The Tysons said they had "never second guessed putting Sue in an oral classroom." They believed that her "outgoing personality" and the fact that "she had never known a stranger" were convincing proof of her ability to succeed orally. Alan suggested that he would like to see Sue academically mainstreamed in future years, if her speech and speechreading skills made it possible.

Both Alan and Jordan stated that they would not consider placing Sue in a total communication classroom, for they feared that she would not be encouraged and/or required to work at developing intelligible speech.

Excerpt from Home Visit #2, 11/17/90
   Alan: Last night we were talking, and I asked Jordan why they (the Preschool) didn’t have a class that offers both. To an extent, they could have a class that works on speech and lets the kids sign too.

The Tysons also made it clear, however, that they wanted what was best for Sue, and that they would make future decisions based upon how she fared while in the oral/aural instructional option at the Preschool.

Sue's Participation in Verbal Language at Home

For the most part, Sue tended to interact at home (and at the Preschool) in two different ways: (1) she engaged in continuous vocalization of unintelligible sounds, or (2) she spoke in clearly articulated one-, two-, and three-word utterances. The continuous vocalization was unintelligible, and
the Tysons suggested that they rarely understood Sue when she communicated in that way. Sue's "talk" (a term her parents used to describe her clearly articulated words) was intelligible to adults who knew her well, particularly when it was in context.

When Sue vocalized continually, she spoke in a continuous flow of speech as if her interlocutor understood every word. When the interlocutor made it clear that he/she did not (usually by saying "What?" or "I don't understand."), Sue would often change styles and "talk." She would speak slowly, clearly articulating the words she knew, often signing and/or gesturing. At times, these words were still unintelligible, but they were clearly different from the continuous vocalizations. They seemed to be conscious attempts at interaction. On several occasions when Jordan was unable to understand Sue's verbal interaction after numerous attempts, Sue grabbed Jordan, pulled her close, cupped her hands around Jordan's ear and "said it louder." As young as she was, Sue had learned to adjust her attempts at verbal interaction by monitoring the responses (i.e., feedback) of her interlocutors. The following excerpts provide examples of Sue's monitoring strategy from both the home and school data.

Excerpt from Home Visit #3, 12/15/90
Alan, Jordan, Sue, and I are looking at a family photo album. Sue begins to vocalize continuously, as if to tell us about the pictures.
J: What? Who is that?
S: Grandpa (or Grandma?). Mom. Dad. Me, Sue.

Excerpt from Videotape Analysis (SVT 1 # 4049), 12/3/90
Sue and Bobby are at the writing table. They are both painting with green paint and sponges. Linda has suggested that they
make a Christmas tree. After I position the camera, I join Sue at the writing table.
C: Hi! What are you doing? (pointing to her painting)
Sue begins to continuously vocalize, seemingly telling me about her painting.
C: What?
S: That tree (s/v). Christmas tree.
C: It is a Christmas tree!

Excerpt from Videotape Analysis (SVT 1, #5582), 12/3/90
Elizabeth is asking the children for contributions for a web she is making in summary of the day's activities.
E: What did we do today?
Sue begins to vocalize continually. Elizabeth lets her finish, then says:
E: I don't understand that.
S: Jack, Nancy home (s/v "home")
E: Oh. Jack and Nancy are at home. Right. And Aaron went home, too.

When Sue interacted with her parents, she spoke in one-, two-, and three-word utterances and used gestures, pantomime, and the signs she was learning from adults and peers at the Preschool. At the beginning of the investigation, she signed infrequently; toward the end of the study, however, her repertoire of signs had increased significantly, and she tended to sign and speak simultaneously while interacting with her parents. Table 10 summarizes the ways in which Sue interacted with her parents.
Table 10. Sue’s participation in verbal language at home

<table>
<thead>
<tr>
<th>Sue interacted with her parents using:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• continuous vocalizations of unintelligible speech</td>
</tr>
<tr>
<td>• clearly articulated one-, two-, and three-word utterances (“talk”)</td>
</tr>
<tr>
<td>• speech only</td>
</tr>
<tr>
<td>• speech and gestures</td>
</tr>
<tr>
<td>• speech and sign</td>
</tr>
<tr>
<td>• speech, sign, and gestures</td>
</tr>
<tr>
<td>• gestures and signs</td>
</tr>
<tr>
<td>• sign only (rarely)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sue:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• adjusted her attempts at verbal interaction by monitoring her interlocutor’s feedback</td>
</tr>
<tr>
<td>• worked hard at intelligible speech, repeatedly imitating her parents’ speech models</td>
</tr>
<tr>
<td>• taught her parents new signs</td>
</tr>
<tr>
<td>• “tuned out” her parents when she didn’t want to “hear”/obey</td>
</tr>
<tr>
<td>• brought routine verbal language interactions from the Preschool into the home (e.g., making her parents sing a song before they ate a snack)</td>
</tr>
</tbody>
</table>

During my visits in the Tyson home, Sue often interacted with me in both sign and speech. She had seen me interacting with the total communication children at the Preschool and knew that I could sign. Often, Sue would use signs with me that her parents did not know, and I would interpret the new signs for them. On each visit, Sue and I usually introduced Alan and Jordan to a few new signs. As well, Sue frequently taught her parents signs as she communicated with them about events of her preschool day. The Tysons told me that they enjoyed learning signs from Sue. Sue would teach them a sign, and laugh if they, particularly Alan, did not make the sign correctly. Alan and Jordan also continued to learn new signs at auditory/speech therapy.

Although Sue used signs, it seemed as if she, too, was committed to learning to talk intelligibly. She worked diligently to pronounce words
correctly, often repeating several times Alan and/or Jordan’s speech model as they shared with her the name of an item or object. As would be expected, Sue’s repertoire of intelligible words increased throughout the school year, and, consequently, made communicating with her much easier during the latter weeks of the investigation.

Although informal, my visits in the Tyson home were never quiet affairs. They were filled with talk. Alan, Jordan, and I talked about Sue’s deafness, her language acquisition, and her literacy development. Sue talked a great deal as well. During each of my visits, Sue played in her kitchen (which included a table with chairs, a stove, a counter, cabinets, a sink, dishes, plastic food, etc.). As she did so, she talked both to herself and to us. She vocalized unintelligibly and/or "talked" while she worked. Alan, Jordan, and I often sat at Sue’s kitchen table while she cooked. Sue frequently said that the food was "hot" and that we needed to "wait." At times she said that the food was "cold," and she put it back on the stove or in the oven. As she played, her parents always asked her to name the food items, modeling correct pronunciations for her.

On two occasions, Sue brought snack items into her kitchen area (cookies, candy for herself, and pretzels.) She placed the snack on plastic plates, told us to "wait," and insisted that we sing the snack song used at the Preschool, "Open, Shut Them." To signal this song, Sue would say "open" (opening her hands) and "shut" (closing her hands into fists) just as was done at the Preschool. Since I knew the song, we sang along, Sue leading with the hand motions.
"Open, shut them. Open, shut them. Give a little clap. Open, shut them. Open, shut them. Fold them in your lap."

Although Sue vocalized throughout the song, not every word was intelligible. At the end of the song, Sue would sign and voice "eat." The influence of Preschool experiences was evident in that her behavior was much like that of her preschool classroom teacher.

On several occasions, Sue pretended that the phone was ringing. She picked it up and pretended to talk using unintelligible vocalizations. She would often make gestures and bodily movements as one does when talking on the phone (e.g., putting her hand on her hip, swaying back and forth, etc.) Then, she would hand the phone to her father or mother saying one or two clearly articulated words, including the name of the caller.

There was plenty of opportunity for interaction in the Tyson home. Since Sue was an only child, she often demanded and had her parents' undivided attention in the evenings. Much of their verbal interaction focused on learning new vocabulary, learning how to pronounce these lexical items, and talking about events of the preschool day.

**Verbal Language in Preschool I: An Oral/Aural Approach**

Sue entered the Preschool a little over a month before her fourth birthday, and she was placed in Preschool I in an oral/aural class. Preschool I was divided into 4 classes: a class for total communication children, a class for total communication children who had additional handicapping conditions, an oral/aural class primarily for children who were repeating Preschool I, and an oral/aural class primarily for newcomers. Sue was
placed in the latter class with Elizabeth Summers, an experienced oral/aural teacher.

Sue's teacher: Elizabeth

Elizabeth was the first teacher at the Preschool to agree to participate in the research. From the outset, she welcomed me into her classroom and seemed to understand her role as research informant, explaining her procedures and interpreting the children's responses throughout my observations. Because the children were hearing-impaired, Elizabeth and I were often able to discuss our interpretations of the children's actions as they occurred. This moment to moment triangulation was not only convenient, it proved powerful in ongoing data analysis and further data collection.

Although Elizabeth was teaching an oral/aural class, she was a proficient signer and instructed the Pidgin Sign English class offered to parents at the Preschool. Elizabeth described herself as "a fence rider," a practitioner who believed that the mode of communication needed by the child was the right modality.

Excerpt from Interview, 2/25/91

I'm not a true Oralist and I'm not a true TC person. My philosophy always goes back to what the child needs. If the child can make it orally, fine. I'll take him orally. If the child needs sign to communicate, don't hold him back, let him sign to communicate. So, I guess you could call me a 'fence rider,' but I believe in a philosophy based upon where the child is functioning.
Elizabeth practiced what she preached. During the course of the study, she recommended that two of her students be placed in a total communication classroom at mid-semester or the following year.

As an oral/aural teacher, Elizabeth saw her primary responsibility as helping her young students "to increase their language, speech, and auditory skills." She considered literacy very important but secondary to those three "basic needs."

Excerpt from Interview, 2/15/91

Writing is important, but language skills--speech skills for the oral child and signing skills for the TC child--are what's going to carry them through. Those are their basic needs. They have to be able to be understood. And that's where we focus.

For Elizabeth, language learning for profoundly deaf children was "a teaching process." She believed that profoundly deaf children learned language primarily visually, either through speechreading or sign language, and that language acquisition was "probably three-fourths teaching and one-fourth ...through-the-air" (i.e., children learned it on their own).

Elizabeth described both reading and writing as "a learned process." She suggested that profoundly deaf children learn to read by learning to identify sight words and then putting those sight words together. She described writing as a difficult process for the hearing-impaired, a process that needed to be taught "step by step."

Elizabeth believed that language was a basic prerequisite to learning to read and write--to learning in general.
Excerpt from Interview, 1/25/91

You can't teach if they don't have. That's the basic premise. If they don't understand a question form, how are you expected to teach them [to answer questions]? You have to go back to what they need, whether it be in twelfth grade or first grade.

Elizabeth's beliefs about language and literacy learning were reflected in her pedagogy. Throughout the school day, she emphasized speech, speechreading, and use of audition. Literacy activities, particularly reading, permeated the day, but they were used in the service of language acquisition and speech development activities. Table 11 summarizes Elizabeth's beliefs about and orientations to the verbal language acquisition and literacy development of hearing-impaired children.

Table 11. Elizabeth's beliefs about language and literacy

<table>
<thead>
<tr>
<th>About modality:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• the mode of communication needed by the child is the right modality</td>
</tr>
<tr>
<td>• for the most part, profoundly deaf children need to be placed in TC classrooms (with exceptions to that rule)</td>
</tr>
<tr>
<td>• success as an oral child depends upon an internal (rather than an external) motivation</td>
</tr>
<tr>
<td>(&quot;By the time they are 3, for the most part, they know how they are going to communicate, and they focus in on that mode.&quot;&quot;)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>About language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• her primary responsibility was to help her students &quot;increase their language, speech, and auditory skills&quot;)</td>
</tr>
<tr>
<td>• for the most part, language must be taught</td>
</tr>
<tr>
<td>• profoundly deaf children learn language primary visually, through speechreading or sign language</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>About literacy:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• verbal language is a basic prerequisite to literacy learning (to all learning in general)</td>
</tr>
<tr>
<td>• reading and writing are secondary in importance to verbal language acquisition</td>
</tr>
<tr>
<td>• profoundly deaf children learn to read by identifying sight words</td>
</tr>
<tr>
<td>• writing is a difficult process for hearing-impaired children and must be taught &quot;step by step&quot;</td>
</tr>
</tbody>
</table>
Sue's classmates

At the beginning of the school year, Sue had five classmates: Aaron, Bobby, Chet, Nancy, and Jack. At mid-semester, Jack was placed in the total communication classroom. This was his second year in Preschool I, and he had not made satisfactory progress in developing language or speech skills.

Jack was the oldest child (see Table 12) in the class, and Sue was next in line. Aaron had the greatest hearing loss, a quiet child who vocalized less frequently than did the other children. Even though they were in an oral/aural placement, Aaron and Jack often signed between themselves, rarely vocalizing. They frequently signed when they interacted with Elizabeth, who never discouraged their signs, but always required that they vocalize when interacting with her. The three younger children, Nancy, Chet, and Bobby, rarely used signs, and their speech was intelligible to most of the adults in the Preschool, particularly to Elizabeth who seemed to understand them when no one else could.

Table 12. Sue's classmates: Demographic information

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>PTA (unaided)</th>
<th>SAT (aided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack</td>
<td>4.2</td>
<td>R=60, L=70</td>
<td>40</td>
</tr>
<tr>
<td>Sue</td>
<td>3.11</td>
<td>R=98, L=99</td>
<td>60</td>
</tr>
<tr>
<td>Aaron</td>
<td>3.5</td>
<td>R=108, L=110+</td>
<td>45</td>
</tr>
<tr>
<td>Nancy</td>
<td>3.3</td>
<td>R=30, L=37</td>
<td>10</td>
</tr>
<tr>
<td>Chet</td>
<td>3.2</td>
<td>R=25, L=30</td>
<td>15</td>
</tr>
<tr>
<td>Bobby</td>
<td>2.9</td>
<td>R=80, L=77</td>
<td>25</td>
</tr>
</tbody>
</table>

PTA = pure tone average
SAT = speech awareness threshold
Schedule of daily events

The daily schedule for Elizabeth's preschool class included circle time, group speech, High Scope\(^7\) (free play), snack, language arts unit, lunch, outdoor recess, web of the day (a retrospective webbing of the day's activities), nap, and an afternoon activity for the children who did not fall asleep during nap time. Although I made several observations during the afternoon activity, no data were collected during those observations. This activity involved all of the Preschool I children and their teachers, some of whom preferred not to participate in the research. Furthermore, only occasional observations were made during lunch time and outdoor recess, and little data were collected during those observations. Each of the scheduled events will be described in some detail in the account of Sue's experiences with literacy within her preschool class.

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 - 9:15</td>
<td>Attendance</td>
</tr>
<tr>
<td>9:15 - 9:45</td>
<td>Circle time</td>
</tr>
<tr>
<td>9:45 - 10:00</td>
<td>Group speech</td>
</tr>
<tr>
<td>10:00 - 10:35</td>
<td>High Scope</td>
</tr>
<tr>
<td>10:35 - 11:00</td>
<td>Snack</td>
</tr>
<tr>
<td>11:00 - 12:00</td>
<td>Language Arts Unit</td>
</tr>
<tr>
<td>12:00 - 12:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:30 - 1:00</td>
<td>Outdoor Recess</td>
</tr>
<tr>
<td>1:00 - 1:30</td>
<td>Web of the Day</td>
</tr>
<tr>
<td>1:30 - 2:00</td>
<td>Nap</td>
</tr>
<tr>
<td>2:00 - 2:45</td>
<td>Activity</td>
</tr>
<tr>
<td>2:45 - 3:00</td>
<td>Dismissal</td>
</tr>
<tr>
<td><em>Library: Tuesday, 9:30-10:00</em></td>
<td></td>
</tr>
</tbody>
</table>

Elizabeth's Preschool I class: Schedule of daily events

\(^7\) "High Scope" was a large play/work room on the second floor of the Preschool building. Although the Preschool teachers did not use the High Scope curriculum (Hohmann, Banet, & Weikart, 1979), they did base some of their activities upon its principles and concepts.
Sue’s Experiences with Verbal Language at the Preschool

Analysis of the preschool data revealed that Sue had multiple and varying experiences with verbal language. She experienced verbal language in a variety of forms, ranging from totally oral language (i.e., spoken English free of any manual communication) to oral language that was heavily accompanied by gestures, signs, and/or pantomimes. Communication ranged from two- and three-word directives to lengthy narrative texts that required superb speechreading skills. Table 13 details Sue’s experiences with verbal language at the Preschool.
Table 13. Sue's experiences with verbal language at the Preschool

**Adults in the Preschool:**
- spoke in complete sentences
- spoke in two- and three-word utterances
- emphasized content words as they spoke
- spoke with natural suprasegmentals
- spoke in slow, carefully articulated sentences with unnatural suprasegmentals
- limited their sentences to words they knew Sue understood
- repeated themselves frequently
- spoke without using deliberate gestures or signs
- used natural, informal gestures as they spoke
- used deliberate gestures as they spoke (i.e., teacher points to her ear and says "I want you to listen.")
- used gestures as signs (i.e., using the "stop" hand signal of a police officer each time she said "stop"; using an umpire’s "You're out!" gesture for "go")
- inadvertently signed as they spoke
- understood Sue's spoken and/or signed utterances
- did not understand Sue's spoken and/or signed utterances
- did not understand Sue's continuous vocalizations
- understood Sue's "talk" in context
- emphasized speech and articulation
- emphasized imitating ("This is a reindeer. You can say that? Say 'reindeer'.")
- emphasized speechreading (i.e., teacher points to her lips as she talks, signaling to the children to speechread)
- emphasized use of audition ("I want you to listen"); "When you hear your name..."; "Good listening!")
- extended Sue's vocabulary ("Yes, its a bird. Its called an eagle. An eagle.")
- required Sue to speak in complete sentences during routine interactions (i.e., during snack--"I want juice, please.")

**Sue:**
- was able to, had difficulty, or did not speechread and understand her interlocutors' communique
- was placed in situations where it wasn't feasible or was impossible to speechread
- had to make maximal use of her residual hearing in instances were speechreading was difficult or impossible
- was exposed to sign language during afternoon activities and Preschool functions

Although Elizabeth was not "a true Oralist" in the sense that she forbade the children to sign, she was very cognizant of her responsibility as a teacher in the oral/aural instructional option. Throughout the school day, she emphasized speech, speechreading, and use of audition.
Emphasizing speech. Parents choose the oral/aural instructional option primarily because they want their children to learn to speak as intelligibly as possible. Elizabeth made intelligible speech her goal. She continuously modeled speech for the children and required them to imitate her models. She would place their hands upon her throat or chin and say the words they were learning. When a child had difficulty producing the correct number of syllables in a word, she often would take his/her hand and, while she said the word slowly, she would squeeze once for each syllable, a technique that worked amazing well with Sue. Elizabeth continuously praised the children's approximations and/or successes ("Good girl." "That was pretty." "Very nice."). Although she never demanded perfection, she required that the children vocalize on every attempt at interaction. It seemed that for the children, every activity was ultimately a speech lesson.

Excerpt from Videotape Analysis (SVT 3, #5618). 1/15/91
It is time for snack. The children are sitting at the table.
E: We have pretzels or cookies. Bobby, which one do you want?
B: Cookie
E: I want a cookie (prompting an imitation).
B: I want a cookie.
E: Okay (gives him a cookie).
E: Aaron, which one do you want (pointing first to the pretzels and then to the cookies)?
Aaron points to the cookies.
E: What is this?
A: Cookie (s/v)
E: Okay (gives him a cookie).
E: Sue?
S: Pretzel.
E: Okay, but what do you tell me?
S: I want pretzel, please.
Elizabeth reaches into the bag and Sue signs "two."
E: Two (prompting a vocalization).
S: /oo/
E: Two (correcting her speech).
S: /oo/
E: Two (emphasizing the /v/).
S: Two
E: Okay, good girl.

Emphasizing vocabulary development. As Elizabeth focused on improving the children's speech, she frequently taught them new vocabulary words. In fact, lexical items often became the vehicle through which she emphasized speech. Elizabeth would orally present the word to the children, often using an object, a picture, or making a quick sketch on a laminated board or chart paper. Many times she wrote the word under her sketch. Then, she would pronounce the word several times and ask the children to say the word. Each child would have a turn, and Elizabeth would model, require the child to imitate, repeat, etc. She always praised the children for their hard work.

Emphasizing speechreading and use of audition. Profoundly deaf children placed in oral/aural settings are constantly faced with the difficult task of speechreading as they try to make sense of the spoken language of their interlocutors. While several of Sue's classmates could actually hear and understand Elizabeth's spoken language, Sue had to depend primarily on speechreading and maximal use of her residual hearing to make sense of what was being said. The following vignette provides a glimpse into Sue's experiences with spoken language in her preschool classroom.

Excerpt from Field Notes, 12/11/90
Last week the children went to see Santa Claus. Elizabeth continues with the Christmas theme. She is reading The Night
Before Christmas (Moore). She has the book completely memorized! She points to the pictures as she quotes the text.

'Twas the night before Christmas, and all through the house, not a creature was stirring, not even a mouse. The stockings (points to the picture) were hung by the chimney with care, in hopes that Saint Nicholas would soon be there..."

"You have stockings. You all have stockings right here" (points to the children's stockings on the bulletin board). Elizabeth quotes the entire text, only looking at the print on a few lines. She makes comments throughout.

...As I drew in my head and was turning around, down the chimney Saint Nicholas came with a bound (points to the picture). He was dressed all in fur, from his head to his foot and his clothes were all tarnished with ashes and soot. A bundle of toys (points to the sack) he had flung on his back and he looked like a peddler just opening his pack...

"Here's Santa! That's Santa Claus!"

PN: Sue watched attentively for the first half of the book, then became restless. She started playing with her shoe laces, looking around the room, and signing to me. Even though Elizabeth was facing them throughout the "read aloud," this had to be tough to speechread! I looked over at Nancy. She was watching/listening attentively.

Because "oral" children must become proficient speechreaders if they are to make sense of the spoken language of their interlocutors, Elizabeth involved the children in many speechreading activities throughout the school day. These activities primarily consisted of obeying commands or answering questions. "Sue, I want you to sit on the blue square." "Where's the reindeer? Show me the reindeer." "What did we do today?" Elizabeth would often begin by prompting the children to "watch and listen." Elizabeth would point first to her eye and then to her ear as she gave this directive. These gestures were the children's cue to speechread what she was about to
say. Then, as she spoke she pointed to her mouth, directing the children's attention to her lips.

When Elizabeth spoke to the children, particularly Sue and Aaron, she frequently gestured, pointed, or pantomimed, giving them "cues" to what she was saying. These were more than informal, natural gestures; they were deliberate signals. At times, Elizabeth inadvertently signed. It appeared that she was keenly aware of the difficulty of speechreading and acted in ways that would support the process.

Excerpt from Field Notes, 9/26/90
Yesterday, I went on a "Safety Walk" with all the Preschool I classes. The teachers directed the children's attention to the traffic signals (stop light) and signs ("Stop," "School") along the way. In follow up to this activity, Elizabeth made traffic signals of colored construction paper mounted on lollipop sticks. The signs were all round: one was red ("stop"), another yellow ("wait"), and the last was green ("go"). As Elizabeth reviewed the meaning of the signs, she gestured, in a deliberate way, as if she were giving a signal for each word. For "stop," she held her hand out like a police officer directing traffic, but not as dramatic. For "wait," she used the same gesture as she had for "stop" but moved it in space just a little. For "go," she used a thumb signal -- like an umpire would when a baseball player strikes out.

Excerpt from Videotape Analysis (SVT 5, #1997), 2/4/91
Elizabeth has just finished unit time.
E: It is time to stop (gestures like a police officer would--although not as dramatic). When you hear (points to her ear) your name, I want you to go take off your Phonic Ear (jiggles her own PE transmitter and points across the room).

To make the speechreading task easier, Elizabeth not only deliberately gestured when she spoke, she frequently repeated herself, and she often used two- and three-word utterances with the children, particularly
when giving directions. When Elizabeth spoke in complete sentences, she emphasized the content words by saying them slowly and loudly so that they "stood out" in the flow of speech.

Excerpt from Videotape Analysis (SVT 3, #2764), 11/26/90

(Language Arts unit on families.) Elizabeth has paper dolls of a man, woman, boy, girl, and a baby.
E: (holding up the man) In a family, who is this?
S: Boy
E: No, it's not a boy, it's a daddy. This is a daddy.

Excerpt from Videotape Analysis (SVT 4, #3886), 1/30/91

Elizabeth is reading from The Winter Picnic (Welber). When it began to snow (points to snow in picture) again, Adam (touche his picture) went to tell his Mom (touche her picture) he wanted to go on a picnic. Mom (touche her picture) said, "Oh no. You don't go on picnics in the winter. It's too cold (makes her body shiver) outside.

Speechreading involves the use of audition, and Elizabeth required the children to make maximum use of their residual hearing. Transition from one activity to the next often became an exercise in listening.

Excerpt from Videotape Analysis (SVT 1, #4002), 12/3/90

Elizabeth has just finished the calendar activity and it is time for group speech. Nancy and Jack are absent.
E: Are you ready to listen (points to her ear)? When you hear your name, I want you to stand up (points up).
Elizabeth covers her mouth with her hand and does not make eye contact with the child whose name she calls.
E: Chet. (He stands up.) Good job!
E: Sue. (She stands up.) Good girl!
E: Andy ... Andy. (He stands up.) Good boy!
Bobby is the only one left sitting.
E: Nancy ... Jack ... Elizabeth ... (Bobby listens. He doesn't stand up.) At this point, Sue (who is standing next to Bobby) taps him with her foot and says "Up!", gesturing with her thumb. He ignores her.
E: Chet ... Bobby. (Bobby stands up.) Good Boy!
Elizabeth turns to Sue:
E: No, he was listening (points to her ear). I did not say "Bobby." I said, "Nancy, Jack, Elizabeth, Chet," (counts on her finger as she says each name) and he was listening (points to her ear). Then I said "Bobby" and he stood up (points up).
Elizabeth turns back to the group.
E: You all did a good job!

Although Elizabeth continually emphasized speechreading and audition and acted in ways that helped Sue and her classmates understand her spoken English, Sue's experiences with verbal language included the problems inherent in profoundly deaf children's placement in oral/aural classrooms. The data repeatedly pointed to not only the difficulty of speechreading in the classroom setting, but its feasibility as well. Every day Sue was faced with the enormous task of speechreading both her peers and the adults in the environment in situations that were, at best, difficult, and, at times, impossible.

Excerpt from Videotape Analysis (SVT 4, #3993), 1/30/91
Elizabeth is sitting on the floor reading The Winter Picnic (Welber). The children are sitting in a semicircle around her. She holds the book in her left hand, making sure that the children can see the pictures. Elizabeth looks at the children when she discusses the story, but when she reads the text, she has to turn her face toward the book to see the print. When she does so, Sue gets a side view of Elizabeth's face, which makes speechreading almost impossible. Chet and Aaron cannot see her face at all. They must rely solely on audition. For Aaron, that's a tall order.

Excerpt from Videotape Analysis (SVT 2, #2433), 12/11/90
Sue and her classmates are in the library. Rhonda, the librarian, has the children standing in a semicircle around her. She plays a record of "Three Blind Mice" and sings for the children, encouraging them to chime in.
"Three blind mice. Three blind mice. See how they run. See how they run. They all ran after the farmer's wife. She cut off their tails with a carving knife. Did you ever see such a sight in your life as three blind mice?"

Rhonda uses hand motions/gestures as she sings, inadvertently signing "three" and "blind." Sometimes she points to her eye for "blind." As she sings, she moves around, acting out the song. 

PN: This must be terribly difficult for Sue to speechread.

This last excerpt will serve to introduce another experience with verbal language that frequently appeared in the data. In this episode, Rhonda signed "three" and "blind" as she sang. She did not do so consistently, however, frequently interchanging the sign for "blind" and a gesture in which she pointed to her eye. The gesture meant "blind." Elizabeth repeatedly used that same gesture when she told the children to "watch" or to "look" (SVT 1, #2385; SVT 1, #3530; SVT 1, #5415). While many adults at the Preschool used deliberate gestures as they spoke to children, these gestures were not constant across settings. Data analysis revealed that the deliberate gestures adults used often had very different meanings in different settings. This inconsistency would not appear to be supportive to young children's acquisition of verbal language. Whether or not it caused Sue difficulties in comprehension is unclear; obviously, I could not discuss the matter with her.

Other Adults in the Preschool. Sue interacted with other adults in the Preschool, most often Rhonda, the librarian, Linda, the supervisor of High Scope, and Joan, the speech therapist. These adults communicated with Sue in multiple and various ways. Rhonda, who knew sign language, often gestured and/or inadvertently signed as she spoke. She emphasized
content words in the flow of speech, and she frequently used one- and two-word utterances. Her communication was much like Elizabeth's. In contrast, when Linda or Joan interacted with Sue, they rarely gestured or signed. They did not tend to emphasize words in the flow of speech, and they almost always used complete sentences. They spoke to Sue almost as though she were a hearing child. Joan always made sure that Sue could speechread their interactions.

Sue's Participation in Verbal Language at the Preschool

Sue participated in verbal language in a variety of ways. She communicated through spoken language, spoken language supported by gestures, simultaneous communication (spoken language and sign language), and sign language unaccompanied by speech. Table 14 summarizes the ways in which Sue interacted with peers and adults at the Preschool.
Table 14. Sue's participation in verbal language at the Preschool

<table>
<thead>
<tr>
<th>Sue interacted with her peers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• using screams and hits (in the beginning of the school year)</td>
</tr>
<tr>
<td>• using speech, sign, pushes/hits (in the beginning of the school year)</td>
</tr>
<tr>
<td>• using screams, signs, and gestures</td>
</tr>
<tr>
<td>• using speech</td>
</tr>
<tr>
<td>• using speech and gestures</td>
</tr>
<tr>
<td>• using speech and sign</td>
</tr>
<tr>
<td>• using speech, sign, and gestures</td>
</tr>
<tr>
<td>• using signs only (with TC children)</td>
</tr>
<tr>
<td>• for the most part, Sue interacted with her peers infrequently</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sue interacted with adults:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• using unintelligible vocalizations</td>
</tr>
<tr>
<td>• using clearly articulated one-, two-, and three-word utterances (&quot;talk&quot;)</td>
</tr>
<tr>
<td>• using speech only</td>
</tr>
<tr>
<td>• using speech and gestures</td>
</tr>
<tr>
<td>• using speech and sign</td>
</tr>
<tr>
<td>• using speech, sign, and gestures</td>
</tr>
<tr>
<td>• using signs only (rarely)</td>
</tr>
<tr>
<td>• by imitating the adults' statement rather than responding with her own (i.e., adult says, &quot;Hi Sue!&quot;) and Sue imitates: &quot;Hi Sue.&quot;)</td>
</tr>
<tr>
<td>• by volunteering to participate in activities (&quot;My turn! My turn!&quot;)</td>
</tr>
<tr>
<td>• by responding to reprimands (e.g. rolling her eyes back into her head)</td>
</tr>
</tbody>
</table>

Sue engaged in very little verbal interaction with her peers. For the most part, Elizabeth's activities were structured so that the children were visually focused upon her (for speechreading purposes) throughout scheduled events during the day. There was very little opportunity or need for the children to talk with one another during teacher-mediated events. Even during free play in the High Scope room, however, when children had ample opportunity to interact, they rarely talked and/or signed with one another.

When the children did interact, their communication often involved moving a peer out of one's space, arguing over materials, or saying "no" for
one reason or another. At the beginning of the investigation, Sue used screams, hits, and/or pushes to communicate.

Excerpt from Field notes, 9/26/90
Sue and I are at the writing table. Sue has just finished writing with markers. She gestures "Come on." Pointing to the Quiet Area she signs, "Play." When we get to the Quiet Area, Bobby is there, sitting on the floor playing with a puzzle. I immediately sit down and begin to write transitional notes, and as I write, I obviously miss something because the next thing I know, Bobby and Sue are "fighting" over a puzzle. It seemed that Bobby wanted a certain puzzle, and Sue didn't want him to have it. Sue positioned her body in front of the puzzle rack so that he couldn't get it. Bobby tried to get the puzzle, and both children began to scream. Bobby tried to move Sue, and she hit him twice. At no time did they talk (i.e., say any words)—and Bobby has intelligible speech.

Excerpt from Field notes, 10/16/90
Sue and I have just finished playing with playdough at the writing table. We wash our hands and she heads straight for the Quiet Area and gets a peg board off the shelf. I remind her that she needs to go back and put her playdough away. As she does so, Chet begins to play with her peg board. When Sue comes back to the Quiet Area and sees him, she runs up to the table, signs and voices loudly "Mine!" and pushes Chet's chair over causing him to tumble to the floor.

This kind of interaction did not last long, as Sue learned quickly that it would not be tolerated by adults at the Preschool. Consequently, she began to use speech, signs, and gestures to claim her territorial rights or make her demands. Very often when there was a need to interact with a peer, however, Sue and her classmates would tell Elizabeth. Elizabeth would say, "Tell him/her to stop."
Had there been opportunity or need, peer interaction might have presented difficulties for Sue and her classmates. While Aaron and Jack signed to one another, Chet, Bobby, and Nancy rarely signed. Sue signed, but she seldom interacted with Aaron or Jack other than to say "no" or "stop." Since their Phonic Ears primarily received input from Elizabeth's microphone, Aaron, Jack, and Sue might have had difficulty hearing Chet's, Bobby's, and Nancy's oral communication. Furthermore, Aaron's, Jack's, and Sue's speech would have been unintelligible to Chet, Bobby, and Nancy. Although they were in an oral/aural classroom, the children's abilities to speak and hear varied greatly, and, in actuality, they did not share a common mode of communication. It is one thing to speak to someone who hears (the adult); it is quite another to speak to someone who does not. Likewise, understanding unintelligible speech is a difficult task for an adult, let alone a very young child. For whatever reasons, the children interacted very little with one another.

Like her communication at home, Sue's interactions at the Preschool usually took one of two forms: (1) she engaged in continuous vocalization of unintelligible sounds, or (2) she spoke in clearly articulated one-, two-, and three-word utterances ("talk"). As at home, Sue monitored her interlocutors' responses and adjusted her communication as necessary.

When Sue interacted with adults at the Preschool, she used a variety of modes. At times she spoke and did not use any gestures, signs, or pantomime. Other times she used all three. There seemed to be little consistency in the ways in which she interacted with adults; however, she did
tend to sign more frequently to the adults who themselves were proficient signers.

Although Sue signed frequently, she rarely signed without voicing. When she signed, her communication was almost always simultaneous, particularly when she interacted with adults. She would, however, surreptitiously sign to me at the camera while Elizabeth was teaching, and, at times, she would sign without voicing to children in the Preschool who knew sign language.

Sue used verbal language at the Preschool primarily to control the behavior of others, to share information, and to gain information. One example of each use of verbal language is provided in the following three excerpts.

Excerpt from Field Notes, 10/4/90
Elizabeth is just beginning the calendar activity. For some reason, Bobby begins to scream very loudly. Sue is sitting next to him. She turns to him and yells "Stop!" Then she signs "no' and touches her ear mold (as if to say his screaming hurt her ears.)

Excerpt from Field Notes, 9/24/90
Elizabeth is getting ready for the Language Arts lesson. She has asked the children to sit in a semicircle around her. I sit down next to Sue. Immediately she taps my arm, points to a scratch on her hand, and signs "Girl, Marta, Scratch." (i.e., Marta scratched my arm.)

Excerpt from Videotape Analysis (SVT 2, #260), 11/19/90
Sue, Aaron, Bobby, Nancy and I are at the writing table in the High Scope room. I am sitting next to Sue writing words on my paper to see if she responds to any of them. I write the word "Mom."
S: What's that? (pointing to Mom).
C: What is that? That is "Mom."
S: Mom (understanding)
Summary: Sue’s Verbal Language World

Sue’s experiences with verbal language varied depending upon the context and the participants. Verbal language was presented and used in a variety of ways in Sue’s presence. Her experiences were multiple, diverse, varied, inconsistent, and at times, contradictory.

Sue’s verbal language world was, for the most part, oral/aural. The primarily mode of communication both at home and at the Preschool was spoken English. Sue’s experiences with verbal language were clearly not "totally oral," however, for her interlocutors often supported their spoken communication with gestures and/or signs.

Although Sue’s parents made an ideological commitment to the oral/aural approach to communication, they were not opposed to Sue's learning signs, and, in fact, they learned a limited number of signs as well. Both Alan and Jordan clearly valued spoken communication over signed communication but realized the utility of sign language for communicating abstract concepts and, in Jordan’s words, things that were "important." In this respect Alan and Jordan were, perhaps, different from most parents who chose an oral/aural approach to communication.

Adults in the Preschool always communicated with Sue through spoken English, but their speech was often accompanied by gestures and/or signs. Likewise, Sue communicated primarily through spoken language, but her speech was often accompanied by gestures and/or signs as well. In this sense, Sue was not a "true" oral child.
The World of Written Language

Sue's experiences with and participation in written language primarily took two forms: (1) She explored print on her own, and (2) she interacted with adults around print. Many of Sue's experiences with written language at the Preschool were similar to her experiences at home. At the Preschool, however, Sue shared the adult's attention with her classmates.

Adults in the Preschool used written language in similar ways, and although differences in verbal language interaction influenced Sue's experiences with written language, literacy events tended to be similar across contexts at the Preschool. The sections that follow detail Sue's world of literacy across home and Preschool contexts.

Written Language in the Home: Reading Books and Writing Names

The purpose of my visits in Sue's home were threefold: (1) to talk with Jordan and Alan about Sue's deafness, her language acquisition, and her interests in literacy; (2) to observe the verbal language interactions between Sue and her parents; and (3) to hear about and witness Sue's experiences with and participation in literacy events. On each visit, Sue either initiated a literacy event or participated in a literacy event initiated by one of her parents.

Sue's Experiences with Written Language at Home

Many of the instances of Sue's experiences with and participation in written language that became units of data were gleaned from her parents' retrospective accounts. On each of my visits, Alan and/or Jordan told me
about Sue’s recent literacy participation and/or achievements. Additionally, I often questioned them about Sue’s literacy experiences, particularly those that had taken place prior to school entry. Table 15 summarizes Sue’s experiences with written language in her home.

Table 15. Sue’s experiences with written language at home

<table>
<thead>
<tr>
<th>Sue’s parents:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reading</strong></td>
</tr>
<tr>
<td>• provided numerous books for Sue’s reading development</td>
</tr>
<tr>
<td>• read with Sue approximately three times a week</td>
</tr>
<tr>
<td>• drew attention to the text during book readings</td>
</tr>
<tr>
<td>• drew attention to print on family correspondence</td>
</tr>
<tr>
<td>• tried to extend Sue’s literacy knowledge while they read (e.g., teaching her the names of alphabet letters, “That’s a B.”)</td>
</tr>
<tr>
<td>• answered Sue’s questions about written language during book readings</td>
</tr>
<tr>
<td>• read infrequently and when they did read it was after Sue went to bed</td>
</tr>
<tr>
<td>• played literacy and literacy-related games with Sue that required reading</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
</tr>
<tr>
<td>• provided writing materials for Sue’s exploration of written language</td>
</tr>
<tr>
<td>• answered Sue’s question during writing events</td>
</tr>
<tr>
<td>• wrote words upon Sue’s request</td>
</tr>
<tr>
<td><strong>Used written language</strong></td>
</tr>
<tr>
<td>• to extend Sue’s vocabulary</td>
</tr>
<tr>
<td>• to support Sue’s speech development (articulation of words)</td>
</tr>
<tr>
<td>• to teach abstract concepts (e.g., prepositions)</td>
</tr>
<tr>
<td>• to help Sue understand events of life (e.g., using storybooks to explain a death)</td>
</tr>
<tr>
<td>• as a springboard for family interaction</td>
</tr>
</tbody>
</table>

Before the Tysons knew that Sue had a profound hearing loss, Jordan tried to read to her. Jordan would sit Sue upon her lap and begin reading. While Sue seemed to enjoy looking at the pictures, she would not wait for her mother to finish reading the text. When Sue had looked at each picture, she was ready to turn the page. After the Tysons learned of Sue’s
hearing loss, they rarely read to her. Once Sue began to demonstrate an interest in books, however, the Tysons began to interact with her around print. This interaction was not reading in the traditional sense, but it was a way to make meaning of Sue's storybooks.

Excerpt from Home Visit #3, 12/15/90

Jordan: I really condense it. I don't sit down and read like, 'Once upon a time ...' and that sort of thing. I'll try to read to her and tell her about the picture on the page without the words (i.e., the text), just the meaning—what's happening in the picture. ... Normally I try to look at what it says and say all the words that I know Sue understands real well.

Alan: I'll try to explain some of the signs [in the Signed English children's books from the Preschool library] and maybe she'll sign that word. Like, 'The fox over the rock.' I've been trying to explain to her what around and through is.

At times, Alan and Jordan would actually point to and say words in the text, drawing Sue's attention to the print. As well, Sue would often point to the pictures and/or the words and say, "What that?" Alan or Jordan would say the word slowly for Sue, prompting her to imitate. In this sense, written language in Sue's home often served as a vehicle through which the Tysons introduced new vocabulary and taught Sue to properly pronounce new words. Picture books, and particularly alphabet books, were frequently used for this purpose.

From the beginning of the investigation, Sue read letters of the alphabet as people's names, particularly her classmates' names, e.g., A was read as "Aaron", B was read as "Bobby", C was read as "Chet," etc. Her parents encouraged this routine and used it as an opportunity to help Sue develop clear articulations of family members' and friends' names. After they
had been involved in the research for some time, however, Jordan began to emphasize literacy learning as well as speech development in their book reading activities. When Sue read the alphabet letters as names, Jordan tried to teach her the names of the letters, but Sue would have no part.

Excerpt from Home Visit (SVT 6, #2977), 2/9/91
Jordan and Sue are looking at an alphabet book.
J: (pointing to the letter A). That's an A.
S: Daddy, Alan. Daddy, Alan.
J: Daddy, Alan. (confirming) That's an A.
S: No, Daddy, Alan.
---later in the book---
J: Sue, can you say "F"?
S: No.
J: Can you say "G"?
Sue doesn't respond.
---later in the book---
J: Sue, what's that? (pointing to the J)
Sue shrugs her shoulders to indicate that she doesn't know.
J: That's mommy's name (points to herself). That's a J (signs the alphabet letter J near her face).
S: /Boppy/ (Sue's pronunciation of "mommy.")
---later in the book---
Sue sees the letter R.
S: Ricky.
J: That's an R.
S: Ricky.

Alan and Jordan bought Sue numerous literacy and literacy-related games. They suggested that even before they had become involved in the research, they valued these kinds of games for supporting language and literacy development.
Excerpt from Home Visit, (SVT 6, #4332), 2/9/91
Cheri: Did you guys just start getting these kinds of games since school started?
Jordan: No! Whenever I bought Sue things, I tried to get educational things.
Alan: The majority of her toys are educational.
J: We have lots of sound things too. When we started [auditory/speech] therapy, Cindy was teaching Sue her colors, so we tried to gear towards the color things. One time, we were at some friends' house, and the kids had toys galore. There were no educational toys at all. They were fun things, but to me, if I'm going to spend the money to buy toys, I'm going to buy something educational. And it can be fun, too. She gets a lot of other toys at birthday and Christmas (i.e., fun toys from other people).
A: Sue plays more with the educational toys than she does with the other.
J: Yeah.

These games primarily involved matching alphabet letters to words on cards or matching pictures to words on a game board. Sue would sit for hours playing with her parents, who would ask her to say the words or letters. They would praise her for making a correct match and for properly pronouncing the words. Again, written language was used to support speech development.

While Sue always had ready access to books and literacy-related games, it was not until Alan and Jordan enrolled Sue at the Preschool that they began to provide her with writing materials. During Sue's intake interview, the school psychologist administered a writing task and asked Sue to cut with scissors. Alan and Jordan felt that Sue did poorly on both tasks because they had never provided her opportunities for writing or cutting with scissors.
Excerpt from Home Visit #3, 12/15/90

Jordan: I felt bad when he introduced the writing part of it. I had never given Sue a pen and paper or a pencil. It was never anything she could just get. Like in my family, crayons were just put away until I wanted them. She never even played with a pair of scissors. ... Now she knows where the paper is, and she asks for it. She cuts her baby doll's hair with the scissors!

When Sue brought papers home from the Preschool, Alan and Jordan often used them as a springboard for spoken interaction. This was particularly true of the "Web of the Day" activity, a paper which documented in print and illustration what the children had experienced and/or learned that day. The Tysons used this paper to elicit speech and to encourage spoken interaction. Again, written language was used to support speech and vocabulary development.

**Sue's Participation in Written Language at Home**

Each time I visited in Sue's home she played in her kitchen, and she read books. On several occasions she wrote, and during one visit she played with literacy-related games (e.g., Boggle Junior, Sesame Street, etc.). Table 16 summarizes the ways in which Sue participated in literacy events during my visits and those described in her parents' retrospective accounts.
Table 16. Sue's participation in written language at home

<table>
<thead>
<tr>
<th>Sue:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reading</strong></td>
</tr>
<tr>
<td>• read by looking at the pictures and making unintelligible vocalizations for each page in a book</td>
</tr>
<tr>
<td>• read by looking at the pictures and saying clearly articulated words</td>
</tr>
<tr>
<td>• vacillated between pointing to the pictures and pointing to the print when reading</td>
</tr>
<tr>
<td>• read independently more often than she asked to be read to</td>
</tr>
<tr>
<td>• &quot;studied&quot; the text and pictures in a book when she read</td>
</tr>
<tr>
<td>• made &quot;life to text&quot; connections during book readings (e.g., Sue sees a bike and says, &quot;Pink bike,&quot; telling her parents that she has a pink bike.)</td>
</tr>
<tr>
<td>• asked her parents questions about events in the book they were reading</td>
</tr>
<tr>
<td>• answered her parents' questions about items or events in the book</td>
</tr>
<tr>
<td>• reversed roles on her parents during book readings (e.g., she begins to ask the questions)</td>
</tr>
<tr>
<td>• reenacted the storybook readings of her preschool class</td>
</tr>
<tr>
<td>• tried to make sense of environmental print</td>
</tr>
<tr>
<td>• played literacy and literacy-related games with her parents that required reading</td>
</tr>
<tr>
<td>• refused to participate in reading events when she was not inclined to participate</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
</tr>
<tr>
<td>• drew faces for people she knew</td>
</tr>
<tr>
<td>• wrote letter-like shapes for people's names and the names of objects/items she drew</td>
</tr>
<tr>
<td>• wrote text for books</td>
</tr>
<tr>
<td>• used written language for social interaction (e.g., corresponded with family members and friends)</td>
</tr>
<tr>
<td>• pointed to a written word and asked for the spoken and/or signed word</td>
</tr>
<tr>
<td>• asked her parents to write words for her, especially names and labels</td>
</tr>
</tbody>
</table>

During each of my visits in the Tyson home, Sue read books. At times she initiated book reading; other times, Jordan gathered Sue's books and asked her to read, often telling her that I needed to "make a movie." Like her ways of communicating, Sue read books by either (1) making continuous unintelligible vocalizations for each page, or by (2) pointing to the pictures or the text and saying clearly articulated words. During my observations, Sue always began reading from the front cover. She read the left page first, and
she turned the pages one at a time, demonstrating considerable book-handling knowledge for such a young child.

As Sue read, she responded to her parents' prompts for speech and asked them questions as well (e.g., "What that?" "Bug bite?"") Sue often responded to events in the book by sharing her literacy knowledge, making comments, or by tying her own personal experiences to the story. In the first excerpt that follows, Sue showed considerable literacy knowledge, demonstrating her developmental understanding of the difference between uppercase and lowercase letters.

Excerpt from Home Visit (SVT 6, #2128), 2/9/91
Sue, Alan, and Jordan are interacting around print. They are looking at an alphabet book. They see the lower case s.
S: Ashley, not mine. Not mine. Not Sue. (i.e., that's Ashley's letter, not mine.)
J: Yes, that's an s.
A: That says Sue. That's an s.
S: No, Ashley. Not mine (s/v). Not Sue.
J: Oh wow! It's not a capital S!
Cheri: Yeah! Whereas Ashley has a lowercase s, Sue does not!
A: Yeah!

Excerpt from Home Visit (SVT 6, #3841), 2/9/91
Jordan, Alan, and Sue are interacting around print. I am at the camera. Sue sees a picture of a little bike.
S: Little (s/v)
J: Little, that's right.
S: Mom bike, Dad bike, me bike pink (s/v all words)
J: You have a pink bike, that's right.
----later----
Sue sees a picture of a jungle gym.
S: Play, school (s/v)
J: Let Mommy see. Jungle gym. That's right, play at school.
----later----
Sue sees a picture of a mailbox.
A: Sue, That's a mailbox. Mailbox (prompting her to imitate)
S: Mom put in. (i.e., Mom puts letters in the mailbox.)

Sue sees a picture of a saw.
S: Daddy saw. Daddy, me saw (s/v)
A: Yeah, Daddy and Sue saw (gesturing like he is cutting with a saw).

On two occasions during my home visits Sue read to her dolls and/or her stuffed animals. In these instances, she pointed to the pictures or the text and said one or two words per page.

Excerpt from Home Visit (SVT 6, #1950), 2/9/91
Sue, Alan, and Jordan are playing. I am at the camera. Sue picks up a bear and a book.
S: Baby cry.
J: That's a bear (i.e., not a baby). You better read it the book so it won't cry.
Sue sits down on one knee of Jordan's lap with the book and the bear. She props the bear on Jordan's other knee. Jordan holds the book open, and Sue begins to read:
S: Red apple. Red apple (v)
Sue looks up from the book and takes hold of the bear's face as if to make sure it is watching, similar to the way Elizabeth does.
Jordan begins reading.
Sue again looks up at the bear and then jerks it up from Jordan's knee.
S: Watch, out! (gestures using Elizabeth's gesture for "out") (i.e., "Watch or you have to go out")
Jordan turns back to the book and as she does so, Sue picks up the bear and starts to get up.
J: No, Sue. The baby wants to see the book.
S: Baby out! Bad.
Sue takes the bear to the corner of the room and puts it on the floor.

Sue seemed to be reenacting book reading events from the Preschool, (obviously with some exaggeration!) for she turned the bear's face toward her and used one of Elizabeth's expressions (i.e., "Watch, or you'll have to go
This excerpt demonstrates the ways in which Sue's experiences with literacy influenced her own literate behaviors. Sue had internalized the appropriate behaviors for storybook read alouds.

Not only did Sue read books, but like many children her age she read print in the environment. She knew the meaning of familiar signs (e.g., McDonalds, Stop, etc.), but she also tried to make sense of unfamiliar environmental print.

Excerpt from Home Visit #3, 12/15/90
Jordan: We were eating tortilla chips the other night and the bag said, "Scott's Snacks." Sue looked at the bag and she said, "Sue," and she signed her name. I said, "No, that's an S, but that's not Sue." She studied it and looked at it. I thought that was really something for her to notice it on the package.

While Sue did not initiate every literacy event that took place during my visits in the Tyson home, she initiated at least one literacy event per visit. Her writing endeavors were always self-initiated. During one of our videotaping sessions, Sue demonstrated her understanding that print carries the message.

Excerpt from Home Visit (SVT 2, #4584), 12/15/90
Sue was reading a book that she had made at auditory/speech therapy. On each page of the book was a picture of an animal. At the top of the page was a speech bubble. The noise that each animal made was written inside the speech bubble, (e.g., "moo" for cow, "baa" for sheep, etc.). Sue read each page by saying the name of the animal and then touching the speech bubble and making its "noise." When she came to the picture of a goat, there wasn't a speech bubble.
S: What that? (to Jordan)
J: Goat.
S: No, what that? (pointing to where the speech bubble should have been)
J: Oh! I don’t know.
At this point, Sue gets up and gets a marker. She makes a speech bubble and puts writing inside it.
Cheri: What does it say?
S: (unintelligible vocalization—perhaps “Ahh” ??)

Sue’s writing at home included coloring in color books, scribbling on paper, drawing faces, and writing names, particularly her own name, her parents’ names (and the words Mommy and Daddy), and her classmates’ names (see Figure 3).

![Image of writing](image)

Figure 3. Sue writes names at home

Sue often labeled the faces she drew with letter-like shapes, the names of those portrayed (see Figure 4).
Sue used written language to interact socially with others. She often wrote letters to her mom and dad and to extended family members. Just prior to one of my home visits, Sue had written a letter to her grandfather. Using only an envelope, Sue wrote the message on the back side and then affixed a stamp to it. The message consisted of several letter-like shapes, most of which looked like the lowercase l. Sue then took the "letter" out to the mailbox for the postman. Jordan secretly confiscated the letter and gave to me when I arrived that afternoon (see Figure 5).
In November, Sue began to express an interest in seeing the written word for spoken/signed words. Throughout the course of the investigation she would ask her parents to write words for her, and many times she would copy them (see Figure 6). As might be expected, the words were often the names of people she knew.

Excerpt from Parent Note, 11/2/90
Jordan: When I got home last night Sue was coloring with markers. She asked me to sit down and gestured that she wanted to "see me write." She asked me our ususals: Mom, Dad, cat, dog, Sue. And then she said "2 more." She asked me to write "horse" and then she signed "play." As soon as I did it, she studied them real hard and then scribbled something herself and was content then to continue her playing.

Excerpt from Phone Conversation, 3/24/91
Jordan: At home we go through pads of paper. She never puts down paper and pen. She wants to see the word. She asks us how to write it. She wants me to write it. She is really into names. When I write, she says "Who that?"

Figure 6. Sue asks for written words and copies them.
Sue's participation in literacy events were influenced by her activities at the Preschool. In her preschool class, Sue learned to read her classmates' names, and her participation in book reading and writing activities in the home reflected this knowledge. Sue's experiences with and participation in literacy events at the Preschool are discussed in the sections that follow.

**Written Language in Preschool**

This final portion of Sue's biography details the ways in which Sue experienced, participated in, and used written language at the Preschool. Like the previous sections, this portion of the biography is divided into subsections detailing Sue's experiences with and her participation in and uses of literacy. At the end of each subsection, one scheduled event is used as a focal context for an in-depth exploration of literacy events at the Preschool.

**Sue's Experiences with Written Language at the Preschool**

Although Elizabeth focused on speech, speechreading, and use of audition, literacy permeated the preschool day and was embedded within teacher-mediated events. Literacy often was used in service of other activities, particularly speech and vocabulary development. Table 17 details the variety of ways in which adults at the Preschool presented and used written language.
Table 17. Sue's experiences with written language at the Preschool

<table>
<thead>
<tr>
<th>Adults:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• read the text almost verbatim during read alouds</td>
</tr>
<tr>
<td>• read the text and made clarifying remarks during read alouds</td>
</tr>
<tr>
<td>• made “life to text” and “text to life” connections with written language</td>
</tr>
<tr>
<td>• drew children's attention to illustrations in books to help them make sense of print</td>
</tr>
<tr>
<td>• emphasized left to right directionality when using written language</td>
</tr>
<tr>
<td>• focused the children's attention on individual words</td>
</tr>
<tr>
<td>• modeled one-to-one correspondence while reading to the children</td>
</tr>
<tr>
<td>• taught concepts about print</td>
</tr>
<tr>
<td>• required children to read printed names</td>
</tr>
<tr>
<td>• used complete sentences when writing</td>
</tr>
<tr>
<td>• directed the children to use written models when writing</td>
</tr>
<tr>
<td>• encouraged children to interact around print during selected literacy events</td>
</tr>
<tr>
<td>• filled the classroom with print</td>
</tr>
<tr>
<td>• drew the children's attention to environmental print</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adults used written language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• to organize the children's responsibilities</td>
</tr>
<tr>
<td>• to teach language/extend vocabulary</td>
</tr>
<tr>
<td>• to communicate with parents</td>
</tr>
<tr>
<td>• to document what was learned/experienced</td>
</tr>
<tr>
<td>• to assist in learning new information/concepts/skills</td>
</tr>
<tr>
<td>• to terminate an activity</td>
</tr>
<tr>
<td>• to convey information</td>
</tr>
<tr>
<td>• to organize the day's/week's/month's activities</td>
</tr>
<tr>
<td>• to help improve speech</td>
</tr>
<tr>
<td>• to show ownership</td>
</tr>
<tr>
<td>• to assist in communication (i.e., in addition to speech)</td>
</tr>
<tr>
<td>• as an authority</td>
</tr>
<tr>
<td>• as a label</td>
</tr>
</tbody>
</table>

Elizabeth used literacy in a variety of ways throughout the preschool day. Data analysis revealed that literacy occurred during each scheduled event of the day (excluding lunch, recess, and the afternoon activity), providing a myriad of experiences with written language for Sue and her classmates. The sections that follow describe the ways in which Elizabeth used literacy.
**Attendance.** When the children came into the room each morning, they sat on their boxes (plastic crates used as chairs) as Elizabeth took attendance. When she finished taking attendance, Elizabeth would ask the children for their notebooks, spirals in which Elizabeth and the children's parents communicated. Elizabeth would read any notes the parents had sent. Sometimes she would make comments to the children about what was written.

In front of the children's boxes was a small chart which listed the children's "jobs" for that day, e.g., lights, attendance, line leader, etc. Each morning Elizabeth looked at the chart to determine whose turn it was to put the attendance envelope on the door. The job chart was not only a way to organize responsibilities, it served as a source of authority.

Excerpt from Field notes, 10/8/90

The children are sitting on their boxes. Elizabeth has just finished taking attendance. She looks at the job chart to see whose turn it is. Sue watches her.

S: My turn! My turn!

E: No, it's not your turn. It's Chet turn (pointing to Chet's name on the job chart).

**Circle time.** Circle time took place in front of a large room divider on which Elizabeth had two calendars. The upper calendar included the month, the days of the week, abbreviations of the days of the week, and space for dates. The lower calendar had the days of the week and a large space for writing underneath each day. Elizabeth sat on the floor in front of the room divider to the left of the calendars. The children sat on colored carpet squares in a semicircle around her. The activities of circle time will not be
discussed here, as I have explored them in detail in the focal context on Sue's experiences with written language at the Preschool.

**Group Speech.** Group speech normally took place in the middle of the classroom, where there was plenty of space for movement. During group speech, Elizabeth worked with the children on voice quality, pitch, duration, intensity, etc. Activities were often game-like and fun for the children. At times, Elizabeth used pictures and/or drawings as symbols to elicit loud and/or soft vocalizations from the children. For example, at Halloween time, Elizabeth showed the children a picture of a ghost, and they worked on saying "boo" in loud and soft, short and long vocalizations.

**High Scope.** During High Scope, the children went upstairs to the second floor of the Preschool into a large play room which was divided into five areas: the sand box area, the block area, the house area, the quiet area (books, puzzles, educational games), and the writing area. Children were permitted to choose the area(s) in which they wanted to play. While the group played, Elizabeth took individual children back into her classroom for auditory training. Linda, the supervisor of the High Scope room, attended to the children's needs while they played. The activities of High Scope will not be discussed here, as I have explored them in detail in the focal context on Sue's participation in written language at the Preschool.

**Snack.** After High Scope, Elizabeth brought the children back into her classroom for snack. The children sat at a large rectangular table in the back of the room. Elizabeth sat at the head of the table so that all of the children could see her face. Before the children had snack, Elizabeth wrote each child's first name on a paper napkin and held it up. "Whose is this?"
she would ask, and when the child had identified his/her name, Elizabeth
gandoned him/her the paper napkin.

Language Arts Unit. All four Preschool I classes studied the same
unit each week. Units often focused upon a seasonal theme, e.g.,
Halloween, Thanksgiving, Christmas, etc. The activities of the language arts
unit always emphasized the teaching of vocabulary items and pronunciation
of those words. Elizabeth used print in a variety of ways as she taught the
lessons and introduced new lexical items. Most often, Elizabeth showed the
children pictures and told them the name of each item. Sometimes she drew
a picture, and when she did, she often wrote the word underneath the picture.
Elizabeth would model the correct pronunciation and individually ask the
children to repeat the name of the picture several times.

For some of her language arts lessons, Elizabeth read the children a
picture book that pertained to the thematic unit. The books were used to help
the children understand the concepts and vocabulary words being taught in
the unit. For example, Elizabeth read Make a Face (Yudell) when teaching
the concepts of happy, sad, angry, and silly during a unit on emotions. She
used Word Bird's Shapes (Moncur) when she taught a unit on geometric
shapes. She read The Winter Picnic (Briggs) and The Mitten (Brett) during a
thematic unit on winter. Elizabeth would hold the book in her right hand and
read the text, pointing to the pictures as she read. She emphasized the
vocabulary words the children were learning and pointed to pictures of these
items as they appeared in the book (e.g., in The Winter Picnic (Briggs) she
pointed out the boy's hat, coat, mittens, etc.) For the most part, Elizabeth read
the text as it was written and made clarifying remarks about the action,
events, or words on each page. She often helped the children make sense of the text by tying their own personal experiences to the story.

Excerpt from Videotape Analysis (SVT 5 #3730), 2/5/91
Elizabeth is reading Make a Face (Yudell). She stops to comment:
E: Do you ever get angry? (to Sue)
Sue shakes her head "no."
E: If Bobby takes a toy, you get angry at Bobby. You say, 'Stop!'
Or, when Jack hit you on the head, that made you angry. We all get angry sometimes.

Elizabeth and the other Preschool I teachers frequently took the children on field trips in conjunction with their thematic units. When Elizabeth and the children returned from their trips, they often created a language experience story about their adventures. Elizabeth would ask the children what they had seen/experienced on the field trip, and she would write their contributions on chart paper. Although the children's contributions were most often one- and two-word utterances, Elizabeth always wrote the contribution in a complete, grammatical sentence. This use of written language was highly supportive of the children's language acquisition as well as their literacy development. While verbal language often presented English in inconsistent and incomplete forms, written language provided the children a consistent and complete model of English.

Excerpt from Field Notes, 11/9/90
Yesterday Elizabeth and the children went to the city zoo. Elizabeth took several Polaroid photographs. She photocopied each photograph for use during the follow-up language experience story. As Elizabeth wrote the children's contributions on the chart, she glued a photocopied picture beside each sentence.
E: What did you see at the zoo yesterday?
S: Giraffe.
E: A giraffe!
She writes: WE SAW A GIRAFFE. As she writes, she says each word, then rereads the entire sentence, pointing to the words.
E: I have a picture of a giraffe. (She glues it to the chart). A giraffe.
Nancy: I have a giraffe (pointing to a giraffe on her pants).
E: Nancy has a giraffe on her pants.
Sue looks on her clothes.
S: I don't have.
E: You don't have a giraffe. ... What else did we see at the zoo?
N: Tiger.
E: Yes, we saw a tiger! We saw a tiger at the zoo.
She writes: WE SAW A TIGER. As she writes, she says each word, then rereads the entire sentence, pointing to the words.
I have a picture of a tiger. (She shows it to the children). This is a tiger.
Did you see a tiger at the zoo? Did you see a tiger? ...

At times, all of the Preschool I children and teachers would come together after a field trip and create a language experience story or a mapping of the event. These stories documented in print what the children had learned or experienced during their outings. Figure 7 is a photograph of an experience story created by all the Preschool I teachers and children after a trip to a science museum.

![Figure 7. Preschool I language experience story](image)
While the preschool teachers' primary objective for the language experience story was to provide opportunities for the children to use verbal language, this use of the children's activity as a meaning base for creating written text also provided opportunities for enhancing the children's developing sense of author and story creation.

**Web of the Day.** The Web of the Day activity resembled the construction of a language experience story, but it only focused upon what the children had learned and/or experienced that day. Elizabeth began the activity by writing the word "Today" in the center of a sheet of paper which was tacked to the board. Then she would ask the children, "What did we do today?" The children would remember things that they had done throughout the day and share them. As in the language experience stories, the children's contributions were almost always one- and two-word utterances, and Elizabeth always wrote a complete sentence for each contribution. As she wrote each sentence, she said the words. Then, she drew a small stick figure to accompany the sentence (see Figure 8). Elizabeth frequently reread the sentence, pointing to the words as she read, modeling one-to-one correspondence.

When the web was complete, Elizabeth walked the children to the office and photocopied the sheet for each of them. The web was sent home each afternoon to serve as a communicator with the children's parents. In the beginning of the school year, Elizabeth asked the parents to use the web as a springboard for verbal interaction.
Excerpt from Videotape Analysis (SVT 1, #5554), 12/3/90
Elizabeth and the children are almost finished with the web of the day.
E: What else did we do today?
Sue pointed to Elizabeth's toy Santa and said, "Santa."
Elizabeth corrected her pronunciation, and then wrote: WE SANG A SONG ABOUT SANTA. She drew a picture of Santa and began to sing the words to the song. After she had sung the song for the children she said, "We'll write that for Mommy and Daddy so they'll know the song." She wrote the words of the song and said each one as she wrote. "That's for mommy and daddy so they'll know what we are singing, okay?"

Figure 8. Web of the Day paper

Focal Context I: Circle time/calendar
One focal event, circle time, was chosen for a more focused look at Sue's experiences with written language in Elizabeth's classroom. A myriad of uses for written language occurred during this teacher-mediated event. During circle time, written language was used in service of speech and articulation activities, but it was also used to directly teach the children concepts about print.

Circle time/calendar was a routine, structured activity in which Elizabeth emphasized speech, speechreading, and use of audition. After a
good morning song, Elizabeth greeted each child and began the lesson with a speechreading activity. She would remind the children to "watch and listen" as she asked each child a set of clearly articulated questions: "What's your name?", "Are you at home or at school?", "Are you happy or sad?", "How old are you?", "Are you a boy or a girl?" The speechreading task was difficult, and Elizabeth worked patiently with the children, praising their attempts and successes.

Excerpt from Videotape Analysis (SVT 4, #2814), 1/30/91

Elizabeth begins with the good morning song. Sue sings along.
E: Are you ready to listen (points to her ear) and answer some questions? Okay, ... Hi Sue! (waving "hi")
S: Hi Elizabeth (very soft)
E: Oh, I didn't hear you. You say, "Hi Elizabeth" (modeling--much louder)
S: Hi Elizabeth.
E: What's your name?
S: Three.
E: No, what's your name?
S: Four.
E: No, what's your name? (slower, very articulate)
S: Three.
E: My name is Elizabeth. What's your name?
S: Elizabeth
Elizabeth looks at her questioningly
S: Sue. (changing her response)
E: How old are you?
S: Four.
E: Good girl! (pats her leg) Are you a boy ... (pauses) or a girl?
S: Girl.
E: Good girl! You were really listening (points to her ear) and watching (points to her eye). I like that! (pats her again).

The second activity of circle time was focused on speech, that is, learning to say your first and last name and the first and last names of your classmates. To teach the children to say their names, Elizabeth wrote the
names on small cards and had each child practice saying all of the names. In September, she wrote the children's first names on the bottom portion of a Polaroid photograph of each child. Over the course of the year, she scaffolded the children's learning: She wrote the names on colored construction paper using each child's color (each child had a color to which his name was associated), on white paper in colored marker, and finally on white paper in black marker. Once the children had learned their first names, Elizabeth taught them their last names.

Each morning the children would read the names and Elizabeth would work on their pronunciations. Elizabeth stated that she felt it was important for the children's safety to be able to clearly articulate their names.

Excerpt from Interview, 2/15/91

If a child gets lost in a department store, and someone asks them what their name is--At three years old you should be able to tell that person what your name is. That's my main reason for doing that (i.e., the name reading activity). These children need to know what their name is so that they can tell someone when they are in need. The other reason is reading. There's a beginning to the reading and writing process, to be able to identify sight words. What's easier than starting with your own name?

For Elizabeth, literacy was an avenue for developing speech skills. Learning to read was not the focus of the activity but was clearly its outcome. While many of the children were not able to pronounce their first and last name in such a way that a stranger could, in fact, understand their speech, all of the children learned to identify their name, and their classmates' names, in print.
The third activity of circle time, calendar, was also literacy-based. Elizabeth began the activity by pointing out the day of the week on the bottom portion of the calendar and asking the children to locate that same day on the top portion of the calendar. The task was clearly academic. Elizabeth did not require the children to pronounce the day, they only had to locate it. These kinds of matching activities were common in Elizabeth’s classroom. During unit time, she often engaged the children in matching activities, e.g., "Find the one that is the same," "Find the one that is different," "Make yours look like mine."

Once a child had located the correct day of the week on the calendar, Elizabeth talked about "its number." Early in the year, she wrote the date in broken-line format and asked a child to come to the calendar and trace over the broken lines. "Can you do this?" she would ask the children. Toward the end of the year, Elizabeth wrote the date in tiny manuscript in the upper left hand corner of the box, and then asked a child to write the date by looking at her model. This activity reflected Elizabeth’s belief that children learned to write, both the mechanics of writing and composition skills, through a "step by step" process of teacher modeling.

Excerpt from Interview, 2/25/91
Writing is the same as their language and their speech. They tell you something, you hear that you need to change it a little bit, and you give it back to them the correct way. When they show you something (i.e., their writing), you say, "Oh, that's wonderful. I see your name. I see the letter B, or whatever. Then you write it the correct way, and say, "Can you do this?"
Elizabeth also used circle time to teach the children to count. Again Elizabeth scaffolded the children's learning. First she had them count to three, then to five, and by the end of the study, to ten. And, once again, Elizabeth used print in service to the task at hand. Pointing to the dates on the calendar, she would ask individual children to count. The children would hold up their fingers, say the number, and wait for Elizabeth to point to the next numeral.

The final activity of circle time was one in which Elizabeth used print to share with the children the activities planned for that day or later in the week. The following vignettes are illustrative:

Excerpt from Videotape Analysis (SVT 3, #1238), 11/26/90
"Today's Monday (pointing to the word on the calendar). What are we going to do today? We will talk about families. We have a daddy (she writes the word "Daddy" on the calendar and draws a small stick figure), a mommy (writing/drawing), and a baby (writing/drawing). We're going to talk about our families today.

Excerpt from Videotape Analysis (SVT 4, #3390), 1/30/91
Do you know what we are going to do today? We are going to have a picnic! (writes 'picnic' on the calendar under Wednesday) Not in here (points to the floor). We are going outside (points toward the window). We're going to have a sandwich (draws a picture on the calendar), and some lemonade (draws cup), and some chips (draws chips). We're gonna go outside, sit down, and have a picnic.

Elizabeth used print to organize the day, and in the process made the task of speechreading easier for these young children. Seemingly, if they did not understand what was being said, they could make sense of the print/drawings on the calendar.
Although Elizabeth's focus was on speech and language development, this analysis demonstrates that literacy permeated the preschool day. Literacy was not the focus of teacher-mediated events, but rather was embedded within them, serving as a vehicle through which Elizabeth taught lexical items and emphasized speech development.

Sue's Participation in Written Language at the Preschool

Sue's interest in written language was evident in the ways in which she participated in literacy events at the Preschool. During teacher-mediated events, Sue often called out "My turn! My turn!" She watched attentively as Elizabeth wrote on the board or read (except on occasions when speechreading became extremely difficult or impossible.) During self-initiated events, Sue worked industriously constructing her own knowledge of written language and interacting with adults around print. Table 18 summarizes the ways in which Sue participated in and used written language at the Preschool.
Table 18. Sue's participation in written language at the Preschool

<table>
<thead>
<tr>
<th>Sue:</th>
<th></th>
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<tbody>
<tr>
<td><strong>Reading</strong></td>
<td></td>
</tr>
<tr>
<td>revisited favorite books during her visits to the library</td>
<td></td>
</tr>
<tr>
<td>actively participated in reading events except in instances where speechreading became very difficult or impossible</td>
<td></td>
</tr>
<tr>
<td>volunteered to participate in literacy events</td>
<td></td>
</tr>
<tr>
<td>demonstrated engagement with written language during literacy events</td>
<td></td>
</tr>
<tr>
<td>made &quot;life to text&quot; connections during literacy events</td>
<td></td>
</tr>
<tr>
<td>used the pictures and/or the text to read</td>
<td></td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td></td>
</tr>
<tr>
<td>used letter-like shapes to write her name without being prompted and/or when requested to do so</td>
<td></td>
</tr>
<tr>
<td>used letter-like shapes to write other people's names, especially her classmates</td>
<td></td>
</tr>
<tr>
<td>constructed her own knowledge of written language as she worked at the writing table</td>
<td></td>
</tr>
<tr>
<td>interacted with adults around print</td>
<td></td>
</tr>
<tr>
<td>drew attention to her own writing</td>
<td></td>
</tr>
<tr>
<td>pointed to a written word and asked for its spoken and/or signed counterpart</td>
<td></td>
</tr>
<tr>
<td>said and/or signed a word and asked an adult to write it</td>
<td></td>
</tr>
</tbody>
</table>

| Sue used written language: |  |
| as a self-monitoring strategy during writing |  |
| in place of, or in addition to, verbal language messages |  |
| to show ownership |  |
| to convey information |  |
| to terminate an activity |  |

During the first two months of the investigation, Elizabeth made small books that reflected the language experience stories she and the children created after field trips. Sue often volunteered when Elizabeth gave the children opportunities to read these books to classmates. When she read, Sue used the pictures to make sense of the text. As Elizabeth held the book, Sue read by labeling pictures with words.

Sue took particular interest in the Web of the Day activity. She readily contributed when Elizabeth asked, "What did we do today?" At times, Sue vocalized unintelligibly, trying to contribute. Elizabeth would say, "I don't
understand," and Sue would try again. Most of the time, Elizabeth could catch a word or two. Sometimes both she and Sue aborted attempts at comprehension. Sue watched carefully as Elizabeth wrote the words and drew the illustrations on the Web of the Day paper. The print afforded Sue explicit information to verbal interaction. Her interest in writing may have been another reason for her attentiveness.

Sue seemed to enjoy the activities of circle time and often called out "My turn. My turn," when Elizabeth looked for a volunteer to read the names, find the day of the week, write the date, or count reading the numerals. Sue had little difficulty identifying her name and her classmates' names in print. From the beginning, the task seemed easy for her. Sometimes when Sue read the names, she pointed to the child. Elizabeth often modeled a correct pronunciation of the names for Sue. Although Sue's pronunciations were seldom conventional, they improved greatly over the course of the study as she worked diligently to approximate the proper number of syllables in each name.

Sue seemed especially interested in the numerals on the calendar. At times, Elizabeth would ask about the date: "What goes here?" "Who knows the number?" Sue often called out random numbers, "1, 2, 5, 7," actively participating in the activity. When Elizabeth called upon a classmate who was slow to respond, Sue frequently assisted, gaining for herself a soft reprimand, "You need to wait. It's Chet's turn." When it was her turn to write the date, Sue very carefully traced over the broken lines, making sure she had not left any blank space, or she studied Elizabeth's model intently as she
copied the numeral(s). Proud of her work, Sue would hand the marker to Elizabeth, who always praised the endeavor.

Sue was not always an active participant in circle time. After she had had her turn, it was not uncommon for her to begin to look around the room, play with her shoe laces (she was learning to tie them), or look at me and smile and/or sign. When this happened, Elizabeth would ask her to "watch and listen."

Excerpt from Videotape Analysis (SVT 1, #2385), 11/15/90

The children are sitting in a semicircle around Elizabeth at the calendar. It's Chet's turn to count. Sue isn't paying attention. She starts looking at something on the floor. Elizabeth taps her foot. E: Just because it's not your turn does not mean, don't look (points to her eye). It's Chet's turn, but you need to watch (points to her eye) and listen (points to her ear), okay? Sue shakes her head "yes," but when Chet starts again, she begins to fiddle with her shoelace. Elizabeth touches her foot. E: You watch (points to her eye), or you have to go out (gestures with her thumb).

It is unclear whether Sue was bored, had her mind on something else, or found it too difficult to speechread her young friend. Chet was facing Elizabeth, and Sue could only see the side of his face. Following the interaction was no easy task, and it seemed that Sue had decided not to participate. Instances like these were common.

Focal Context II: High Scope

High Scope (free play) was chosen as the focal context for an in-depth look at Sue's participation in literacy at the Preschool. Unlike the
majority of Sue's day, High Scope provided many opportunities for making
decisions, making choices, and social interaction.

From the beginning days of the investigation, Sue showed a keen
interest in writing. During early observations, she was aware of my note
taking and seemed to know that she, too, could write. When I put my pencil
down, she would often pick it up and hand it to me, and, later, when we were
better acquainted, she would scribble on my note pad, uninvited but
welcomed.

Excerpt from Field notes, 9/28/90
I am sitting next to Sue, taking notes. She touches me and signs
"My write." Then, she points to a bulletin board which displays a
picture she has colored.

Later in the year, Sue demonstrated an interest in knowing what I was
writing. As I sat beside her and wrote, she would often point to the print and
ask "What that?" I would tell her the words, sometimes signing.

Excerpt from Videotape Analysis (SVT 2, #206), 11/19/90
Sue and I are at the writing table. She is drawing with markers. I
am writing on paper. I write the word "Dad" to see if she will
comment on it, and she does.
S: What that?
C: What is that? That is 'Dad.'
S: What?
C: Daddy.
S: Daddy (s/v). At work.
C: Daddy's at work.
S: Painting (gesturing as if she has a paint brush in her hand).
C: He's painting.
Excerpt from Videotape Analysis (SVT 4, #4160), 1/30/91
Sue is busy writing by the time I position the camera. I approach the table with a piece of paper and write a note (to hang on the door).
S: What that?
C: That says, 'The camera (pointing to the camera) is on.' (I execute the sign for 'camera.') That's what it says. 'The camera is on.' I'm gonna put it on the door.

Sue's interest in written language was evident in her participation at the writing table during High Scope time. I made 22 separate observations in High Scope over the course of the investigation. In 14 of those observations, Sue spent the entire time in the writing area. She only played in the block area once, and eventually she moved to the writing area for the remainder of that session (11/14/90). On two occasions, she divided her time between the house area and the writing area (12/3/90 and 1/18/91). During three observations, she worked first at the writing tape and then moved to the quiet area (9/26/90, 10/16/90, and 1/18/91) where she played with educational games. There were only three observations in which Sue did not choose to work in the writing area (9/18/90, 9/21/90, 10/29/90 -- note that all three instances occurred during the first two months of school). During each of those sessions, Sue spent the entire time in the quiet area playing with puzzles and educational games.

During a brief triangulation session with Elizabeth, I asked her about Sue's interest in the writing area. Elizabeth suggested that on any given day, Sue would work in the writing area for the majority of High Scope time. Clearly, Sue chose literacy and literacy-related events over other available activities. There was no time for free-choice writing in Elizabeth's daily schedule; it seemed that Sue used her High Scope time for writing.
The writing area consisted of a round table large enough for four or five small children to work comfortably. Pens, pencils, markers, crayons, various kinds of paper, glue, and scissors were available to the children. In addition, buttons, string, pipe cleaners, feathers, glitter, "popcorn" packaging, paper doilies, samples of gift wrap, and old greeting cards provided many opportunities for creative expression. Playdough, finger paints, watercolors, and tempera paints were also available for the young artists. While Sue occasionally visited the easels, she more often painted with watercolors. Less frequently, she tried her hand at other artistic expression. The majority of her energies, however, were focused on writing with markers.

In the early days of the investigation, Sue's work at the writing table consisted primarily of scribbling. Experimenting with the markers, she would test out each color, scribbling and making marks all over her paper. By the third week of school, however, Sue had begun to make letter-like shapes in addition to her scribbles, shapes that she read as "Sue."

Writing names was a central theme throughout Sue's endeavors at the writing table. By October, the letter-like shapes she read as "Sue" often closely resembled the letters of her name. Directionality was inconsistent throughout the course of the investigation: Sue wrote her name from left to right, right to left, and, at times, in a circle.

By November, Sue was writing the names of her classmates and friends. The writing was clearly different from the scribbles she had made earlier in the year; each name consisted of one or more letter-like shapes. I would often point to a "name" and ask "What's that?," knowing that she could speechread the question. Without fail, Sue would provide a name for each
set of letter-like shapes. The names were most often her classmates or friends in the Preschool. Often she would read "Mommy," "Daddy," "Alan," or "Jordan" when called upon to explain her work. Sometimes she wrote "Elizabeth" or "Cheri."

Sue not only wrote names, she also drew pictures, primarily faces. The faces almost always had eyes, a nose, and a mouth. Often they had hair, and at times a beard (?). Sue would label the faces with letter-like shapes, names of the individuals portrayed. Without exception, Sue would voice and/or sign someone's name when I questioned her about the portraits. As indicated in the home data, Sue's interest in writing names and drawing faces crossed context boundaries.

At times, Sue's drawings seemed to reflect her life experiences. In November, she drew a turkey and labeled it with letter-like shapes which she read as "turkey" (see Figure 9). Jordan told me later that Sue had visited her grandparents' farm over the weekend and was fascinated with their new gobbler. In December, Sue drew a picture of a Christmas tree.

Figure 9. Sue's turkey
Although Sue stayed busy with her own writing, she often took time to ask me to write for her. Not surprisingly, she frequently requested that I write her name, "Mommy," "Daddy," or my name. Sue often told me to paint, cut paper with scissors, or play with playdough.

Excerpt from Videotape Analysis (SVT 4, #0), 1/17/91
I am late to High Scope today. I position the camera and sit down beside Sue. Immediate she says, "Write Cheri."
C: Write "Cheri" -- my name?
Sue shakes her head "yes," so I do. She immediately hands me another marker.
S: Sue (s/v)
C: You do it (handing the marker to her).
S: No, you.
As I write her name, she watches intently. I write letter by letter, pausing after each one so she can see. Then, I show her that we both have an "e" in our names.
S: Same (s/v)
C: They're the same.

While Sue talked freely with me or other adults at the writing table, she rarely interacted with the classmates who worked along side her. In fact, while all the children talked with adults as they worked, they seldom interacted with one another. On one occasion when Sue and Nancy were painting at the easels, they worked along side one another for ten minutes and did not interact the entire time. At one point, Sue picked up a paint jar from Nancy’s easel and put it on her own easel. Nancy had the paint brush to that jar in her hand. Instead of saying something (and Nancy can talk intelligibly) to the effect of "Wait a minute!" or "Stop Sue," Nancy handed the brush to Sue who put it back in the jar. Not a word was spoken or signed. A few minutes later, Sue took another jar from Nancy's easel, and, again,
Nancy did not speak. After about ten minutes, Nancy finished her painting and began to put her paint jars back on the shelf. Sue walked quickly behind her and took them off of the shelf and put them onto her own easel. There was no verbal exchange. The girls said nothing to one another the entire time they painted—and they were standing side by side! Videotape analysis of the 22 observations in High Scope repeatedly documented this phenomenon.

Excerpt from Videotape Analysis (SVT 4, #5063), 1/30/91

Nancy, Bobby, Aaron, and Sue are at the writing table. Sue and Nancy are painting with watercolors. Bobby is using the markers. Aaron is working with playdough. Linda is sitting close by watching the children work. I am at the camera facing the children.

As Sue works, she dips her brush into the water jar. She accidently spills water on the table and needs a paper towel. She looks up at me at the camera—instead of saying something to one of the children at the table! A few seconds later Nancy finishes painting. She looks at me: "I'm finished with my paints."

The children work without talking to one another. Bobby leaves the table to get another sheet of paper. Nancy looks at me and says, "Bobby's getting pink paper."

When Bobby gets up, he is standing right beside Nancy, but he turns to me and says, "Hey look!" (pointing to something on the floor).

Sue's paper is full, and she needs to get another sheet. As the children work, it is quiet. No one talks. After several minutes have passed, Nancy talks with Linda:

N: Sue gotta put her name on there.
L: Where will she put the name? There isn't any room on her paper.
N: On the back, not on the front.
PN: The children are closer to each other than they are to me or Linda. Why don't they interact with one another? I think it is because of the communication problem. It can't be a lack of language because they are expressing themselves—just not with each other.
For the most part, the only interactions that took place among the children while they worked at the writing table were sharing "smells" of markers that had fruit scents and arguments over space or use of materials. In these instances, the children would often say "no" to one another and/or scream for Linda's attention. In the entire data set of observations at the writing table, there was only one instance where a child actually tried to interact with a classmate about writing.

Excerpt from Videotape Analysis, (SVT 3, #2267), 11/26/90
Sue, Aaron, Bobby, and Nancy are at the writing table. Sue is writing names. I point to one of the names and ask, "What's that?" "Sue," she quickly responds. Chet walks over to the writing table and stands beside Sue as she continues to write. He touches the writing on her paper several times and asks, "Sue, what's that?" Sue did not hear, did not understand, or was ignoring him, for she didn't stop writing. I tapped her on the arm and said, "Sue, Chet wants to know what this is." With her index finger, Sue touched one "letter" and said "Chet." I touched it, pointed to Chet, and asked, "Is that 'Chet'?" She shook her head "yes." As Chet watched, I touched several other "letters" and asked, "Who's this?" Each time Sue named someone: "Bobby," "Aaron," "Jack," "Cheri," "Nancy" (see Figure 10).

Figure 10. Sue writes her classmates' names
Although the children very rarely interacted with one another about their writing, they did talk, either to adults or to themselves. Not infrequently, Sue and her classmates used verbal language as a self-monitoring strategy to direct and/or monitor their individual writing or artistic endeavors. Before they wrote, they often said and/or signed the name of the crayon they would use. Sometimes they said words that gave meaning to their work or elaborated on what they would write.

Excerpt from Field Notes, 10/16/90
Sue was glueing doilies, pipe cleaners, packaging "popcorn", feathers, etc. onto her paper. As she worked, she continuously vocalized, not directing her speech to me or anyone else. It was as if she were talking to the "stuff" she was glueing on. A few minutes later, Sue picked up a pipe cleaner and said "baseball." She swung the pipe cleaner in the air like a baseball bat.

Excerpt from Videotape Analysis (SVT 4, #4850), 1/30/91
Nancy has been painting with the watercolors. She finishes her work and gets a can of playdough. "I'm gonna make a dinosaur." Nancy creates the dinosaur and makes dinosaur noises. Then she pretends that it has bitten her. She locks it up in the can and begins to work on another piece of playdough. "I'm makin' a ball. Two balls."

One other interaction at the writing table demands attention. But first, some background information: At the Preschool, teachers often gave the children stickers or stamped their hands when they had attempted and/or successfully completed a task. The sticker/stamp terminated an activity.

During one observation in High Scope, Sue had left the writing table to paint at the easel. When she returned to the writing table, Aaron was
fingerprinting. Sue decided she wanted to fingerprint, but there was only one tray.

Excerpt from Videotape Analysis (SVT 4, #1450), 1/17/91
Sue begins to interact with Aaron, trying to get his tray.
S: Finish you. Finish you. Finish you. (signing clearly, but voicing only softly)
Aaron ignores Sue, and continues to paint. Sue gets closer and touches him on the shoulder.
S: Finish you. Finish you. Finish you. (sign only).
Aaron still ignores her, and she starts taking the tray from him. He grabs the sides. At this point, Sue walks over to the shelf, grabs a stamp, and rushes back to the table. She stamps Aaron’s hand and again s/v “Finish you.” When she does this, Aaron begins to scream, and Linda rushes over to settle the dispute.

In this interaction, verbal language was not effective for Sue. She interacted with Aaron in sign and voice, but to no avail. Knowing that, in this Preschool, stamps terminate an activity, Sue used print in this manner in an effort to communicate what she wanted.

Summary: Sue’s Written Language World

Literacy in Sue’s home was often subsumed in speech development activities. Alan and Jordan used print to teach Sue to properly pronounce new words. Toward the end of the study, however, literacy began to take on new meaning, as Jordan tried to teach the names for letters of the alphabet.

Sue’s participation in written language in her home reflected her interest in people. She drew their faces and wrote their names. She corresponded with them. Print was a vehicle through which Sue interacted socially with individuals.
Literacy permeated and was embedded within Sue's activities at the Preschool. Written language served a myriad of functions, particularly the support of speech development activities.

When given the opportunity to make choices, Sue consistently chose literacy and literacy-related events over other available activities, and she chose writing over reading. Using content that was meaningful to her, i.e., the names of people she knew (many of whom she had learned to read) and everyday experiences of school and home life, Sue explored both the mechanics and message of written language. She came to understand that the marks she made on paper had meaning and could be used to communicate with others.

This analysis also revealed that when Sue and her classmates had opportunity to interact around print, they did not do so. They explored written language independently or with an adult, but not with peers. It would appear that the lack of a common modality for communication contributed to this phenomenon.

**Sue's Knowledge and Understanding of Written Language**

Throughout my observations in Sue's home and at the Preschool and through the informal assessments I administered at the Preschool site, Sue demonstrated a great deal of literacy knowledge and understanding for such a young child. In Table 19, I have delineated the knowledge and understandings Sue demonstrated by February 28.
Table 19. Sue's demonstrations of written language knowledge

**Book-handling knowledge:**
- began at the front cover and proceeded to the back page when reading a book
- leafed through a book one page at a time

**Concepts of print:**
- distinguished between the top and bottom of a page
- understood that the print carries the message
- read the left page of a book first

**Sense-making strategies:**
- used pictures to make sense of text
- using visual information in print to make sense of text

**Terminology:**
- book
- read
- write

**Developmental understandings:**
- written correspondence is a way to communicate with others
- written correspondence needs a stamp
- letters of the alphabet belong to/name people
- writing has meaning
- speech and/or signs can be translated into written words
- uppercase letters are different than lower case letters

**Reading:**
- read her own name, all of her classmates' names, her teacher's name her parents' names, and the researcher's name
- read the words “mom” and “dad”
- read numerals 1 - 9
- read books by making unintelligible vocalizations for each page and/or by using the pictures and/or text

**Writing:**
- made letter-like shapes to write each of the names she knew as well as other words she needed

Through her experiences with written language at home and at the Preschool, Sue had come to understand much about both the form and function of written language. As Table 19 details, Sue understood that written language communicated a message and provided a means for
interpersonal communication. Even at age four, Sue was beginning to use sense-making strategies to making meaning of written language.

As might be expected, communicating what I wanted Sue to do in each of the testing situations was difficult, and at times impossible. I attempted to administer each task of the two assessments, and although I signed and voiced the task directions, many of the signs were unfamiliar to Sue, and she would simply imitate my signs. For this reason, I was unable to administer Clay's (1979) Diagnostic Survey (except for the letter identification task) and several of the Literacy Tasks (Harste, et al., 1984), e.g., tell me a story, write a story for me.

Although Sue demonstrated inconsistent left to write directionality in her writing, she always began reading a book from its front cover. She distinguished between the top and bottom of the page and easily leafed through the book one page at a time. When asked to read, she either made unintelligible vocalizations for each double page or used the words she was able to pronounce to create a verbal text. In either case, Sue always studied the pictures intently, making meaning of the action portrayed. On several occasions, Sue actually pointed to the print, made vocalizations and/or said words, and then pointed to the pictures, clearly imitating the read aloud process.

As might be expected, I was unable, in any of the testing situations, to elicit terminology associated with reading and writing. I had no way to communicate what I wanted. Through observations in the home and preschool classroom, however, I observed Sue signing/voicing the words "read," "write," and "book."
As she had done both at home and at the Preschool, during testing situations Sue read letters of the alphabet as people's names, e.g., A was read as Aaron, B as Bobby, C as Chet, etc. Sue distinguished between lowercase and uppercase letters in an interesting way. While she would read an uppercase I as "Tory" (a friend of the family), she would not do so with a lowercase l. A lowercase l might be read as "Chet" since he had a lowercase l in his name, and Tory did not. Sue would often read the lowercase s as "Not mine," or "Not Sue," demonstrating her understanding of the physical difference between s and $S$. Sue had learned to use the visual information of print to make sense of text, a sense-making strategy that supports young readers' understanding of written language.

Sue demonstrated an awareness of environmental print at home and in the preschool classroom, and she clearly recognized many of the items in Phase 1 (item labels) of the Environmental Print Task (Harste, et. al, 1984). She named many of the items and/or said "I like that," or "I don't like that." Often she asked me if I liked a particular item. In Phase 2 (photocopies of item labels, minus contextual support), Sue astutely provided an unintelligible vocalization for each item--a response she knew would serve as an attempt. In Phase 3 (item names written on white 3 x 5 cards in black ink), Sue began to read the words as people's names, e.g., Aunt Jemima Pancakes = Aaron, Jif Peanut Butter = Jack, Campbell's soup = Chet, Cheerios = Cheri, etc. Although Sue knew each of these names in print, she was making meaning of a task that was for her meaningless.

The results of the assessments highlighted Sue's understanding that written language carried and could be used to communicate a message.
Sue approached each assessment as though she understood she was to make sense of the written language I had set before her or use it to communicate her own message. She never refused to participate in any of the assessments, and even when the task had no meaning for her, Sue provided some response.

**Biography Summary**

My observations in Sue's home and in the preschool classroom and the results of the informal assessments demonstrated that Sue was an active constructor of meaning. Sue's limited knowledge of verbal language did not prevent her from exploring written language on her own or socially constructing literacy knowledge through interaction with adults. Rather, she demonstrated considerable interest in written language, very frequently choosing literacy and literacy-related events over other available activities. The lack of a common modality for communication with her classmates may have contributed to their lack of interaction around print.
ANDREW

Unlike Sue, Andrew was probably born deaf. His mother, Cathy Osbron, described him as "a perfect little guy" who rarely cried or woke up during the night. This unusually good behavior and the fact that Andrew "seemed to be ignoring [them] all the time" began to worry his parents, however, and when Andrew was a year and a half old, they took him to the family pediatrician and expressed their concerns. Cathy was a registered nurse, and the pediatrician felt she was overly concerned. The doctor insisted that Andrew was just "a bright kid," and that this was "a stage all kids go though."

Seeing no change in Andrew's behavior, the Osborns took him to the pediatrician almost every two months. Cathy reported that the pediatrician "never tested him, never rang any bells, never did any kind of hearing test." After six months, the Osborns decided to have Andrew's hearing checked at a local speech and hearing center. At two years of age, Andrew was diagnosed as having a profound bilateral sensorineural hearing loss. Soon after the diagnosis, the Osborns changed pediatricians.

One month after they had learned of Andrew's hearing loss, the Osborns decided to have their younger son's hearing checked. Bradley, who was two years younger than Andrew, had normal hearing.
The World of Verbal Language

In the two major sections that follow, I will discuss Andrew's experiences with verbal language in his home and at the Preschool.

Verbal Language in the Home: Changing Modalities

The Osbrons had taken Andrew to the same speech and hearing clinic to which the Tysons had taken Sue. Interestingly enough, the same audiologist, Cindy, diagnosed Andrew's hearing loss, and, as in Sue's case, became his auditory/speech therapist.

Excerpt from Home Visit #1, 10/24/90

Cathy: Cindy actually was the one (i.e., the audiologist) that helped out with our whole situation at [the speech and hearing center]. She worked there at the time. Parents are so dumbfounded and have no idea what this is all about. What do you do? 'The anxious mom.' Cindy said we should start with speech lessons, etc. She said she could give us some names or else we could go to her. Of course, we liked her. So Andrew started right after we found out [about his hearing loss].

Like the Tysons, the Osbrons chose the oral/aural approach to communication. They had heard Dr. Daniel Ling, a prominent "Oralist" educator, and were so impressed with his presentation that they "wanted Andrew to be oral." When I asked Cathy to elaborate on their decision, she suggested the predominant reason was that she and her husband wanted Andrew "to talk like a normal person."

Excerpt from Home Visit #1, 10/24/90

Cathy: I think -- maybe this is a broad statement -- but, I think most people would want their child to talk like a normal person. I think
that when this first starts up, the biggest thing you want is for your child to talk. We both wanted very much for him to talk. That was our approach. We'd do anything to get him to talk. We read an awful lot of information on it to know that there are two different theories. We came to a joint decision. That's what we wanted as his mom and dad.

For the next year, the Osbros worked at developing an oral/aural environment for Andrew, and when he was three, they enrolled him in an oral/aural class at the Preschool. At the end of two years in oral/aural classes (Preschool I and Preschool II), Andrew had not developed the speech and language skills necessary to remain in an oral/aural placement, and the instructional staff recommended that he be retained at the Preschool II level and placed in a total communication setting. Recognizing the problem, Cathy agreed to this change.

Excerpt from Home Visit #1, 10/24/90
Cathy: I think I saw it coming, but I didn't want to admit it. I think after two years we felt that Andrew was losing ground language wise because he wasn't able to communicate well. We gave it two years, and after two years in the oral program, the problem was that Andrew couldn't talk about what happened during the day time. We couldn't communicate well about the past or the future. I think the language was lacking.

By the time I visited first in Andrew's home, he had been in the Preschool II total communication setting for two months and Cathy had just begun her first Pidgin Sign English course. I asked her how she was feeling about the change.
Excerpt from Home Visit # 1, 10/24/90
Cathy: I think it's the best decision for Andrew. I'd still like him to be strictly oral, to be honest with you, but you want the best for your child. Last year he was easily distracted. In fact, at the beginning of the year, I think [his teacher] thought that he had an attention deficit. I think the signing has made him so much more attentive. I think that it was definitely the right move.

During my last home visit I posed the same question, and Cathy again suggested that changing modalities was the right decision.

Excerpt from Home Visit (AVT 9, #3071), 2/27/91
Cathy: Quite frankly, it's really been a lot of fun with Andrew. There is an awful lot more of communication we have. And he tells me about what happens in school. It's such a difference. ...With these kids that are oral--and I really believe this--I don't think they're getting that much communication. ... And I just didn't realize how much he knew. I didn't even know he knew the days of the week. I had no idea he knew the difference between Monday and Friday.

Although Cathy was pleased with the total communication setting and the change in modality, she did indicate some concerns about the use of sign language. Andrew often used signs that Cathy did not know, and she found it frustrating to try to look up the sign in her sign language book, for she would "be all day in the book." Cathy also expressed concern about the inconsistency of signs across contexts and the lack of a one-to-one correspondence between spoken English and sign language.

Excerpt from Home Visit #1, 10/24/90
Cathy: I've sort of noticed that the sign is not an exact language. Every so often people sort of throw in their own thing (i.e., sign). If you ever went to school and took French, you couldn't throw in
your own terms for French. It seems like sign is not an exact language. I find that totally disappointing.

During this conversation, I talked with Cathy about the nature of Pidgin Sign English and other sign systems and explained that they were not formal languages, and that at times, there would not be a one-to-one correspondence between what was spoken and what was signed.

At the beginning of the investigation, Cathy suggested that learning sign language was "so much fun" and that it was "simple" for her. On my last visit in her home, she stated that she enjoyed learning sign language and felt that it was easier for her than for most people because she could immediately "use it with Andrew." She also stated, however, that to learn sign language "you really do have to be committed, because it's like going to school every week," and she suggested that she was "looking forward to a break."

Andrew's Experiences with Verbal Language at Home

As interested as Cathy was in learning sign language, the fact remained that she was a very beginning signer, and as might be expected, the primary mode of communication in Andrew's home was still spoken English. Learning to sign fluently takes considerable time and effort, and Cathy's sign language course only met once a week. Throughout the investigation, Cathy learned many new signs, but in the larger scheme of things communication in the home was predominantly spoken English supported by the signs that she knew. The following vignettes provide examples of the kinds of interactions that took place in Andrew's home. The underlined words are the words Cathy signed.
Excerpt from Home Visit (AVT 9, #2844), 12/11/90
The boys are having a snack. Cathy has given Bradley some milk, and he asks for more.
Ca: You can have more, but it's almost bedtime, and I don't like you to have a lot before we go to bed.
Bradley drinks the milk quickly.
B: I'm gonna need more.
Ca: No honey. I think that's enough for you.
B: More please.
Ca: I don't like you to drink a lot before you go to bed.
B: But you said, you said--I need more drink, please.
Ca: Okay, just a tiny, tiny bit.
Andrew has been coloring. When he sees that Bradley is getting more milk, he asks for some.
Andrew: Juice (s/v).
Cathy: What (gesturing). I can't hear you (cupping her hand over her ear).
Andrew: (speaking louder) I want juice, please (s/v).
Cathy: Okay.
Signed words=underlined

Excerpt from Home Visit (AVT 9, #1201), 2/27/91
Cathy is reading a Signed English book to the boys. She reads a page in the book that talks about having friends on the school bus. She interacts with Andrew about the page.
Ca: Do you have friends on the bus?
It appears as if Andrew interprets the question as "Do you have friends?" for he begins to name his friends and doesn't say anything about the bus. Andrew signs but does not use his voice.
A: Carita friend
Ca: Carita goes on the bus, oh.
A: Marta friend
Ca: Marta does? Oh, all his friends go on the bus. Bradley.
A: Kyle friend
Ca: Kyle goes on the bus.
A: Leona friend
Ca: You have a lot (big) friends.
A: Anna friend
Ca: No, Anna doesn't (no) go on the bus.
Cathy turns the page.
Ca: Okay, watch (gestures) me. Let me show you what we're going to do. ...
Signed words=underlined
When Bradley interacted with Andrew, he used a combination of spoken English, gestures, and the signs Cathy and/or Andrew had taught him. For the most part, Bradley did not speak when he signed. The boys did a lot of gesturing which Cathy suggested was "their own form of communication." Thus, like Sue's, Andrew's experiences with verbal language at home were diverse and varying. Table 20 details Andrew's verbal language world at home.

Table 20. Andrew's experiences with verbal language at home

<table>
<thead>
<tr>
<th>Cathy:</th>
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<tbody>
<tr>
<td>used spoken English as her primary mode of communication (supported by the signs she knew)</td>
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<tr>
<td>often spoke without using any signs</td>
</tr>
<tr>
<td>spoke slowly when trying to speak and sign simultaneously</td>
</tr>
<tr>
<td>often did not know the signs she needed to communicate with Andrew</td>
</tr>
<tr>
<td>often repeated what Andrew said/signed to make sure she had understood</td>
</tr>
<tr>
<td>often talked with Bradley in Andrew's presence without signing</td>
</tr>
<tr>
<td>talked to Bradley more often than she did to Andrew</td>
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<tr>
<td>sometimes used incorrect signs</td>
</tr>
<tr>
<td>often spoke in incomplete sentences when she tried to sign every word</td>
</tr>
<tr>
<td>looked up unknown signs in her sign language book</td>
</tr>
<tr>
<td>often did not understand or misunderstood Andrew's signed/spoken utterances</td>
</tr>
<tr>
<td>understood more sign language than she was able to produce</td>
</tr>
<tr>
<td>asked researcher for signs or to explain something to Andrew</td>
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<tr>
<td>taught Bradley many of the signs she was learning</td>
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<tr>
<td>encouraged Bradley &quot;to sign a little&quot; when he spoke to Andrew</td>
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<tr>
<td>emphasized speech</td>
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<tr>
<td>emphasized speechreading</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bradley:</th>
</tr>
</thead>
<tbody>
<tr>
<td>knew very few signs</td>
</tr>
<tr>
<td>communicated with Andrew through a combination of spoken English, gestures, and the limited signs he knew</td>
</tr>
<tr>
<td>rarely spoke when he signed to Andrew</td>
</tr>
<tr>
<td>did not sign when speaking to his mother in Andrew's presence</td>
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<tr>
<td>talked more with his mother than with Andrew</td>
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</tbody>
</table>
Knowing that Andrew needed a total communication environment, at times Cathy tried to sign every word she spoke. When she did, her speech was very slow and somewhat unnatural, and she often used incomplete sentences.

Excerpt from Home Visit (AVT 9, #565), 2/27/91
Andrew's head is hurting, and he tells Cathy about it.
A: (touches a bump on his head) Hurt (s/v).
Ca: What hurts? The back of your head?
Cathy feels a bump on the back of Andrew's head. He yells as she touches it.
Ca: Hurt (then gestures as if to say, "What happened?").
A: ___?___ (Push?) Hit head, Fall (s/v).
Ca: You fall?
I explain that Andrew had been rocking on his chair at school when he fell over and bumped his head on the table.
C: You hurt (points to her head) (fingerspells A - T) school?
Andrew shakes his head 'yes.'
C: Sorry.

As is often the case with most beginning signers, at times Cathy used the wrong signs when trying to communicate with Andrew. During one of my visits, Cathy was praising Andrew and said "you're so smart," but she signed "you don't know." Andrew did not object to her statement, so he may have interpreted what she really meant.

Considerable talk went on around Andrew. Cathy and Bradley interacted frequently. They talked as Cathy opened the door for me, prepared a snack for the boys, or as they moved from room to room. Throughout my visits, Cathy and Bradley talked in ways that were very natural for mother and young child. In contrast, Cathy interacted with Andrew less frequently than she did with Bradley. Perhaps one reason for this was
that it was easier to talk with Bradley. Another reason was that Bradley talked more to her than Andrew did. For the most part, when Andrew was in the room and Cathy and Bradley were talking to one another they did not sign. When Andrew was actively participating in the conversation, however, Cathy tried to sign for him or encouraged Bradley "to sign a little."

On several occasions during my visits, Cathy misunderstood Andrew's signed and/or spoken communication to her. For example, on one occasion he signed and voiced "wrong" and she thought he was asking "why." On another occasion, he signed and voiced "paper" and she thought he was saying "school." Since Cathy did not know all the signs Andrew was using, she had to rely heavily upon context, his spoken English, and the iconicity of sign language.

Excerpt from Home Visit #1, 10/24/90
The boys are having a snack. Andrew speaks without signing.
A: (?)
Ca: You want more? There isn't any more.
Ch: I thought he said "spoon."
Ca: Really?
Ch: I think. I'm not sure.

Cathy suggested that, at times, she had difficulty understanding Andrew's communication.

Excerpt from Home Visit #2, 11/07/90
I was sharing with Cathy some of Andrew's responses to story reading at the Preschool, giving her some idea of his language development and interest in books.
Cheri: Anna was reading a story about the zoo sending a child animals for a pet. When Andrew saw the picture of the horse, he said "I horse have," and then when he saw the picture of the horse
being delivered to the house he said, "House no play." (i.e., I have a horse. Horses can't play in the house.)

Cathy: You know, now I understand the reason why I'm not following it very well when he does do sign. It's sort of like a chopped up type of thing. I have a hard time with his signing so much. I realize I don't know a lot of his words (i.e., signs), but on the other hand sometimes it doesn't seem to make sense.

Cheri: That's because his signs are not always in English word order.

Andrew often signed without speaking, and frequently Cathy said "What?" or "I can't hear you," encouraging him to speak. When Andrew spoke, Cathy frequently corrected his pronunciation of words, demonstrating the value she placed upon intelligible speech. When Andrew approximated her speech models, she often praised him, saying "Very good." "That was good." "I heard you." As well, Cathy emphasized speechreading, frequently tapping Andrew on the arm or turning his face toward hers so that he could speechread what she was about to say.

Andrew's Participation in Verbal Language at Home

Andrew participated in verbal language in a variety of ways when interacting with Cathy and Bradley. He spoke, he signed, and he often used gestures to communicate. Sometimes his communication was simultaneous, that is, he spoke and signed at the same time. Other times he signed without speaking, and many times he spoke without signing. I observed no particular consistency in the mode of communication he used. Andrew seemed to interact using whatever modalities would communicate his message. For the most part, Andrew spoke and/or signed in two-, three-, and four-word
utterances. His participation in verbal language at home is summarized in Table 21.

Table 21. Andrew's participation in verbal language at home

Andrew:
- spoke without signing
- spoke and signed simultaneously
- signed without speaking
- spoke, signed, and gestured to communicate
- modified his attempts at communication when his mother or brother had difficulty understanding
- used written language when verbal language did not communicate his message
- used verbal language to get what he wanted (i.e., a snack, crayons, etc.)
- used verbal language to share information
- worked at intelligible speech by imitating his mother's speech models
- taught his mother and brother new signs
- corrected his mother if she improperly executed a sign
- used routine interactions in the home that he was required to use at the Preschool (e.g., I want drink, please.)
- made sense of his mother's and/or brother's communication by speechreading and interpreting their signs and gestures
- practiced the signs he learned from Signed English books

Since Cathy did not know or did not understand all of the signs Andrew used, he often modified his attempts at communication when it was clear that she was not understanding. Andrew would repeat himself, speak louder, use a different sign, add a gesture, and/or pantomime to help her understand. In the following excerpt, Andrew resorted to print when verbal language would not communicate his message.

Excerpt from Home Visit (AVT 9, #1003), 2/27/91
Cathy is reading Julie Goes to School (a Signed English book by Collins-Ahlgren) with the boys. The story is about a teacher and a group of children who make wolf masks and act out Little Red
Riding Hood. Andrew decides that he wants to make a wolf mask as the children in the book had done.
A: My paper. Me wolf (signing only).
Ca: You want the wolf? What?
A: Here, write (s/v) (He leans over and hugs his mother).
Ca: Ahh.
A: Please (s/v).
Ca: Please what? (gesturing)
A: Wolf (s/v).
Ca: The wolf?
A: Me.
Ca: You wanna be the wolf?
Andrew shakes his head 'yes.'
Ca: Okay. (to Bradley) He wants to be the wolf.
B: I wanna be the grandmother.
Ca: Okay, you can be the grandmother.
A: Me want paper please (signing only).
Cathy is turning the page so she doesn't see Andrew's signs. She begins to read.
Ca: Draw a picture of the wolf's face.
A: My crayons. Orange. Orange wolf (s/v).
Ca: Yeah, look (pointing to the picture). They're gonna draw (gesturing) a picture with crayons. Yes.
A: Orange wolf. Me write please (s/v).
Ca: Oh? (questioning, as if she doesn't understand).
Ca: Okay. You and me (still not understanding).
Cathy turns the page and reads:
Ca: Now cut on the line. See, they're making faces of the wolf (runs her finger along the page).
A: Me (s/v).
Ca: You wanna do that?
Andrew shakes his head 'yes.'
Ca: Let's wait, and maybe we'll do it next.
Andrew shakes his head 'yes' as if to say 'Okay.'
Cathy reads two more pages and Andrew is ready to make his mask.
A: Draw mask (he uses a gesture for 'mask,' pantomiming tying on a mask as the children in the story had done).
Ca: You wanna be a Ninja turtle?
Cathy turns to me at the camera:
Ca: I just learned that last night. (as if to say that she should remember how to sign it). What's Ninja turtle?
Ch: This is turtle (demonstrating), but I don't know what Ninja is.
Ca: (to Andrew) Turtle? Ninja (gestures like a mask around the eyes) turtle?
A: Wolf mask (s/v).
Ca: Ninja turtle?
A: No. Wolf mask (s/v).
Ca: A wolf turtle?
Andrew shakes his head 'no' and reaches for the book. He points to the picture of the child with a wolf mask on.
Ca: Oh, you want to make a mask (using the sign in the book) for a wolf.
A: Mask (using the sign she has just used).
Ca: Maybe. We'll see.

Although it required considerable time, effort, and resourcefulness, Andrew successfully communicated his message to Cathy. Andrew realized that print could communicate a message when his verbal language could not.

During my visits, Andrew primarily interacted with me in simultaneous speech and sign. For the most part, we understood each other, and as we interacted, I interpreted for Cathy and Bradley. I used simultaneous communication when talking with Andrew.

Excerpt from Home Visit #1, 10/24/90
Cathy and I sit down to talk. The boys are in the living room with us. Andrew begins to talk with me, signing and voicing.
A: Cheri
Ch: That's my name, yes. Cheri.
Andrew shows Cathy my name sign.
Ch: Very good. You remembered my name.
A: Andrew (pointing to himself). Bradley (pointing to Bradley, who is still in the kitchen).
Ch: Yes, Andrew and Bradley. I know your names.
Andrew: Anna here?
Ch: No. Anna's not coming. Just me.
A: Anna bus.
Ch: This morning? Right, Anna went on the bus with you this morning. Did you have fun this morning?
Ch: I did not go on the bus. I stayed home today. You are right. Tomorrow I will come to school. Okay? I'll see you tomorrow, okay?
Andrew shakes his head 'yes' and walks back into the kitchen.
Cathy: It's amazing how much he's picked up already!
Much of the time Andrew seemed unaware that Cathy and Bradley were talking in his presence. If he was aware, he did not in any way encourage them to sign. When he was attending to their conversation or participating in their talk, he watched their faces to speechread.

For the most part, when I visited in Andrew's home, his primary use of verbal language was to get what he wanted, i.e., a snack, crayons and paper, etc. He frequently said/signed "I want ______ please." On a few occasions, however, he shared information with Cathy (see Excerpt AVT 9, #565 above) or me.

Excerpt from Home Visit # 2, 11/07/90
I am just about to read a picture book to the boys. Andrew sees an M on the front cover of the book.
A: Marta.
Ch: Yes, the M is in Marta's name.
A: House.
Ch: Yes, Marta is at home.
A: Anna house.
Ch: Yes, Anna is at her house, too.
A: Carita house.
Ch: Yes, you're right. All of the boys and girls are at home. Andrew shakes his head 'yes.'
Ch: I need to go home, too. I think we will save this book for next time.

When Cathy tried to correct his pronunciations, Andrew readily imitated Cathy's speech models. Like Sue, he seemed to participate willingly as if he genuinely wanted his speech to be intelligible.

Although I only saw Andrew correct Cathy's signs one time, she suggested that he "loved" to help her execute the signs she was learning. As well, Andrew often taught Cathy and Bradley new signs.
Verbal Language in Preschool II: A Total Communication Approach

There were three oral/aural classes and one total communication class at the Preschool II level. When Andrew started his third year at the Preschool, he was placed in Anna Kohman's total communication class. Anna was a veteran teacher of eleven years, having taught both hearing and hearing-impaired children at the high school, elementary, and preschool levels.

Andrew's teacher: Anna

The first time I observed in Anna's class, I had great difficulty watching Andrew: I could not keep my eyes off of Anna's signs. I was fascinated by her ability to speak and sign simultaneously. Her sign language vocabulary was very large, and she was amazingly proficient. Her signs were clear, sharp, and fluid, easy to understand. She did not execute a sign for every word (for example, she often left out the articles, auxiliary, and pronouns), but her ability to sign the majority of words she spoke was quite impressive.

Anna readily agreed to participate in the study, and, like Elizabeth, she provided invaluable insights into the children's behaviors and responses throughout my observations. She often reverse interpreted (voiced the children's speech/signs) for me when I did not understand or was unable to see the children's interactions from my position at the camera.

From the outset, Anna invited me to participate in classroom activities as a member. When I ate snack with the group, I participated in routine verbal interactions (for example, I had to say "I want juice, please," or "I
would like two cookies, please," etc.) Anna often included me in classroom activities and discussions. She would refer to me when talking with the children (Who else has a "C" in their name? Cheri does! We forgot about Cheri!) She asked me questions, and on occasion, Anna or one of the children would say, "Cheri's turn," and I would leave my post at the camera and join the children to take a turn at whatever they were doing. Anna seemed to understand and feel comfortable with my role as a participant observer.

I felt comfortable with Anna, and throughout the investigation I freely asked her questions about philosophy, theoretical orientation, and pedagogy. Table 22 summarizes Anna's responses to my questioning.

Table 22. Anna's beliefs about language and literacy

<table>
<thead>
<tr>
<th>About modality:</th>
</tr>
</thead>
<tbody>
<tr>
<td>all profoundly deaf children should be placed in TC classrooms initially until they have developed a strong receptive language base, then those children who can succeed orally should be moved into an oral/aural placement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>About language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>provided that they do not have additional handicapping conditions, profoundly deaf children learn language in the same ways that hearing children learn language except that they learn it through the visual (rather than the auditory) mode</td>
</tr>
<tr>
<td>profoundly deaf children learn language through modeling, by having visual contact with an appropriate, consistent language role model</td>
</tr>
<tr>
<td>to learn language, profoundly deaf children need to be exposed to language and have opportunities to use it</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>About literacy:</th>
</tr>
</thead>
<tbody>
<tr>
<td>children learn when they are ready to learn</td>
</tr>
<tr>
<td>children teach themselves as their teachers present, manipulate, and model</td>
</tr>
<tr>
<td>children learn to read and to write (or to do anything) through immersion when they are given opportunities to work, to manipulate, to play</td>
</tr>
<tr>
<td>phonics and sight word methods are inadequate because they segment the reading process rather than presenting it globally</td>
</tr>
</tbody>
</table>
Anna felt strongly about the need to provide hearing-impaired children with a language that would be accessible to them in their earliest years. She believed that all profoundly deaf children should be provided a total communication environment from the outset, both at home and at school, an environment that supported the acquisition of a strong receptive language base. Anna believed that through sign language, speech, speechreading, and use of audition, young profoundly deaf children could acquire a language "to draw from," a language with which to learn and to communicate.

Excerpt from interview, 2/4/91
Anna: I believe that if a child is a 'normal' hearing-impaired child (i.e., having no additional handicapping conditions), he's going to learn language the same way that a hearing child does. It's just that he needs that visual input. Hearing-impaired children could learn language in the same way that hearing children learn language if they were given that opportunity and that exposure to language. They need to be bombarded with language. Language needs to be here, and it needs to be at home. ... I think that our children should be "Total" first, so that they build a receptive language base. I think the most important thing is to build up their language base so they have something to draw from. I think that is real important--from day one.

Anna believed that some profoundly deaf children could succeed in oral/aural placements. She suggested that once a profoundly deaf child had acquired an initial language base through a total communication environment and demonstrated a "potential for speech" (i.e., the ability to produce intelligible oral language) and the ability to speechread spoken English, he/she might be placed in an oral/aural setting.
Excerpt from Interview, 2/4/91
Anna: I think there is a place for an oral child and an oral philosophy. If there are children that can definitely survive and function in a nonsigning environment, then for those children it may be appropriate to drop the sign language at some point.

Anna believed that profoundly deaf children learn language "through modeling," through exposure to "an appropriate, consistent language role model." She suggested that both parents and preschool teachers need to "let the child see language all the time."

Excerpt from Interview, 2/4/91
Anna: They're [i.e., profoundly deaf children] not going to hear it, and they're not going to pick it up the same way that hearing children do unless they have visual contact with language. We need to sign all the time--everything--and just bombard them the same way we bombard hearing children even though we're not aware of it. ... The way I teach these children is very similar to what I do with my daughter at home, just that I add the sign language.

When I asked Anna about literacy learning, she stated that she believed "all children learn when they are ready to learn," and that they teach themselves. She suggested that children learn to read and write when they are "immersed in" and given opportunities to explore the process.

Excerpt from Interview, 2/4/91
Anna: I don't believe that we really 'teach' children anything. I believe that children learn when they are ready to learn. We present and manipulate and model, but we're not 'teaching.' They teach themselves; they learn from each other. They model for each other. Like these alphabet letters that they're starting to write. I didn't teach them that. I think the only way to teach reading, writing, or anything is just to immerse them in it--to give
them opportunities to play with it, to manipulate it, to see and hold it, until they are ready. Then, all of a sudden, it happens. It seems like it always does.

When I asked Anna about various approaches to reading instruction for hearing-impaired children, she suggested that both phonics and sight word approaches were inadequate because they segmented the reading process. Anna suggested that children learn to read when they are immersed in reading. She stated that she taught reading through "story books and literature."

Excerpt from Interview, 2/4/91
Anna: The sight word method just goes against what my whole philosophy is about. I think you have to look at everything globally. You can't lift a word out and chop it all up. I think we are really doing a disservice by teaching that way, teaching individual, isolated words.

I can't even talk about phonics! It's like signing "run--ing." I don't sign the "ing" or "tion" markers. I think you chop up a word by doing that. Instead of just getting the concept of "running," the "ing" is like another sign. Phonics is like that. You don't chop up a word to learn to read. ... If you can't read, phonics doesn't make any sense. If you can read, you don't need phonics. So what's the point in teaching that way? You're not getting anywhere with it.

Anna's beliefs about language and literacy were evident in her classroom practice. She maintained a nurturing environment which provided constant opportunities for immersing her students in both language and literacy.
Andrew's Classmates

Andrew was next to the youngest in his class (see Table 23). He had celebrated his fifth birthday just nine days after school started. Although one of the youngest, he was clearly a leader in the group, particularly during story and calendar time where he tended to answer the most questions. Carita and Leona were the classmates with whom Andrew interacted most. Kyle and Marta were quiet children who tended to take a back seat in the interactions of Andrew, Carita, and Leona.

Table 23. Andrew's classmates: Demographic information

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>PTA (unaided)</th>
<th>SAT (aided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leona</td>
<td>5.7</td>
<td>R=102, L=107</td>
<td>50</td>
</tr>
<tr>
<td>Marta</td>
<td>5.6</td>
<td>R=117, L=112</td>
<td>70</td>
</tr>
<tr>
<td>Carita</td>
<td>5.3</td>
<td>R=115+, L=75</td>
<td>55</td>
</tr>
<tr>
<td>Andrew</td>
<td>5.0</td>
<td>R=112, L=111</td>
<td>45</td>
</tr>
<tr>
<td>Kyle</td>
<td>4.11</td>
<td>R=100+, L=105+</td>
<td>60</td>
</tr>
</tbody>
</table>

PTA=Pure tone average
SAT=Speech awareness threshold

Schedule of daily events

The daily schedule for Anna's preschool class included free-choice writing, music and movement, the morning story and calendar, snack and free-choice reading, language arts unit and story, individual speech and auditory therapy and a table activity, group speech, lunch, outdoor recess, the afternoon story, rest time, and physical education or High Scope time. As
I stated in Sue's biography, only occasional observations were made during lunch time and outdoor recess and very little data were collected during those observations. I did not make any observations during physical education and I only made three observations during High Scope time since all of the Preschool II children and teachers were involved in these activities. Each of the scheduled events will be described in some detail in the account of Andrew's experiences with literacy within his preschool class.

9:00 - 9:30  Free-choice writing
9:30 - 9:45  Music and movement
9:45 - 10:10 Morning story and calendar
10:00 - 10:30 Rest room, snack, free-choice reading
10:30 - 11:00 Language arts unit and story
11:00 - 11:20 Individual speech/auditory therapy, table activity
11:20 - 11:45 Group Speech
11:45 - 12:00 Rest room/wash up
12:00 - 12:30 Lunch
12:30 - 1:00  Outdoor Recess
1:00 - 1:10  Rest room/wash up
1:10 - 1:30  Afternoon story
1:30 - 2:00  Rest time
2:00 - 2:45  Physical education or High Scope
2:45 - 3:00  Dismissal

• Library: Wednesday 1:30-2:00; Friday 10:15-10:45

Anna's Preschool II class: Schedule of daily events

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**Andrew's Experiences with Verbal Language at the Preschool**

There was sharp contrast between Andrew's verbal language experiences at home and those of the Preschool. While the mode of communication in Andrew's home was predominantly spoken English, teacher-mediated activities in Anna's classroom were consistently presented in simultaneous speech and sign. Anna maintained a total communication
environment for her students; when her students participated in activities with
the children in the three oral/aural classrooms, Anna interpreted for them.
Both Joan, the speech therapist, and Rhonda, the librarian, used
simultaneous communication with the children. Even within this consistent
total communication environment, however, Andrew’s experiences with
verbal language were far from uniform. Sign language does not code
spoken English, so it is impossible to sign every word that is spoken.
Consequently, what the teachers said and what they actually signed was
different. Furthermore, Andrew’s teachers’ abilities to speak and sign
simultaneously differed greatly. Their knowledge of sign language
vocabulary also varied. Their use of signs varied as well. Table 24 details
Andrew’s experiences with verbal language in this total communication
environment.
Table 24. Andrew's experiences with verbal language at the Preschool

<table>
<thead>
<tr>
<th>Anna:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>• focused on language acquisition and development (i.e., vocabulary)</td>
<td></td>
</tr>
<tr>
<td>• extended Andrew's vocabulary</td>
<td></td>
</tr>
<tr>
<td>• for the most part, spoke and signed in simultaneous communication</td>
<td></td>
</tr>
<tr>
<td>• left out articles, auxiliary, and pronouns during simultaneous communication</td>
<td></td>
</tr>
<tr>
<td>• could not sign every word she spoke</td>
<td></td>
</tr>
<tr>
<td>• spoke in complete sentences</td>
<td></td>
</tr>
<tr>
<td>• invented a sign when a sign didn't exist or she didn't know it (rarely happened)</td>
<td></td>
</tr>
<tr>
<td>• required Andrew and his classmates to use simultaneous communication</td>
<td></td>
</tr>
<tr>
<td>• required that each child work at intelligible speech</td>
<td></td>
</tr>
<tr>
<td>• required Andrew and his classmates to speak in complete sentences during routine interactions (e.g., during snack--&quot;I want juice, please.&quot;)</td>
<td></td>
</tr>
<tr>
<td>• required that Andrew and his classmates take turns leading routine verbal interactions (i.e., &quot;Is it windy outside? Is it rainy? Is it summer?&quot; &quot;Is it winter?&quot;)</td>
<td></td>
</tr>
<tr>
<td>• for the most part, understood Andrew's signed/spoken utterances</td>
<td></td>
</tr>
<tr>
<td>• involved Andrew and his classmates in speechreading/auditory training activities</td>
<td></td>
</tr>
<tr>
<td>Other Adults in the Preschool:</td>
<td></td>
</tr>
<tr>
<td>• were unable to sign every word they spoke</td>
<td></td>
</tr>
<tr>
<td>• used simultaneous communication</td>
<td></td>
</tr>
<tr>
<td>• spoke using incomplete sentences</td>
<td></td>
</tr>
<tr>
<td>• invented signs when a sign didn't exist or they didn't know it</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Andrew:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• was exposed to different signs for the same word in different contexts</td>
<td></td>
</tr>
<tr>
<td>• received radio interference through his Phonic Ears</td>
<td></td>
</tr>
</tbody>
</table>

**Diversity and variability in sign language.** Sign language is an inadequate medium for translating spoken English. It does not have a one-to-one correspondence with oral language and regardless of one's skill at signing, it is impossible to sign every word that is spoken and maintain a natural flow of speech. Although Andrew's experiences with verbal language at the Preschool were consistently presented in both speech and sign, what he actually 'saw' receptively and what his teachers said was often quite different. The following vignettes are illustrative. The words that the teachers signed are underlined. When what was signed was not actually spoken, the
word is placed in parentheses, i.e., when a teacher said "sleep" but signed (bed).

Excerpt from Videotape Analysis (AVT #5, #407), 1/31/91
Anna is telling the story of Curly the Caterpillar.
Anna: You'll need to sit the correct way, please, and I think that you need to move over a little. Move over please. Thank you. This is a story about a Caterpillar named Curly. What color is Curly? [Andrew: orange] Yeah (yes). Thank you for paying attention. There he is (points to the picture she is passing in front of them). Curly the Caterpillar. Curly the Caterpillar lived in a very big house. And Curly's house is many, many different colors. His house is pink and purple, and yellow and red and green and orange and blue. Wow. Many different colors. But Curly Caterpillar had a problem. He was very sad because he was cold inside his house. He was very cold and he cried. Very cold inside his house.
Signed= underlined
Signed but not spoken=(_)

Excerpt from Videotape Analysis (AVT 5, #3091), 1/31/91
Joan, the speech therapist, is leading a group speech lesson. The children are making pages for a speech book to use over the summer with their parents. Joan begins the lesson by having the children practice a page they had previously drawn. Then, she shows each of their pages, making comments on the drawings.
Joan: (holds up Andrew's page) Let's start together and be really loud. Ready. (Children practice vocalizing /ba/.) I heard Andrew and Leona, but not Marta, not Carita, and not Kyle. Let's try it again all of us together. Listen. (They try again). And then we stop. Good. Let's do some (see) more. (holding up Marta's page). Oh, this is a pretty one. Whose is this? Whose is that? (holding up Leona's). Oh, that's pretty.
Leona. That's yours. And one more. (holding up Carita's) Wow. Look at that. Whose is that? Carita, yes. Look at her name. She wrote it five times. Carita, Carita, Carita, Carita, Carita. Wow, that's wonderful. Well, these are really wonderful. (Puts them away). We're gonna make a new picture for our book. Do you remember a monkey at the zoo? I have a monkey. (holds up a toy monkey). He has ears and a long tail (pointing to the tail). And here are my monkeys. (shows them her drawing) I want you to listen. He is really a tall monkey.

Signed= underlined
Signed but not spoken=(_ )

Excerpt from Videotape Analysis (VT 1, #2600), 11/14/90
Rhonda is reading Nightmare in my Closet (Mayer).
Rhonda: We have a different book. The name of the story is, There's a Nightmare in my Closet (signs 'shut the door'). There used to be (uses ASL sign) a nightmare in my (bed) closet. Before, not now. There's nothing now. Before I went to sleep, I always closed the door. Before, he went to sleep (bed), closed the door. I was afraid to stop and turn around and look. Not gonna turn around. No! Afraid. I'm afraid. Go get in bed, sleep. When I was in bed, I would peek, sometimes. One night, I decided to get rid of that (finished) nightmare once (time) and for all (finished). Finished. No more. (showing the picture) He has a gun and a helmet. He is ready. Waiting for the monster. (reading again) As soon as I turned off the light, I heard the monster nightmare creeping towards me. Look at his face. He's afraid. He wants to be strong. He's listening. Quickly, I turned on the light and I caught (heard) the nightmare sitting at the end of my bed.
Signed= underlined
Signed but not spoken=(_ )

Not only is it impossible to truly sign and speak simultaneously, very few individuals know the sign for every word they speak. In fact, there is not a
sign for every word of spoken English. Although Anna was an adept signer, on rare occasions she did not know the sign for a word she was using. In these instances, she would create a sign to continue her lesson.

Excerpt from Videotape Analysis (AVT 7, #2630), 2/19/91
(Language Arts Unit on Numbers: Counting to Ten.)
Anna is reading a counting book. The page she is on has a picture of nine beads. She reads the text: "Nine beads..." Then, as if talking to herself she says, "I don't know the sign for that, so we'll invent it." She invents a sign with high iconicity and continues reading.

Rhonda, the school librarian, also invented signs as she read to the children or led them in songs. These invented signs did not remain constant, however, and the songs she was teaching the children were presented differently from one week to the next.

Excerpt from Videotape Analysis (AVT 3, #4790), 12/14/90
Rhonda is teaching the children the song "Three Blind Mice." Today as Rhonda sang the song, it seemed to me that she used different signs than she had used last week. When I reviewed the 12/7/90 tape, I saw that the words "carving knife" and "cut off their tails" were signed very differently from today's rendition.
PN: How can we avoid this? Sign language is so inadequate for mapping spoken English. We'll never get over this inconsistency.

It was not uncommon for Andrew to experience inconsistency in sign language. During one of my visits at the Preschool, I walked into Andrew's classroom as Anna was reading Cookie's Week (Ward), a picture book I had read to Andrew and Bradley during my first visit in their home. The sign that
Anna was using for Cookie (the cat in the story) was different from the sign name that I had used. Later that day, I asked Anna whether Andrew mentioned my reading the book to him. He had not. I wondered if the inconsistency of our signs affected Andrew’s interpretation of the book.

Throughout the investigation I was aware of the inconsistency in sign language across contexts. Signs that I used with Andrew were sometimes different from the signs that Anna used. Signs that we both used were different from signs that Rhonda used. Signs used at school were different from signs used at home. When I mentioned this to Anna, she suggested that Andrew and his classmates would face this inconsistency all their lives and would probably learn to make sense of it as hearing children understand and learn to change registers in their spoken language.

Excerpt from Teacher Interview, 2/4/91

Anna: I think that they’ll get that all their lives. I see that kids who come back to say ‘hello’ or something sign to me the same way I sign to them. But, I see them with another teacher and they sign to that teacher the way she signs to them.

There was a time here when everybody wanted their signs to be consistent. Everybody wanted to be the same, so they had sign language classes, and everyone tried to learn the same sign for everything. It’s just not that way. When I talk to someone, I talk differently then when I talk with someone else. When Andrew’s mom came in [to observe], he was talking to her [about snow skiing] and he used the sign that she used. But in the same conversation, he turned to me and used a different sign, the sign that I use [for snow skiing].

Not only did Andrew’s interlocutors use different signs, they communicated with Andrew and his classmates in different ways. While Anna and Joan, the speech therapist, always spoke in complete, grammatical
sentences, at times Rhonda, the librarian, used abbreviated utterances when communicating with the children.

Excerpt from Videotape Analysis (AVT 3, #3770)
Rhonda has given the children time to look at books. Leona read a book, and then Andrew asked her for it. She gave it to him. After Andrew finished reading, he put it aside and began reading another book. Leona wanted the book back. She walked over and took it, but this made Andrew mad. He signed "ugly" (no voice) and took the book away from her.
Rhonda tries to settle things:
R: (to Leona) Ask if you can read it. Ask Andrew if you can read. Say, 'Please read it now.' Say, 'Please read.'
Leona doesn't do anything, but rubs her eyes as if to cry.
R: (to Leona) Okay if he reads it now?
Leona shakes her head 'no.'
R: (to Andrew) She says 'no.' Not okay if you take that now.
R to L: You want? (i.e., Do you want that book back?)
Leona shakes her head 'yes.'
R to A: She wants to read it now. Can you give it to her. Let her read it now.

Andrew's teachers also differed in their expectations for Andrew's use of verbal language. While Anna and Joan always required Andrew and his classmates to speak when they signed, Rhonda did not consistently make this demand.

Emphasizing simultaneous communication. Because of her commitment to simultaneous communication, Anna spoke and signed simultaneously, and she required the children to do so. Rarely did she permit the children to sign without speaking when they interacted with her or during teacher-mediated activities.
Excerpt from Videotape Analysis (AVT 1, #1006), 11/12/90
I put the microphone on Andrew today before he got his Phonic Ear on. It got in the way of his straps. As Anna is helping him, he signs "Cheri" but doesn't voice.
Anna: What?
Andrew: Cheri (s)
Anna: What?
Andrew: Cheri (s)
Anna: I can't hear you.
Andrew: Cheri (s/v)
Anna: Oh! Cheri put that on you.

Excerpt from Videotape Analysis (AVT 5, 1766), 1/31/91
The children are at the table coloring. Andrew needs a yellow crayon. He has just told Anna that he doesn't have one.
Anna: I have one.
Andrew started to reach inside Anna's crayon bucket. She grabs his hand and holds it. Andrew realizes that he needs to ask.
Anna: I want yellow, please (s/v)
Anna: Okay (she hands him her bucket).
Anna: Thank you. (v)
Anna: You're welcome.

**Emphasizing speech.** Anna required the children to speak as they signed, and she also required that they try to speak intelligibly. She made it clear that "the message was far more important than the speech," but she required each child to work to his/her individual potential.

Excerpt from Videotape Analysis (AVT 4, #5093), 1/31/91
Andrew is having some difficulty putting on his Phonic Ear. He asks Anna for "help" (s/v), but his articulation is very poor.
Anna: I think you can use better speech.
Anna: I want help, please.
Anna: That's better! (she helps him)
While Anna readily accepted the children's one-, two-, and three-word utterances throughout the school day, there were times when she required the children to speak in complete sentences. This requirement was particularly true of snack time, where Anna required Andrew and his classmates to ask for juice and cookies/crackers/pretzels, etc. The children had to say, "I want _____, please." Often, Anna would ask, "How many do you want?" and require the child to answer and then count the cookies, etc. as she placed them on his/her paper napkin.

**Emphasizing speechreading and use of audition.** Anna engaged the children in activities that required them to make maximum use of their residual hearing and speechreading skills.

Excerpt from Videotape Analysis (AVT 6, #3347), 2/21/91
Anna has just finished the language arts lesson and it is time to use the rest room. To dismiss the children, she engages them in a speechreading and auditory training activity.
Anna: You have to watch me now because I will not sign your name. Watch my mouth. I'm going to use my speech and say your name, and then you go sit on your box.
Anna does not make eye contact with the children as she says their names. When they have identified their name, the children raise their hands. Anna praises them for their hard work.
Anna: Good for you! You knew your name! You can go sit on your box.

**Emphasizing language acquisition.** While Anna emphasized simultaneous communication, use of intelligible speech, speechreading and use of audition, her primary focus was on language acquisition, that is, providing the children opportunities to learn language, "to build up their language base so they have something to draw from."
Throughout the day, Anna introduced and reinforced new lexical items, vocabulary words she wanted the children to comprehend and come to produce. She did not, however, present the words in isolation. Rather, her primary avenue for introducing new vocabulary was through children's picture books and stories, particularly stories about alphabet letters.

Excerpt from Interview, 2/4/91
Anna: I think reading to children is a natural way to teach language. The vocabulary that I want is in those stories. I don't 'teach' the words, they come up in the story. They come up in the activity that we do afterwards. They come up throughout the day, hopefully, in other situations that we set up. ... Even with our "Alphabet Stories," that's as much for language. The goal isn't letters, the children are just interested in letters, so I use letters as a means of showing different words. But it's really the language that I'm after.

Because Anna used children's picture books and stories to teach vocabulary, literacy and literacy-related events permeated the preschool day. As in Elizabeth's class, written language was not necessarily the focus of the activity, but was used in service of the task at hand, in Anna's case, language development. The ways Anna used written language to teach vocabulary will be discussed in the last section of this biography.

Anna emphasized language development throughout the day. She frequently tried to extend the children's vocabulary as she talked with them about everyday affairs of life.

Excerpt from Videotape Analysis (AVT 6, #2906), 2/21/91
Anna has recently started making a list of all the things the children will do during the day. She writes the name of the day on a legal-sized sheet of white paper and then writes what they will
do that day in the order in which it occurs. She writes: Writing, Music, Story, Calendar, Snack, Books, etc. The children participate as she asks, "Then what will we do?"

Today was a very "full" day, and the list was longer than usual. Andrew comments:

Andrew: Many, Many.
Anna: We have many, many things to do today. We are busy. We are very busy (as she says the word 'busy' she signs slowly, leans over a little toward the children, and changes the pitch of her voice, clearly emphasizing the word).

Andrew: (imitating) Busy
Anna: Yes, busy, busy. We have many things to do this morning.

These kinds of verbal language interactions were not uncommon. Anna seemed to consciously focus on both presenting new vocabulary and extending the children's present levels of verbal language knowledge.

**Andrew's Participation in Verbal Language at the Preschool**

At home, Andrew was not consistent in his use of modality: He used speech, speech and sign, sign, and gestures to communicate. In his Preschool II classroom, however, Andrew participated in verbal language interactions in primarily two ways: (1) he used simultaneous communication with adults, and (2) he most often signed without voicing when interacting with his classmates. (I did not have opportunity to observe Andrew interacting with oral children at the Preschool.) Table 25 describes the ways in which Andrew participated in and used verbal language at the Preschool.
Table 25. Andrew's participation in verbal language at the Preschool

<table>
<thead>
<tr>
<th>Andrew:</th>
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<tbody>
<tr>
<td>- freely participated in verbal language interactions throughout the school day</td>
<td></td>
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<tr>
<td>- used simultaneous communication when interacting with adults</td>
<td></td>
</tr>
<tr>
<td>- at times, signed without voicing to some adults</td>
<td></td>
</tr>
<tr>
<td>- used signs without voicing when interacting with his classmates</td>
<td></td>
</tr>
<tr>
<td>- at times, used simultaneous communication when interacting with his classmates</td>
<td></td>
</tr>
<tr>
<td>- appeared to understand both his peers' and Anna's communique</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Andrew used verbal language:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- as an avenue for competing with his peers</td>
<td></td>
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<tr>
<td>- to regulate the behavior of others</td>
<td></td>
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<tr>
<td>- to maintain/discontinue relationships</td>
<td></td>
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<tr>
<td>- to share information</td>
<td></td>
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<tr>
<td>- to interact with adults on a personal level</td>
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</table>

During the first month of the investigation, Andrew's communication was primarily simultaneous with all of his interlocutors. As the year progressed, however, he began to interact with his classmates through signs alone. This behavior was inconsistent, however, for at times he would use simultaneous communication with his peers as well as with adults. It is not clear whether or not Andrew had come to understand that the adults in the Preschool could hear his spoken English and his classmates could not. Andrew's actions may have been a response to the expectations of others. Adults in the Preschool expected and required him to use speech; his classmates did not.

Whether he spoke and signed or signed without speaking, Andrew was an active participant in verbal language interactions at the Preschool. He communicated freely with both adults and children. He asked and answered questions, and he shared information about himself, particularly during story time. Andrew and his classmates had a common mode of
communication, and they interacted with one another in a variety of ways throughout the preschool day. The following vignette details a conversation between Andrew and Rhonda, the school librarian. Conversations of this nature were not uncommon for Andrew. He seemed to enjoy conversing with both adults and children.

Excerpt from Videotape Analysis (AVT 3, #5033), 12/14/90

Rhonda notices that Andrew's tooth is missing:
R: Your tooth fell out.
A: Tooth, money.
R: Wow!
R: You didn't cut it.
A: Yes.
R: Your Mom cut it?
A: Dad. Mom no. Dad.
R: Your Dad cut it.
A: Slow, cut.
R: Ouch! Did it hurt?
A: No.
R: No? Now tonight, you gonna put it under your pillow?
R: Money? How much?
A: One
R: One dollar. What are you going to buy with your dollar?

At this point, Leona and Carita interrupt the interaction.

About midway through the investigation, Andrew, Leona, and Carita began to use verbal language in a competitive way. They kept track of who had the highest number of correct responses to Anna's questions or who contributed the most. Each time a child responded in such a way as to warrant Anna's praise, the children counted this response as a "point." These competitive interactions primarily took place when Anna's eyes were turned away from the group.
Excerpt from Videotape Analysis (AVT 7, #4760), 2/20/91
Anna has just finished the calendar activity and now she is ready to make a list of all the things the children will do during the day. She points to the top of the paper and asks:
Anna: What do I write here?
Carita: Wednesday
Andrew: 'Thursday
Anna shakes her head 'yes' to Carita and begins to write 'Wednesday.' As she writes, the children sign:
Carita: (to Andrew) Yes (i.e., Anna said 'yes' to me or I got one right).
Andrew: (to Carita) Three you. Six me. (i.e., You have three correct answers, but I have six.)
Anna: What did we do over here? (pointing to the area of the room where they do music and movement).
At the same time, Andrew and Carita both s/v "music."
Anna: Right!
Anna turns to write 'music,' and as she writes, Andrew signs to Carita:
Andrew: Me seven.
Carita: Me, you. (i.e., We both answered correctly.)
Andrew: No, me! (emphatically)

Anna was not unaware of the children's interactions. She knew they were signing, permitted them to do so, and did not reprimand them for not using their voices. She understood that this was peer interaction, and that she was not a part of it. Anna respected the social dynamics constructed by the children in their "talk behind her back." She wanted them to interact and to learn from each other. Anna's attitude contributed to the children's language development, for children learn language by using language. At times while Anna wrote, she would ask me to interpret what the children were saying. We enjoyed the episodes.

Andrew used verbal language at the Preschool in a variety of ways, primarily to regulate the behavior of others, to share information, and to establish, maintain, or discontinue relationships. It was not uncommon for
Andrew to use verbal language in a regulatory way. He reprimanded his peers, told them they were wrong, and tried to control their behavior.

Excerpt from Videotape Analysis (AVT 5, #5375), 1/31/91
During High Scope at the writing table. Leona has just gotten another sheet of paper to write on. Andrew reprimands her.
Andrew: Wrong! Forgot! (he signs very emphatically; he picks up her first sheet and points to the back, gesturing that she must turn the paper over).

Excerpt from Field Notes, 10/22/90
The children are sitting at the writing table. It is time for Leona to put on her Phonic Ear. She needs to walk behind Andrew's chair, but he is pushed back so far that she can't walk between him and the wall.
Leona: Move!
Andrew: (slowly, emphatically) I want please. (i.e., I want you to say 'move please'.)

Throughout the study Andrew and his classmates used verbal language to establish, maintain, or discontinue relationships among themselves. They used one sign in particular to indicate the person with whom they would be friends that day (or, more often, that hour). The sign is often translated "same," and is executed by moving the "y" hand shape from one point to another, indicating that the two objects, items, or persons are "the same." The children consistently used this sign to indicate friendships. One child would be "the same" with another child, indicating that the two of them were friends. The sign was often used to exclude someone, and its use frequently resulted in hurt feelings. Anna had strictly prohibited use of the sign in this fashion, but the children continually used it.
Excerpt from Videotape Analysis (AVT 1, #58), 11/12/90

The children are at the writing table. For some reason, it appears that Andrew and Carita are upset with one another. Andrew is using the "same" sign to hurt her feelings. For the most part, he signs without voicing.
Andrew: (to Carita) Same Leona.
--Two minutes later--
Andrew: (to Carita) Same Leona.
--Four minutes later--
Andrew gets out a red crayon and vocalizes (?). He then s/v "ha, ha, ha red" to Carita (i.e., I have a red crayon). Leona hands Andrew another crayon. They compare to see if both crayons are red. They are. Andrew s/v "same" to Leona then turns to Carita and signs "sorry."
--30 seconds later--
Andrew looks for a blue crayon and when he finds it he s/v "blue, sorry" to Carita. The he signs "same, good" to Leona. Carita looks away.

Andrew often used verbal language to share information with his classmates and particularly with adults. This was a common use of verbal language for all of the children.

Excerpt from Field Notes, 11/9/90

When I came into the room today, Andrew and his classmates were just concluding a surprise party they had given for Becky, an aide who was leaving. Today was her last day on the job. Andrew looked at me and s/v "Have Becky party," (i.e., We had Becky's party, or We had a party for Becky).
---later that morning---
It is 11:01 a.m. and the children are at the table just beginning a worksheet in follow up to their unit. Leona had been absent but walked in the door. Andrew looked at me and s/v "Leona sick no," (i.e., Leona isn't sick).
PN: Whenever a child is absent, the children automatically think he/she is sick.
Summary: Andrew's Verbal Language World

Andrew's verbal language world at home was primarily oral. His mother, Cathy, and younger brother, Bradley, were beginning signers, and although they supported their spoken language with the signs they knew, Andrew also had to rely on speechreading, use of audition, and context to make sense of their communication with him. Because Cathy and Bradley did not know or understand all of the signs Andrew used, he often gestured and/or pantomimed as he signed. He spoke without signing, and he signed without speaking. He demonstrated no consistent mode of communication in the home.

While the mode of communication in Andrew's home was predominantly spoken English, teacher-mediated activities in Anna's classroom were consistently presented in simultaneous speech and sign. Anna was a proficient signer and provided constant opportunities for meaningful interaction. Even within this total communication environment, however, Andrew experienced diversity in verbal language. Adults' knowledge and use of signs varied across contexts within the Preschool.

Andrew actively participated in verbal language at the Preschool. He interacted with both adults and peers. He participated through both simultaneous communication and sign language without speech. He used verbal language in a variety of ways as he interacted with others.

The World of Written Language

Andrew's experiences with and participation in written language primarily took three forms: (1) He explored print on his own, (2) he interacted
with his classmates around print, and (3) he interacted with adults around print. Andrew had considerable experiences with books both at home and at the Preschool. The nature of those experiences differed somewhat, reflecting the diversity between his experiences with verbal language at home and at the Preschool. The sections that follow detail Andrew's world of literacy across home and Preschool contexts.

**Written Language in the Home: Reading Books**

From early on, I knew that Cathy was concerned about Andrew's reading development. When she agreed to participate in the research, her only stipulation was that my visits in her home be more than just a time for ascertaining information about Andrew. She wanted information from current research on how she could support Andrew's language and literacy acquisition, particularly his reading development. Cathy stated that she had read various articles about hearing-impaired children which caused her considerable concern because they were "not very encouraging about reading ability."

Believing in the importance of reciprocity in research practice, I agreed to share with Cathy current theoretical and pedagogical thinking. I admitted my own bias toward total communication for all profoundly deaf children and a literature-based approach to reading, and I suggested that the information I would share could not be divorced from my own perspectives.

Although we had talked on the telephone, I met Cathy for the first time at Andrew's I. E. P. meeting at the Preschool. During that session, Cathy again voiced her concern and indicated that she wanted suggestions and
advice. She asked Anna to show her how to read a story to Andrew, and when Anna modeled one way to read, Cathy said, "I can't wait till I get good at this." Cathy asked Anna if it would be appropriate for her (Cathy) to check out from the public library the books that Anna was using in class. Cathy stated that Andrew might then be able to teach her the signs that he was using in school. Anna encouraged Cathy to do this, and told her that each week Andrew would bring home a "For Your Information" note that would list many of the books they would be using in class. Cathy followed through with this idea, and sometimes Andrew brought books to school that his mother had borrowed from the public library.

During my first visit in Andrew's home, and throughout the investigation, Cathy reiterated her concern.

Excerpt from Home Visit #1, 10/24/90
Cathy: Probably the worst thing that I ever heard [was that] reading is something the kids aren't picking up. I really enjoy reading, and I hate for him to not have that benefit.

Excerpt from Home Visit #2, 11/07/90
Cathy: As I told you before, I'm a real firm believer that reading is really important, especially for Andrew. Of all three 'R's,' I think reading is one of the most important. This is a very big concern of mine, because the information you read about hearing-impaired children is not very good.

Excerpt from Home Visit #3, 12/11/90
Cathy: I'd still like Andrew to be able to talk, but reading is the bottom line. I'm more concerned about that, especially since I like to think of him as college-bound.
During my visits, Cathy frequently asked me how to execute certain signs, and we always talked about Andrew's progress and what she could do to support his language and literacy learning. During an early conversation, Cathy asked about teaching Andrew vocabulary words by using flash cards.

Excerpt from Conversation, 10/2/90
Cheri: Well, there's a huge body of research that suggests that talking to children, having extended dialogues with them, is one of the best ways for helping a child learn language. I strongly encourage you to learn sign language and talk with Andrew as much as possible. ... This research also suggests that children who have extended conversations with their parents and peers eventually do better in school when the ways of talking aren't too different. ...

Early in the investigation I sent Cathy a list (see Appendix B) of children's books with an asterisk beside those that had predictable, repetitive language. On two occasions, I brought children's picture books and demonstrated a way to read to Andrew in sign language. We talked about the various approaches to reading to profoundly deaf children. I also gave Cathy a videotape of Anna reading to Andrew and his classmates at school.
Cathy stated that the tape "reinforced how she should read to Andrew."

On my last visit in Andrew's home, Cathy asked for any "last minute" suggestions.

Excerpt from Home Visit, (AVT 9, #3300), 2/27/91
Cathy: Can you help me in some of the things I could be doing?
Cheri: ...I guess my biggest advice is to learn as much sign language as you possibly can. The more signs you know, the better you are going to be able to communicate. You should be able to sit down and have a discussion with Andrew just like you
do with Bradley. ... Look how much Bradley learns just because you're talking to him all the time. You need to be able to talk with Andrew like that. I think one of the keys is communication. ... And keep doing what you're doing with the books. I really feel that is central to his learning. I don't think he can get enough of it. And then, you might want to provide him with writing materials. He is so interested in writing! Get some cheap paper and pencils and just let him write when he wants to ...

Andrew's Experiences with Written Language at Home

Given Cathy's concern, I was not surprised to find that the most frequent literacy event in Andrew's home was reading books. Although Andrew did engage in some writing activities, his primary literacy involvement was with children's picture books. Table 26 summarizes Andrew's experiences with written language at home.

Table 26. Andrew's experiences with written language at home

<table>
<thead>
<tr>
<th>Cathy:</th>
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<tbody>
<tr>
<td><strong>Reading</strong></td>
</tr>
<tr>
<td>• provided Andrew with many books to read</td>
</tr>
<tr>
<td>• provided frequent opportunities for Andrew to read books (approximately five times a week for at least one hour)</td>
</tr>
<tr>
<td>• before changing modalities, read to Andrew by pointing to words and voicing them so he could speechread</td>
</tr>
<tr>
<td>• after changing modalities, read to Andrew by copying the signs in Signed English books</td>
</tr>
<tr>
<td>• had difficulty copying the signs in Signed English books</td>
</tr>
<tr>
<td>• frequently read in front of Andrew, modeling her interest in and the value she placed upon reading</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>• provided Andrew more and more opportunities and materials for writing as the study progressed</td>
</tr>
<tr>
<td>• engaged Andrew in copying activities (i.e., copying her &quot;dot-to-dot&quot; or bold-face models of written words, particularly names)</td>
</tr>
<tr>
<td>• used picture books as a source of information for the boys' writing/drawing</td>
</tr>
<tr>
<td>• used written language to communicate concepts to Andrew</td>
</tr>
<tr>
<td>• using written language, she asked the researcher to explain concepts to Andrew (i.e., how to play T-ball)</td>
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</tbody>
</table>
**Reading events.** Cathy provided Andrew with many books to read. She purchased children’s books, and she checked them out from the public library. In October, Andrew brought home a Signed English book from the Preschool library. Cathy was very impressed with the book and decided to purchase some for Andrew’s book collection. She contacted Anna, who sent her an order form from Gallaudet Press. Cathy ordered several Signed English books in multiple copies for Andrew, Bradley, and their cousins.

Excerpt from Home Visit #1, 10/24/90
Cathy: I just ordered five books. I got nursery rhymes and The Three Little Pigs. I was going to order all 14 books, but I thought I should give it a try before I ordered too many. I'll order a bunch of them, provided I like them and I think they are worth it. I thought I’d give it to his cousins for Christmas. They're all little kids his age, and they're interested in communicating with Andrew. I'm so excited. In fact, I just ordered them yesterday. ... Actually, it's half for me too, because it's taught me a lot of new words (i.e., signs).

During the time that Andrew was in the oral/aural placement, Cathy read alphabet books to him by pointing to and voicing the words so that he could speechread. After Andrew was placed in the total communication classroom, Cathy tried to sign the text, a difficult task because of her limited sign language vocabulary. She also found that copying the sign print in Signed English texts was no easy task.

Excerpt from Home Visit #2, 11/07/90
Cathy: Because we'd been oral for such a long time I'd read one of those simple books like "Apple." I would point and he would try to read my lips. Now I try to sign, or make up my own sign. We have the book *Hansel and Gretel* (Saulnier) and tend to read it. It's got the signing in it too. It's very difficult to do.
On my last visit in Andrew's home, Cathy read *Julie Goes to School* (a Signed English book by Collins-Ahlgren) to the boys. She propped the book up on a small, desk-sized music stand so that the boys could see the pictures. Then, as she read the text, she imitated the signs in the book. Because Cathy was a beginning signer, many of the signs in the book were new to her, and she did not execute them properly. During the reading, she asked the boys questions and related events in the story to their own experiences. She often asked Bradley to imitate her signs so that he would learn them.

Excerpt from Home Visit (AVT 9, #417), 2/27/91
Cathy is reading *Julie Goes to School* to the boys. [The words she signed are underlined.]
Ca: (reading the text and signing) *It is a sunny Monday.*
Ca: (to Bradley) Can you do the sign for *Monday* (showing him).
B: *Monday* (imitating).
---later in the book----
Ca: (reading the text and signing) *Put your lunch boxes on the shelf.*
Ca: (to Andrew) *You* take your *lunch,* don't *you?*
Andrew shakes his head 'yes.'
Ca: Does *Bradley* take his *lunch?*
Andrew shakes his head 'no.'
Ca: *No.*
---later in the book---
They have just turned the page to the picture of Little Red Riding Hood.
Ca: What is that? (running her finger along the picture). Did we watch the movie? (Andrew is looking at the picture. She touches Andrew to get his attention). Did we watch the movie (*camera*) of Little Red Riding Hood?
Andrew doesn't respond.
B: Oh yes! (as though he remembers)
Andrew looks at the picture again.
A: *Bite!* (he makes growling noises)
B: We watched it. (i.e., the movie)
Cathy suggested that reading to Andrew had always been difficult, and that she did it infrequently. Instead, she provided Andrew with many opportunities to read books on his own. One hour before bedtime, Cathy would take the boys upstairs and everyone would read.

Excerpt from Home Visit #2, 11/07/90
Cathy: We do books almost five out of seven nights. I don't read to them. I read my book, and they read their own books. They sit and look at their own books. We'll sit there for an hour. They've figured out that as long as they read their books, they don't have to go to bed--which is fine with me. But sometimes they stay up too late. ... If there's anything that we do, it's all of us looking at our books. They know if they're good, they can stay awake.

Cathy infrequently permitted Andrew and Bradley to watch television. She felt that most of the programs were "too violent." The boys played with their cars and trucks, they played outside when the weather permitted, and they read books.

Writing events. While Andrew had many opportunities to explore books at home, in the early days of the investigation he had few experiences with writing. Cathy suggested that Andrew had shown little interest in writing, and she had not encouraged writing activities as she had reading.

Excerpt from Home Visit #2, 11/07/90
Cheri: I know he's into books. What about writing?
Cathy: I'm not so sure about writing. Quite frankly, I don't sit down and do writing every night. I probably don't sit down with him like I should.
Cheri: Does Andrew get materials and write on his own?
Cathy: Probably not. I don't think I have encouraged that at all like I have the reading. Maybe I should more. Do you think it's important? Do you think I should give him pencil and paper, like
before dinner, for him to work on? Do you think that would help any?
Cheri: Yes, because I think reading and writing are very much related. ...

After this conversation, Cathy began to encourage writing activities in the home by providing the boys with opportunities and materials for writing.

By the end of the data collection phase of the research, Cathy had grown particularly interested in Andrew's name writing. She was concerned that his letters were still somewhat unconventional, and she discussed the matter with Anna.

Excerpt from Home Visit (AVT 9, #3175), 2/27/91
Cathy: Anna taught me something that was good. Andrew would spell his name and make his "n" like a "u." I kept correcting that. She said to let him do it. To not worry if it's right or wrong right now. He's interested in writing and you want to encourage the writing. I thought that was good.
Cheri: Yeah. The first picture that I have of his name is so different from the picture that I have now. He's just gotten so much closer to the way it's supposed to be written. And it's not something that she sat down and taught. It's just that constant exposure to it and providing the materials and support.

Andrew's Participation in Written Language at Home

At least one literacy event took place during each of my visits in Andrew's home. Cathy initiated events, Andrew initiated events, and I initiated events (e.g., reading to the boys). Table 27 summarizes the ways in which Andrew participated in these literacy events and those described in Cathy's retrospective accounts.
Table 27. Andrew's participation in written language at home

**Andrew:**

**Reading**
- read independently a great majority of the time
- read by intently studying the pictures, text, and/or the sign print in books
- read by recognizing printed words in books and signing and/or voicing them
- read aloud a Signed English text by locating the signs he knew
- made 'life to text' connections when reading
- answered Cathy's questions about items or events in the books she read to him
- acted out the story line in children's books (i.e., pretended to be the wolf in Little Red Riding Hood)
- learned new signs from Signed English texts
- recognized his name on correspondence addressed to him
- refused to participate in literacy events when he was not inclined to participate

**Writing**
- copied his mother's "dot-to-dot" or bold-face models of words, particularly names
- drew pictures and wrote letters and letter-like shapes
- referred back to the text when drawing in response to a story
- used verbal language as a self-monitoring strategy during writing
- asked adults for help drawing his pictures
- made evaluative comments about Bradley's or Cathy's written work
- used written language as a source of information
- used written language in place of, or in addition to, verbal language messages

Wanting to observe Andrew's book reading behavior at home, I asked Cathy if we could look at books during one of my visits. When I arrived on the evening we scheduled this event, I looked through the living room window and saw Cathy sitting on the couch with Andrew on one side and Bradley on the other. They were reading together. There were books all over the living room floor. My coming interrupted the literacy event, so I asked Cathy to finish reading, but she seemed shy about doing so. She said, "My signs aren't very good."

As Cathy and I began to talk, the boys began to look at their books. Bradley leafed through the pages of the book, often making comments and
asking Cathy questions about the events in the story. Andrew sat quietly, leafing through page by page. He began at the front cover and proceeded to the back page of each book. He did not comment or question but studied the pictures intently from one page to the next.

At one point, Andrew picked up *The Night Before Christmas* (Kannapell) one of the Signed English books Cathy had ordered from Gallaudet Press. He voiced and signed, "December. Wait, wait, wait." I translated for Cathy, and she was surprised that Andrew knew the word 'December.' A little later in the evening, I asked Andrew to read to us. He again picked up *The Night Before Christmas* (Kannapell) and began to look at the sign print in the book. It seemed as if he was looking for signs he knew. He would skim the page, and when he saw a sign he recognized, he would sign it for us. Andrew knew that the sign print carried the message in these books.

After Andrew finished the reading, he moved to the couch and lay there quietly looking at the book. Within a few minutes, he was asleep. Bradley continued to look at the books and to interact with Cathy and me.

Excerpt from Home Visit # 2, 11/07/90

Cathy: It's hard for me because Bradley does so much better than Andrew sitting and looking at books. Bradley will go and sit and look at books for two hours in the other room just to stay up late. Andrew will go to sleep because he's tired. I guess I really push him hard because I think it's so important for him.

On another evening, Andrew and Bradley were writing at the kitchen table when I arrived. Cathy and I sat in the living room and talked while the boys worked. Andrew drew a picture of a bird and brought it into the living
room to show us (see Figure 11). Cathy and I had been talking about the importance of writing and its relationship to reading, and I used the event as an opportunity to model interactions around written language.

Excerpt from Home Visit #2, 11/07/90
Cathy: Here comes Andrew. ... Do you want show?
Andrew shakes his head 'yes.'
Cheri: Let me see.
Andrew: Mom (s/v)
Cheri: Oh, first mom.
He shows the picture to Cathy.
Cathy: Wow! Did you do that?
Then he shows the picture to me.
Cheri: That's beautiful. What is that?
Andrew: Bird (s/v).
Cheri: A bird. Write 'bird.' Write 'bird' on your picture.
Andrew: You (s/v) (hands me his marker)
Cheri: Okay, I'm going to write 'bird.' B-i-r-d (after I write each letter, I fingerspell it). Bird. See? (showing him the word).
Andrew: You, home.
Cheri: I can take it home? Thank you! I love this picture.

Figure 11. Andrew's bird
As Andrew walked back into the kitchen, Cathy said, "I see how writing could help develop reading skills."

Andrew participated in other writing events that either he or Cathy initiated. He traced Cathy's dot-to-dot or bold-face models of words (see Figure 12).

![Figure 12. Andrew traces Cathy's models](image)

Sometimes Andrew wrote letters and letter-like shapes (see Figure 13).

![Figure 13. Andrew's writing at home](image)

Only once during my home visits did Cathy actually read to Andrew and Bradley. Cathy read *Julie Goes to School*, (Collins-Ahlgren) a Signed English book. As Cathy read, Andrew looked at both the pictures in the book and his mother's signs. Once he had decided that he wanted to make a wolf mask (see Excerpt AVT 9, #1003), he seemed less interested and appeared to be anxious for the reading to be over. He frequently tried to turn the page.
before Cathy finished reading the sign print. On one occasion, Andrew turned several pages at a time, and, consequently, they missed a substantial portion of the story. This upset Bradley, but Cathy told him they would go back later. Andrew continued to turn the pages as Cathy read. At one point, Andrew turned the page before Cathy finished reading and she asked "What??" Andrew responded "Me turn." I thought he was telling Cathy that he was turning the pages for her. She understood him to say that he wanted a turn reading.

Excerpt from Videotape Analysis (AVT 9, # 1300), 2/27/91
A: Me turn.
Ca: You wanna read? Why don't you read to me. Your turn. You point to the words and tell me the story (running her finger down the page of the book).
Andrew vocalized three times, and then signed and voiced three words I didn't understand.
Ca: That's good. (she claps for him) Tell me more.
Andrew turns the page and Bradley insists that it is his turn to read.
Ca: Okay. Andrew, let Bradley tell the story.
B: (looking at the pictures) Do you...
Ca: You have to sign some.
B: ...want snack?
Ca: Good. Now what's 'snack?' Snack (she gestures eating). We do 'eat.' Eat. What eat?
Cathy turns the page.
A: Bus, home (ws).
Ca: (reading and signing) It's time to go home. Take your wolf mask home.

As soon as the reading was over, Bradley wanted to reread the story, and when he picked up the book and turned to the front cover, Andrew protested loudly. "No Bradley! No. Mask, mask, mask, wolf mask, write."
Bradley ignored him and continued to open the book. Andrew immediately turned to Cathy and asked for some paper.

Excerpt from Home Visit (AVT 9, 1370), 2/27/91
A: Paper, please (s/v).
Ca: School what? (thinking that his sign for "paper" was "school")
A: Paper (s/v, louder).
Ca: School, what? (gesturing "what?")
A: Wolf, write (s/v).
Ca: Mask? (actually signs "wolf") You make mask (fingerspells a-t) school?
A: No, Mom. Here (s/v, emphatically).
Ca: Here? Oh! (finally understanding). You wanna do a mask here!
Okay.

Cathy gave each of the boys a file folder and some crayons to draw a mask. She opened the book and turned to the page where the children in the story were drawing wolf masks. Andrew looked at the picture but seemed unsure about how to draw, and he asked Cathy to help him. Cathy drew the outline of a wolf's face, but Andrew was not pleased with her work.

Excerpt from Home Visit (AVT 9, #1392), 2/27/91
A: Help, please, wolf.
Ca: I'll try to draw that one, okay? (she points to a picture of the wolf).
Cathy draws the outline of the wolf's face.
A: Wrong! (to Cathy about her drawing).
He gets another file folder and again asks for her help.
A: Help, please.
Cathy tries again and Andrew seems pleased with this rendition.

Andrew also evaluated Bradley's work. As Bradley drew his wolf's face, Andrew leaned over, looked at the drawing, and told Bradley it was "Wrong."
Furthermore, Andrew critiqued his own work. After he had drawn the wolf's
eyes, he stopped, looked at his work and signed "wrong" to himself. He picked up a different crayon and traced over the eye. Andrew was using verbal language as a self-monitoring strategy to direct and/or monitor his writing.

When Andrew had finished his mask, he asked Cathy to cut it out. As she did so, Andrew began to talk about himself as the wolf.

Excerpt from Home Visit (AVT 9, #2289), 2/27/91
A: Big wolf.
Andrew beings to pantomime how scary he will be. He reaches out and grabs Cathy.
A: Closet.
He makes gruesome noises as a wolf might. He pantomimes shutting Cathy in the closet.
A: Wolf, bed.

If seemed as if Andrew was telling Cathy that she was the grandmother and he, the "big wolf," had locked her in the closet then crawled into her bed.

When Cathy put a string on Andrew's mask and tied it around his face, Andrew signed and voiced: "Wolf me. Closet stay! (growls like a wolf)." Andrew was clearly responding to Little Red Riding Hood, reenacting a story he had read in the book, seen in a movie, and heard at the Preschool. Although I did not have opportunity to see Andrew responding to other books in his home as he had done in this instance, there were numerous examples of similar response to stories at the Preschool.

**Written Language in Preschool II**

This final portion of Andrew's biography details the ways in which he experienced, participated in, and used literacy at the Preschool. As in the
previous sections, this portion is divided into subsections detailing Andrew's experiences with and his participation in and uses of literacy. At the end of each subsection, one scheduled event is used as a focal context for an in-depth exploration of literacy events at the Preschool.

**Andrew's Experiences with Written Language at the Preschool**

Anna often used written language within the activities she designed to foster the children's language acquisition and vocabulary development. Consequently, literacy permeated Andrew's preschool day as it was embedded within verbal language events. As well, there were numerous occasions where literacy found its way into both teacher-mediated and child-initiated events, as the following excerpts demonstrate.

**Excerpt from Field Notes, 10/22/90**

(Calendar activity) Leona is not paying attention, and Anna has already spoken to her several times. Anna reprimands again, using written language as an authority: "I think I have asked you many times to pay attention today. (Leona is looking around to see who Anna is talking to.) You Leona, you! I asked you many times to pay attention. If you do not pay attention, you will have to go sit on your box, because our rules say 'pay attention.' (Anna walks over to the rules chart and points to this rule.)"

**Excerpt from Field Notes, 10/30/90**

It is time for the children to line up to use the rest room. Anna tells them that she is going to fingerspell their names and that they have to pay close attention. Anna spells Marta's name first. Marta recognizes it right away and raises her hand. Anna praises her: 
A: You were paying attention! Good for you! Marta gets up, walks over to the rules chart, runs her finger along the rule that says 'Pay attention,' and then she points to herself.
A: Yes, you were paying attention! Good girl.
Table 28 details the variety of ways in which Andrew and his classmates experienced written language at the Preschool.

Table 28. Andrew’s experiences with written language at the Preschool

<table>
<thead>
<tr>
<th>Anna:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reading</strong></td>
</tr>
<tr>
<td>• revised text when reading aloud</td>
</tr>
<tr>
<td>• extended the text when reading aloud</td>
</tr>
<tr>
<td>• read to children several times a day to provide exposure to language and new lexical items and to foster an appreciation for reading</td>
</tr>
<tr>
<td>• drew the children’s attention to pictures to help them make sense of print</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
</tr>
<tr>
<td>• provided opportunities for the children to explore print independently and socially at the writing table</td>
</tr>
<tr>
<td>• encouraged the children to copy from written models</td>
</tr>
<tr>
<td><strong>Anna’s strategies</strong></td>
</tr>
<tr>
<td>• modeled one-to-one correspondence when using written language</td>
</tr>
<tr>
<td>• emphasized left to right directionality when using written language</td>
</tr>
<tr>
<td>• focused the children’s attention on individual letters and/or words</td>
</tr>
<tr>
<td>• taught concepts about print</td>
</tr>
<tr>
<td>• encouraged interaction around print</td>
</tr>
<tr>
<td>• made “life to text, “text to life, and “text to text” connections with written language</td>
</tr>
<tr>
<td>• linked the children’s present literacy knowledge to concepts they were learning</td>
</tr>
<tr>
<td>• scaffolded the children’s learning</td>
</tr>
<tr>
<td>• filled her classroom with print</td>
</tr>
<tr>
<td>• drew the children’s attention to print</td>
</tr>
</tbody>
</table>

| Anna used written language: |
| • to teach language/extend vocabulary |
| • to organize the children’s responsibilities |
| • to assist in learning new information/concepts/skills |
| • to document what was learned/experienced |
| • to organize the day’s/week’s/month’s activities |
| • to convey information |
| • to establish/maintain relationships |
| • to prevent arguments |
| • to show ownership |
| • to communicate with parents |
| • as a label |
| • as an authority |
| • as a model or guide |

| Other adults in the Preschool: |
| • read the text as it was written and added clarifying remarks during read alouds |
| • used written language to terminate activities |
It was not Anna's objective to teach reading or writing, but every teacher-mediated event that I observed involved some form of written language. The sections that follow describe the ways in which Anna used literacy within her Preschool II classroom.

**Free-choice writing time.** When the children came into the room each morning, they knew to put their book bags away, use the rest room, and go directly to the writing table. For approximately 30 minutes, while Anna took attendance, helped the children with their Phonic Ears, and took care of written correspondence to the children's parents, Andrew and his classmates worked at the writing table. Occasionally, Anna provided the children with a mimeographed sheet to complete or color, but usually she provided blank pieces of drawing paper and crayons and encouraged the children to write. The events of free-choice writing time will not be discussed here as I have explored them in the focal context detailing Andrew's participation in written language.

**Music and movement.** The music and movement activity was primarily an exercise in auditory training. Written language was embedded within this activity on the album labels of the records Anna played and in the form of X's and O's on bean bags that Anna often had the children toss as they moved with the music.

**Story and calendar.** After music and movement, the children would sit in a semicircle around Anna in front of a large room divider. On the room divider was a large calendar and a weather chart. The activity began with a story. Most of the time, Anna would read a children's picture book. The stories often coincided with the thematic unit for that week. Toward the end of
the data collection period of the investigation, Anna began to tell the children "Alphabet Stories" about letters of the alphabet, e.g., BB Bunny, Curly the Caterpillar, Ditto the Dog, etc. The children had demonstrated a keen interest in alphabet letters, and Anna decided to build upon that interest in her morning story (see Excerpt from Interview, 2/4/91, p. ).

When Anna used these stories, she directed the children's attention to words that began with the letter they were "studying." When she told the story of BB Bunny she introduced the words bike, bag, butterfly, and baseball bat. During Ditto the Dog, Anna focused on the words doll, donut, domino, dig, and dinosaur. After she told the story, Anna directed the children's attention to the chalkboard where she had printed the words and drawn a small picture. Each child took a turn identifying the words in print. These activities were clearly literacy-oriented, and although Anna's primary objective was to build vocabulary, the children were learning to recognize the words in print.

The calendar activity followed the morning story. Anna would direct the children's attention to the calendar and ask them to identify the day of the week. After someone had successfully identified the day, Anna would ask about "the number."

Excerpt from Field Notes, 10/30/90

Anna: What is the number today?
Andrew: Seven
Anna: No, not seven.
Andrew: Twelve
Anna: No, it's not twelve.
Andrew: Twenty-five!
Anna shakes her head 'no.'
Andrew looks at the calendar and sees that the number 25 is already on the calendar.
Andrew: Twenty-five is finished.
Anna: Yes, 25 is finished. Today is number 30.

After Anna wrote the date on the calendar, she talked with the children about what they would do that day or later in the week, just as Elizabeth did with the Preschool I children. Often the children would talk about upcoming events, and Anna would point to the date on which the event would take place.

Excerpt from Field Notes, 10/22/90
Anna has just written the date on the calendar. She comments: "Look, on Wednesday (pointing to the print) we will go to the pumpkin farm and on Thursday (pointing to the print) is Kyle’s birthday!"

Excerpt from Videotape Analysis (AVT 4, #5637), 1/31/91
Anna: Today is the last day of January. Tomorrow will be February.
Leona: Valentine.
Anna: Yes, Valentine's Day. We will have a party for Valentine's Day in February.
Leona: Happy birthday to me!
Anna: And your birthday. Wow!

The weather chart followed the calendar activity. This event provided opportunities for the children to use many of the vocabulary items they had learned. Throughout the school year, Anna taught the children vocabulary words that described the weather and the seasons of the year. Each morning, Anna required one child to be "the leader" during verbal interactions around the "weather chart," a large poster that was divided into four sections for each season of the year. In each section, written words described the picture of the season.
The leader would stand at the weather chart and ask his/her classmates about the weather. Pointing to the pictures on the chart, the child would ask, "Windy?" "Rainy?" "Sunny?" "Spring?" "Winter?," etc. All the children, and Anna, would say "yes" or "no" to the leader's questioning. The pictures and print on the weather chart served as a guide for verbal interactions. Looking at the chart, the leader knew what vocabulary words to use for the questioning.

After the first of the year, Anna added one additional activity to the morning routine. She began to make a list of all the things the children would do during that day. She tacked a legal-sized sheet of paper to the bulletin board and wrote the day of the week at the top. Then she would ask the children what they had already done during the morning and what they would be doing for the remainder of the day. The children contributed as she wrote, i.e., Writing, Music, Story, Calendar, Snack, etc. After Anna had written each word, she would run her finger from left to right across the word and say/sign it again for the children. This activity was clearly literacy oriented. Anna was providing the children opportunities to learn to read words that had significance in their daily experience.

**Snack, free-choice reading.** Environmental print, e.g., labels on cookie packages, pretzel bags, juice cans, etc., was available for the children's exploration during snack time. The children were particularly interested in alphabet letters and on occasion would make connections between the initial letters of their names and letters on food labels.
Excerpt from Videotape Analysis (AVT 6, #3539), 2/21/91
Andrew notices the C on the Hi-C juice can. He signs "Carita," and then jumps up and points to the C on the juice can.
Anna: Yes, and the same as Cheri!
Cheri: That's my letter and Carita's. Carita and I share the same letter!

On occasion, Anna made direct references to print. "Today we are having donuts for snack. This is a donut," (writes the word 'donut' on the chalkboard).

In Anna's classroom, print was an authority, a primary way of knowing, and, consequently, there were incidents in which the children tried to make sense of written language when it did not coincide with their present levels of understanding.

Excerpt from Videotape Analysis (AVT 6, 3409) 2/21/91
Andrew had brought the snack for the week. As Anna set the juice can on the table, Andrew s/v "mine," and Anna said, "Yes, you brought the juice for snack." While Anna was getting the paper cups ready, Carita signed to Andrew, "Anna" and pointed to a piece of tape on the juice can where Anna had written her name. Carita was telling Andrew that the juice was Anna's not his. In turn, Andrew s/v "mine," insisting that he had brought the juice. Carita again pointed to Anna's name on the can as if to indicate her disbelief. Andrew s/v "Mine, mine!" and appeared to be angry. Carita signed "Look" and once again pointed to the piece of tape. Anna had not interrupted during this interaction. At this point, Andrew looked at Anna for help. Anna shook her head 'yes' and s/v to Carita, "Honey, Andrew brought the juice, and I wrote my name on it for the refrigerator." Andrew looked at Carita and said "See," smiling with satisfaction, as if to lord it over her.

After the children finished their snack, Anna permitted them to read books in the class library. The class library was purposefully small. Anna
primarily placed books in the library that she had read to the children. She wanted them to revisit these books. She also placed books in the class library that followed her thematic unit or coincided in some way with the children's personal experiences. For example, during October Anna placed books in the library that related to the children's Halloween costumes. Andrew dressed as a football player, Marta was Little Red Riding Hood, and Carita was Cinderella. Consequently, the stories of Little Red Riding Hood and Cinderella and a book about football were added to the class library.

During this free-choice reading time, the children looked at books alone or with a buddy. On several occasions, one child read aloud to another, acting as if he/she were Anna. The children had internalized the read aloud routine.

Excerpt from Videotape Analysis (AVT 7, #5703), 2/20/91
Leona is sitting in a chair, like Anna's, reading The Snowman (Briggs) to Carita who is sitting on the floor. Leona s/v words as she looks at the pictures: "Hat, gloves, coat, snow, sleep, wake up, look, pants, shirt, hat, hat fall, boots, play snow." Leona looks up from her reading and notices that Carita has looked away. Leona taps Carita on the head and signs "You look!"

Free-choice reading time lasted only five to seven minutes, and Anna frequently had to hurry the children to put their books away when it was time for the language arts lesson to begin.

Language arts unit and story. After free-choice reading time, the children would gather once again in front of the calendar for a language arts lesson. The language arts lesson usually revolved around a thematic unit and was a focal activity for introducing new vocabulary. The activities of the
language arts unit will be discussed in detail as the focal context for Andrew's experiences with literacy in his Preschool II classroom.

**Individual speech/auditory therapy, table activity.** Three activities occurred during this event. Joan, the speech therapist, worked with an individual child in one area of the room, Anna worked on auditory training with a child in another area of the room, and the remainder of the children worked at the table with an aide. I primarily observed the table activity during this time frame. Observing individual training sessions tended to make the children nervous.

The table activity typically was related to the language arts lesson Anna had just taught. Most often, the children drew, colored, cut, glued, etc. to complete a worksheet or an art activity. For example, during their unit on zoo animals, Anna read *Sam Who Never Forgets* (Rice) during the language arts lesson. The story was about a zoo keeper who never forgot to feed the animals. The worksheet that followed that lesson required the children to match the animal with the food the zoo keeper had given it (e.g., hay for the elephant). While the worksheets or activities were often directly literacy-related (e.g., gluing pinto beans onto a large uppercase letter B; writing alphabet letters A through D), numerous literacy events took place “unintentionally” during the table activity as the children made sense of written language in their environment.

Excerpt from Videotape Analysis (AVT 2, #3245), 11/28/90
Anna was explaining the table activity to the children before she started auditory training. She needed a red crayon for the activity and couldn't find one in her crayon bucket. The children sit watching her. Finally she says, "I am looking for my red and I don't
have it!" Both Andrew and Marta jump up from their seats and come down to the end of the table to help her look through her bucket. After a quick search, Andrew finds a red crayon and holds it up for Anna to see. Anna comments, "Oh, you're right. Look, it says 'red.' Thanks!"

--later--

It is time to stop. Anna comes over to the table and tells the children to write their names on the back of their paper. Marta is having some difficulty, so Anna gets Marta's name tag and places it on the table for Marta to copy.

Excerpt from Videotape Analysis (AVT 4, #3864), 1/16/91

The aide is absent today, so Anna is sitting with the children at the table. Andrew is searching for his glue, but he can't find it.

Andrew: (to Anna) Don't have glue.

Anna: (hands him a glue bottle). This is glue.

Andrew takes the bottle, looks at it, runs his finger from left to right across the front of the bottle and comments:

Andrew: Name, where? Me forgot.

PN: Andrew knows that the children's glue bottles are supposed to have their names written across the front.

**Group speech.** Group speech was most often a game or game-like activity through which Anna solicited speech from the children. Anna often used "Concentration" type games where the children had to match similar pictures on playing cards, e.g., matching two elephants, two zebras, etc. She also used counting bears, blocks, dominoes, etc. Written language was embedded within the activity on the game boxes and on some of the playing cards.

Toward the end of the investigation, while Anna was working on a thematic unit on counting to ten, she used group speech as a time to reinforce recognizing and saying the numerals 1 through 5. Anna would place a small card on the floor that had a numeral on it. Each child had to identify the numeral and, while counting out loud, place the correct number of
bears, blocks, etc. next to the card. Anna was not only emphasizing speech, she was reinforcing mathematical concepts and literacy knowledge.

**Afternoon story.** When the children came in from outdoor recess, Anna read them a story. Sometimes the story followed Anna’s thematic unit. Other times, it was simply for the children's enjoyment. Literacy was used in this situation to calm the children after their rigorous outdoor activities.

**Rest time.** During rest time, the children lay on their blankets on the floor all around the room. Some of the children actually napped. On occasion, Anna permitted the children to quietly look at books while they rested on their blankets.

**High Scope.** The High Scope room, described in Sue's biography, became a forum for the children's writing endeavors. Although Andrew and his classmates could choose to play in the sandbox, the block area, the quiet area, or the house area, Anna stated that they consistently chose the writing table over the other activities. I made three observations of High Scope time, and during each of these observations Andrew spent the majority, if not all, of his time at the writing table.

**Library.** Andrew and his classmates visited the library twice a week for thirty minutes each. In the library, Rhonda read them stories, taught them songs, and provided opportunities for them to read books independently. On occasion, she provided materials for writing, and at times she permitted the children to play with playdough.

When Rhonda read to the children, she primarily read the text as it was written and then added clarifying remarks. She always terminated the children's visit in the library by giving them a sticker or placing a stamp upon
their hands. This form of print signaled to the children that library time was over and that they had behaved appropriately.

**Focal Context I: The Language Arts Unit and Story**

To explore in depth Andrew's experiences with literacy in Anna's preschool classroom, I reexamined the language arts lesson in a second wave of data analysis. A myriad of uses for written language occurred during this teacher-mediated event. During the language arts lesson, Anna used literacy in service of language acquisition and vocabulary development activities, but she also used written language to directly teach the children concepts about print.

During the course of my investigation, Anna presented language arts lessons around several thematic, one- to two-week units: Fall, Halloween, Zoo Animals, Christmas, Winter, Birds, Emotions, and Counting. The language arts lesson was approximately thirty minutes in length, and its primary purpose was to provide the children opportunities to experience and use language. Anna used print in a variety of ways as she introduced and reinforced specific vocabulary words she wanted the children to learn. Her primary objective, however, was not to teach the children individual lexical items. The language arts lessons were designed to expose the children to natural language interactions.

Anna believed that reading to children was a natural way for them to learn language (see Excerpt from Interview, 2/4/91, p. 198), and almost without exception she used a children's book or story during the language arts lesson. Anna did not read the text as it was written. She looked at the
text then signed/spoke a sentence or two that communicated the message and highlighted the vocabulary words she wanted the children to learn. I asked Anna why she did not read the text verbatim.

Excerpt from Interview, 2/4/91
Anna: I always read in English word order, but I'm not reading the text because the vocabulary is cumbersome. The children don't know what the words mean, or there are idioms that mean nothing to them. So, if I read the text, I would lose them. What I'm trying to gain by reading all these books would be lost, because it would become a boring task for them. That's why I try to drop the parts that I feel are cumbersome. And I know what they understand. I pretty much know what's going to make sense and what's not.

The following are examples of the ways Anna revised the text while reading children's books during the language arts lesson.

Excerpt from Videotape Analysis (AVT 7, #1010), 2/6/91
Language Arts Unit on Emotions. Unit vocabulary items: Angry, sad, happy, tired, upset, etc. Alexander and the Terrible, Horrible, No Good, Very Bad Day. (Viorst)

Text: I went to sleep with gum in my mouth and now there's gum in my hair and when I got out of bed this morning I tripped on the skateboard and by mistake I dropped my sweater in the sink while the water was running and I could tell it was going to be a terrible, horrible, no good, very bad day.
Anna's text: The boy's name is Alexander. Alexander had a very bad day. Alexander went to bed with gum in his mouth. It fell out and got stuck in his hair. He had gum in his hair and he was angry.

Text: At breakfast Anthony found a Corvette Sting Ray car kit in his breakfast cereal box and Nick found a Junior Undercover Agent code ring in his breakfast cereal box but in my breakfast cereal box all I found was breakfast cereal.
Anna's text: In the morning, Alexander went to eat breakfast, and his brother ate all the cereal. There was nothing for Alexander. He was very sad.
Excerpt from Videotape Analysis (AVT 8, #4522), 2/28/91
Unit on Counting from 1 to 10. The Rooster Who Set Out to See the World (Carle).

**Text:** One fine morning, a rooster decided that he wanted to travel. So right then and there, he set out to see the world. He hadn’t walked very far when he began to feel lonely.

**Anna’s text:** One morning the rooster thought, “I want to walk and walk and walk far away.” So he started to walk, but he felt very sad and lonely. He said, “I want a friend to come with me.”

**Text:** Just then, he met two cats. The rooster said to them, “Come along with me to see the world.” The cats liked the idea of a trip very much. “We would love to,” they purred and set off down the road with the rooster.

**Anna’s text:** The rooster saw two cats. He said, “Do you want to come with me and walk far away and see many different things?” So the cats said, “Yes, we want to go with you.” Now the rooster felt happy. He had friends with him.

As Anna read, she often extended the text, and, consequently, the children’s experiences with verbal language.

Excerpt from Videotape Analysis (AVT 5, #4906), 1/31/91
Anna has just finished the Winter unit and is talking now about birds (goes with Winter unit). She also reviews vocabulary items from other seasons of the year. Sleepy Bear (Dabcovich).

**Text:** It’s getting cold.

**Anna’s text:** It’s getting cold outside.

**Text:** Leaves are falling.

**Anna’s text:** The leaves are falling from the trees.

**Text:** Birds are leaving.

**Anna’s text:** The birds are flying away. They are flying away to a place where it gets warm, not cold. When it’s cold--remember we talked about how Round Robin’s friends all flew away. These birds are flying away. They don’t like the cold because they can’t get the food.
This last excerpt also demonstrates how Anna made connections between the books she had read to the children. Anna referred to the information in previously read stories to help the children understand the text she was presently reading or the concepts involved in the thematic unit.

Excerpt from Videotape Analysis (AVT 5, #3656), 1/31/91 (Unit on Birds) Anna has just finished reading Are You My Mother? (Eastman), a story about a little bird who is lost and is trying to find its mother. Now Anna is showing the children pictures of birds and their eggs. Anna holds up a picture of a robin.
Anna: What is this?
The children do not answer.
Anna leans over and gets the book Round Robin (Kent) off of her desk.
Anna: Do you remember this story? This bird (in the picture) and Round Robin are the same. They’re the same. Do you remember what he eats?
Andrew: Seeds.
Anna: Yes! I have some seeds here for you to look at. These are seeds. Seeds.
Anna shows the children the seeds, and then opens the book again to show them the picture of Round Robin eating seeds.

Anna encouraged verbal interaction during the read alouds. Through her actions, she demonstrated to the children that they were free to respond to the story she was reading. Anna looked at the text, laid the book face down on her lap, signed/spoke a rendition of the text, then held the book up for the children to see the pictures. She would lean forward and pass the double page in front of each child so he/she could get a close up view. The children were free to make comments, share personal experiences, etc. Often times the children would touch the pictures as Anna held the book near.
Excerpt from Videotape Analysis (AVT 5, #526), 1/31/91
Alphabet story: "Curly the Caterpillar." As Anna tells the story, she holds up a picture of Curly's house.
Anna: Curly's house had many different colors.
Marta: House and Cinderella. Curly house, Cinderella. Carita!
(i.e., Curly's house is like Cinderella's house. Carita was Cinderella for Halloween.)
Anna: You are right! Cinderella's house was like this!

Excerpt from Videotape Analysis (AVT 7, #1753), 2/6/91
Anna is reading Alexander and the ...Terrible Day. (Viorst) She is showing a picture of Alexander at the dentist's office and the dentist has just "hurt his mouth."
Leona: Me before.
Anna: Oh, that happened to you before? I'm sorry.
Carita: Me before.
Anna: That happened to you before too? Were you sad?
Carita shakes her head 'yes.'

As the children responded to the read aloud stories, Anna often extended their comments by providing them with words (i.e., labels) for the concepts they were trying to communicate. For example, on one occasion, after Anna had read a Christmas text to the children, she showed them the back cover of the book. It was filled with pictures of Christmas toys. When Anna pointed to a pair of roller skates, Andrew and Leona both jumped up and pantomimed roller skating. Anna immediately said the word and showed them the sign. On another occasion, Carita pointed to a roll of toilet paper in a picture and began to pantomime pulling toilet paper off of the roll. Anna said "toilet paper," demonstrating the sign. These kinds of interactions took place frequently as Anna permitted the children to interact around the stories she read.
After Anna read the story, she engaged the children in a group activity that provided opportunities for them to use the vocabulary words they were learning and extend their knowledge of the concepts taught during the unit. For example, after Anna read *Alexander and the Terrible, Horrible, No Good, Very Bad Day* (Viorst) she showed the children pictures of people's faces that portrayed various emotions. Anna let the children talk and decide what emotion was depicted. Each child's contribution was accepted and there was no right answer. On several occasions, an individual picture was labeled both sad and angry. Later, during the table activity for this lesson, Anna let the children draw faces (happy faces, sad faces, etc.) and talk about "how the people felt."

Anna's primary objective for the language arts lesson was to support the children's language acquisition and development. Anna used written language as the vehicle for both presenting language and providing the children opportunities to interact using language. Language and literacy were inseparable in Anna's classroom, and as the children attended and responded to the stories Anna told, they made connections between print and their daily lives.

**Andrew's Participation In Written Language at the Preschool**

Andrew's interest in written language was evident in the ways in which he participated in literacy events at the Preschool. Almost without exception, Andrew actively participated in both language and literacy events. He watched attentively as Anna read stories and used print to mediate language events, and he contributed at every opportunity. During self-
initiated events, Andrew worked industriously, constructing his own knowledge of written language, soliciting help from others, and interacting with his peers and/or adults around print. Table 29 summarizes the ways in which Andrew participated in and used written language at the Preschool.

Table 29. Andrew's participation in written language at the Preschool

**Andrew:**

**Reading**
- watched attentively as adults read aloud
- demonstrated an engagement with written language
- actively participated in read alouds, responding and making comments at each opportunity
- asked questions when he did not understand during literacy events
- made "life to text" connections during literacy events
- read books independently when given the opportunity to do so
- revisited favorite books
- pretended to read aloud to classmates and adults
- read aloud to others by signing/voicing words for the pictures in books
- interacted with classmates and adults around print

**Writing**
- evaluated peers' writing
- used verbal language as a self-monitoring strategy during writing
- solicited peers' assistance at the writing table
- wrote the names of his classmates, teacher, and family
- interacted with peers and adults at the writing table

**Andrew used written language:**
- as an authority
- as a substitute for, or in addition to, verbal language messages
- to show his individuality
- to accomplish his own purposes
- to convey information
- to gain information
- to establish/maintain/discontinue relationships
- to show ownership

Andrew seemed to enjoy being read to at the Preschool. He watched attentively as Anna read each page of the book. When Anna
showed him the pictures, he often touched the page, and like his classmates, he responded freely, making connections between the text and his own personal experiences. His participation demonstrated his knowledge and understanding of interactive storying as constructed by Anna during storyreadings. The data corpus was replete with Andrew's responses to written language. The following vignettes are illustrative:

Excerpt from Videotape Analysis (VT 2, #2000), 11/18/90
Anna is reading a book about Christmas. The story is about a dog asking Santa for Christmas presents.
Anna: (reading) Santa Ciaus, if I am a very good dog, can I please have ... (Andrew interrupts her)
Andrew: Ho, Ho, bad, Ho Ho bye. Bad, Ho Ho bye bye. (i.e., if you are bad, Santa will leave and you won't get any presents.)
At the end of the story, a dog receives a pair of roller skates from Santa. When Anna showed Andrew the picture of the dog on his new skates, Andrew responded:
Andrew: Roller skate fall, bump head, hurt. Bike, hurt head, fall, bump head, cry.
P.N.: It appears that the picture reminded Andrew of his own mishaps!

Excerpt from Videotape Analysis (AVT 5, #2824), 1/31/91
Anna is reading the book Are You My Mother?, (Eastman) a story about a little bird who is separated from and trying to find his mother.
Anna: The baby bird saw a kitten. He said, 'Are you my mother?'
But the kitten did not say anything.
Andrew: No, not.
Anna: I must have a mother and I will keep looking for her. A big car came and scared the baby bird. Now the baby bird ran. She saw a boat in the water. She said, "A boat. Are you my mother?"
Andrew: No. Not thinking!
Anna: You're right. The baby bird is not thinking! Oh no. A big machine has picked up the baby bird and is carrying it away!
Andrew: Mother hurry!
Andrew and his classmates were very interested in people's names, and often during the read alouds they would comment on character's names or the initial letters of those names.

Excerpt from Videotape Analysis (AVT 3, #1392), 12/7/90
Anna is ready to read The Snowman (Briggs). She introduces the characters in the story, "Jim," the little boy, and the snowman.
Andrew: Name snowman?
Anna: His only name is the "Snowman." That's his only name.

Excerpt from Videotape Analysis (AVT 7, #2312), 2/19/91
Anna is reading a counting book. She opens to the first double page. On one side is a birthday cake with one candle and on the other side is a picture of a pair of shoes.
Anna: One birthday cake. Two shoes.
Andrew: Anna, name?
Anna: We don't know whose birthday.

When given the opportunity to freely look at books (in the Preschool library or during free-choice reading time), Andrew seldom had to be encouraged to choose a book and read. As in his book reading behaviors at home, Andrew would choose a book and leaf through page by page, closely studying the pictures, often acting as though he had never seen the book before. In many cases, however, Andrew revisited the same books time and again. In the library, Andrew often chose Julie Goes to School, and during free-choice reading time he frequently revisited Little Red Riding Hood (Eisen). For the most part, Andrew did not sign or vocalize when he was reading books independently, however, on occasion he would point to a picture and sign a word.
On several occasions, Andrew read aloud to his classmates or to Rhonda, the librarian.

Excerpt from Field Notes, 11/2/90
(Preschool library) Andrew has chosen Julie Goes to School. Leona sits down in front of him and Andrew acts as if he will read to her. He uses expressions that Anna often uses when she prepares to read to the children:
Andrew begins to read to Leona. His actions are like Anna's. He looks at the page, puts the book down, makes a sign to Leona, picks up the book and shows her the picture. He doesn't appear to be using the sign print.

Excerpt from Videotape Analysis (AVT 1, #3396), 11/14/90
(Preschool library) Marta and Rhonda are sitting on the floor looking at books. Andrew pulls up a chair in front of Rhonda as though he will read to her. He has a children's magazine in his hand.
R: Are you going to read to me?
R: Okay.
A: Party.
Andrew holds the magazine so that Rhonda can see the pictures, and he vocalizes, as if telling her the story or making a comment. Then, he turns the magazine back around so that he can see the pages. He reads:
A: Party birthday you.
Andrew points to a picture of balloons.
A: Color, what you?
R: Balloon? I want blue.
Andrew pretends to give Rhonda a balloon, signing "give."
Leona interrupts the read aloud at this point.

For the most part, while in the library or during free-choice reading time in Anna's classroom, Andrew tended to read books alone. He did, however, interact with his classmates (or an adult) around the books they were
reading. He would point to the pictures and label them for a classmate, ask his friends questions about the book, or act out the events in the story. Many times he would watch as other children interacted around books.

Except from Videotape Analysis (AVT 1, #3257), 11/14/90
(Preschool library.) Leona is looking at a magazine about a birthday party. Andrew walks over and begins to look at the magazine with her.
Andrew: Red, give me okay? (i.e., Give me a red balloon, okay?)
Leona pretends to give him the balloon. Andrew sits down beside her.
Andrew: Party birthday.
Carita has been watching the interaction from across the table. She begins to sing and sign. "Happy birthday to you!" Andrew and Leona laugh.

Andrew interacted with his classmates during writing activities as well as during reading events. On one occasion during High Scope time, Andrew drew a picture of an animal and cut it out. He put it aside telling both Leona and Carita that it was his and that they should not touch it. "Mine, no."
When Carita responded with a sad face, as if to say he had hurt her feelings, Andrew quickly signed, "Sorry, sorry." Then, Andrew picked up the "scrap" paper and taped the pieces back together, leaving one end open. He started playing with the "scrap" rather than the animal he had cut out. He made vocalizations for it, opening and shutting its "mouth" (the open end). He pretended that it was attacking Carita, and he vocalized as the animal attacked. Then, his creature attacked Leona with louder cries and growls. Finally, Andrew walked around the table moving the creature in the air as if it were flying.
On another occasion, Andrew wanted Leona to look at his writing. He repeatedly signed and voiced, "Look, look, look" but to no avail. Leona was busy working and continually ignored his attempts at interaction. Frustrated, Andrew picked up a crayon and scribbled on Leona's paper.

Andrew's participation in writing events was, perhaps, illustrated best by his behaviors during free-choice writing in Anna's room. The section to follow describes the ways Andrew participated in and used written language at the writing table in Anna's classroom.

Focal Context II: Free-choice Writing

Early in the investigation, Andrew primarily drew pictures during free-choice writing time. These pictures were often "abstract" (see Figure 14), and for the most part, Andrew did not label his pictures verbally.

Figure 14. Andrew's picture
As the year progressed, Andrew began to write letters and letter-like shapes that he read as the names of people he knew, particularly his classmates, Anna, and his family (see Figure 15).

Figure 15. Andrew writes names

The children loosely interpreted Anna's directive to write. Often, there was as much verbal interaction as there was physical writing. Early in the investigation, the children often talked about their crayons. They would pick out all the red crayons (red, red violet, redish-blue, etc.), all the blues, the oranges, etc., and compare the shades of color. On occasion, the children, especially Andrew, actually looked at the print on the sides of the crayons to make sure they were shades of the same color. Having many shades (different crayons) of one color was noteworthy and cause for attention from one's classmates.

Free-choice writing time frequently became a forum for sharing personal experiences. As the children worked, they talked about their families, special affairs, and everyday events of their lives.

Excerpt from Videotape Analysis (AVT 2, #994), 11/18/90
Andrew is already at the table when Carita arrives. As Carita sits down, Andrew comments, "Kyle sick, not here."
Excerpt from Videotape Analysis (AVT 4, #1876), 1/14/91
The children have just settled in to write. No one is talking. Then, Marta begins to tap each one on the arm to tell him/her she has gotten a hair cut.

Many times, the children's talk made its way into their writing. When Andrew lost a tooth, Carita drew of picture of his face, snaggletooth and all. When the time approached for Leona's sixth birthday, Andrew and Carita both drew pictures of her birthday cake. Andrew's cake was complete with six candles (see Figure 16).

Excerpt from Videotape Analysis (AVT 4, #5107), 1/31/91
When I arrived today the children were both talking and writing about Leona's upcoming birthday. Andrew has the beginnings of a birthday cake on his paper. I ask him about his work:
Cheri: Andrew, please tell me about your writing. What is that?
Andrew: Birthday, six.
A few minutes later, Leona looks up from her own work at Andrew's cake.
Leona: Birthday me.
A few minutes later, Andrew takes a break to share:
Andrew: Birthday you.
A few minutes go by and Andrew looks over at the cake Carita is drawing. He shakes his head "No," perhaps because Carita has ten candles on her cake.
In turn, Leona and Andrew both drew pictures of birthday cakes for Carita's little sister, Ashley. Although Ashley was only two, Andrew gave her twenty-two candles.

Excerpt from Videotape Analysis (AVT 5, #5422), 1/31/91
Andrew has just finished drawing a birthday cake for Ashley's birthday. He shows it first to Carita, and then walks over to show Anna.
Anna: Beautiful! What did you make?
Andrew: Ashley birthday.
Anna: Oh. How many candles do you have?
Andrew counts up to ten and stops. Anna helps him count the remaining candles.
Anna: Twenty-two! Wow!

When Marta was absent for several days, Andrew and his classmates filled their writing paper with her name. Andrew showed Anna his paper, signing and voicing, "Marta sick."
The children not only talked about their personal lives as they worked, they talked about their writing. They frequently drew attention to their pictures and/or the names they had written, soliciting praise from their peers. Often, they evaluated each other's work, regardless of whether their critiques had been invited. For Andrew and his classmates, the writing table was an early entry into the emerging roles of author and audience.

Excerpt from Videotape Analysis (AVT 3, #500), 12/7/90
Leona tells Carita and Andrew that she is going to write "Mommy." She signs "y" and then tells them that here are 2 "m's."

Excerpt from Videotape Analysis (AVT 3, #811), 12/7/90
Andrew has written Leona's name. He taps her on the arm, and as he runs his finger along the print from left to right, he s/v "Leona." Leona immediately picks up her bucket and points to her name tag signing "Wrong." (i.e., telling Andrew that he didn't write her name correctly.) This angers Andrew who yells and signs "No!" to Leona. Andrew does, however, eventually make the change Leona has suggested.

Andrew often asked Carita for assistance in his writing. He would point to a letter on her paper or sign a name and ask Carita to write it for him. At times Carita willingly assisted. On several occasions, however, she suggested that Andrew copy from a name tag. Sometimes Carita flatly refused to help.

Excerpt from Videotape Analysis (AVT 4, #2309), 1/14/91
Carita is busy writing. Andrew wants to see her paper and he s/v "See." She shows him her work, and he sits back down to write. A few seconds later, Andrew jumps up from his chair and touches a letter on Carita's paper. He hands her his paper and crayon clearly trying to get her to make the letter for him. She refuses by
shaking her head and covering her paper with her arms. Andrew responds vehemently, "Carita Anna! Bad you!" (i.e., I'm going to tell Anna on you! You're bad!) Andrew pretends to call for Anna, signing her name, but not voicing. Then he turns to Carita and signs "Me tattle tail." Carita continues to work as if she isn't bothered by his taunts. Andrew sits for a while, not writing. A few seconds pass, and again he pushes his paper toward her and signs "Help." Carita begins to s/v "Anna, Anna" actually telling on him. Andrew signs "shut up" (or "big mouth"?) and takes his crayon and paper back.

While there was considerable peer interaction at the writing table, the children also talked with Anna about their work. When Anna finished her morning "business," she often joined the children at the table and asked them about their writing. Sometimes she made suggestions or extended their literacy knowledge. These interactions often involved explicit demonstrations or mini-lessons in which Anna taught concepts about print.

Excerpt from Videotape Analysis (AVT 3, #1128), 12/7/90
Andrew has written Marta, Leona, and Carita on his paper. Anna asks him about Kyle's name.
Anna: Where is Kyle's name?
Andrew: Kyle name (he hands Anna the crayon).
Anna: Maybe you can copy it, look (pointing to Kyle's name tag).
Andrew copies Kyle's name, and when he comes to the "e," Anna tells him that the "e" in Kyle's name is the same as the "e" in his name. Andrew quickly jumps up and grabs Leona's bucket to show Anna that "Leona" also has an "e" in her name. Andrew wonders if Carita has an "e" in her name, so he checks her bucket. He shakes his head "no." Then, Anna asks him if her name has an "e". Andrew looks over at the bulletin board where everyone's names are written. He studies her name and then shakes his head and signs "no."

On rare occasions, I joined the children at the writing table. The first time I did so, I sat down in Kyle's chair (who was absent) and announced that
I would write. Andrew told me to use Kyle’s crayons and paper. I began to write my name. Andrew left his chair and stood beside me, watching closely as I wrote my first name. Carita watched from across the table. When I finished writing, I asked Andrew what he thought I had written. Without hesitation he signed and voiced "Cheri." I wrote my last name, and when I explained it, Andrew responded, "Don’t know," indicating that he did not know about last names. I then wrote his first and last name on his paper. He showed it to Leona, proudly signing "My name."

Over the course of the investigation, Andrew learned to write his first name with considerable conventionality. By the end of the data collection period, he was consistently writing all six letters of his name. By February, only two of his letters were still upside down or backward.

Andrew talked with his classmates, he interacted with adults, and he talked to himself at the writing table, that is, he used verbal language as a self-monitoring strategy as he wrote. The data corpus was replete with examples of Andrew and his classmates using verbal language to direct their writing. The following vignettes demonstrate this use of verbal language during the writing process.

Excerpt from Videotape Analysis (AVT 1, #1683), 11/13/90
Andrew is writing letters from left to right across the page. As he makes a letter, he signs "Wrong, forgot."

Excerpt from Videotape Analysis (AVT 7, #3410), 2/29/91
Andrew is coloring vigorously. He signs "purple" without lifting his eyes from his paper. A few seconds later he signs, "Fine, know."
Excerpt from Videotape Analysis (AVT 8, #4199), 2/26/91
Andrew decides to use his glue. He picks up the glue bottle, puts a dab on his paper, then changes his mind, signing "not." He picks up a crayon and signs "one."

In each of these instances, it was clear that Andrew was not attempting to communicate with anyone at the writing table. Most of the time, his eyes never left his paper as he spoke and/or signed. He was using verbal language to direct his writing endeavors.

Andrew was an active participant in all of the interactions at the writing table. He talked with his peers, and he talked with adults. He explored print on his own, and he solicited assistance from others. He drew pictures that represented experiences in his life and the lives of his classmates. At the writing table, Andrew and his peers constructed both individual as well as social knowledge about written language.

**Summary: Andrew's Written Language World**

Literacy in Andrew's home was a family affair. Almost every evening the family would sit together and read. The reading event, however, took place individually as each family member read his/her own books. For the most part, Andrew explored written language on his own, constructing his knowledge of print through his revisitation of books.

In contrast, literacy at the Preschool involved more collaboration and social interaction with both peers and adults. Through their talk, Andrew and his classmates constructed social knowledge about written language.
Literacy permeated Andrew's preschool day but was often used in the service of language acquisition and vocabulary development activities. Literacy events for literacy's sake occurred infrequently.

Andrew's Knowledge and Understanding of Written Language

Throughout my observations in Andrew's home and at the Preschool and through the informal assessments I administered at the Preschool site, Andrew demonstrated considerable understanding of written language. In Table 30, I have delineated the knowledge and understandings Andrew demonstrated by February 28.
Table 30. Andrew's demonstrations of written language knowledge

<table>
<thead>
<tr>
<th><strong>Book-handling knowledge:</strong></th>
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<tbody>
<tr>
<td>began at the front cover and proceeded to the back page when reading</td>
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<tr>
<td>leafed through a book one page at a time</td>
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<table>
<thead>
<tr>
<th><strong>Concepts of print:</strong></th>
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<tbody>
<tr>
<td>distinguished between the top and bottom of a page</td>
</tr>
<tr>
<td>understood that the text carried a message</td>
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<tr>
<td>left to right directionality during writing</td>
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<tr>
<td>return sweep during writing</td>
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</tbody>
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<thead>
<tr>
<th><strong>Sense-making strategies:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>used pictures to make sense of text</td>
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<tr>
<td>returned to pages in the book to reexamine story events</td>
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<table>
<thead>
<tr>
<th><strong>Terminology:</strong></th>
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<td>book</td>
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<td>read</td>
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<td>write</td>
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<table>
<thead>
<tr>
<th><strong>Developmental understandings:</strong></th>
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<tbody>
<tr>
<td>the pictures and the text in books relate and should be congruous</td>
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<tr>
<td>letters of the alphabet name people</td>
</tr>
<tr>
<td>letters of the alphabet can be named</td>
</tr>
<tr>
<td>the sign print in Signed English books carries the message</td>
</tr>
<tr>
<td>written language can be used for correspondence (i.e., to communicate a message to another person)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Reading:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>read by using the pictures and/or the text</td>
</tr>
<tr>
<td>read Signed English books by making sense of the sign print</td>
</tr>
<tr>
<td>read the days of the week (at times Thursday &amp; Saturday gave him trouble)</td>
</tr>
<tr>
<td>consistently read colors words red, blue, green, yellow (at times pink, orange)</td>
</tr>
<tr>
<td>read numerals 1 - 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Writing:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>wrote letters and letter-like shapes for names</td>
</tr>
</tbody>
</table>

While Andrew was an active participant in classroom language and literacy events, freely volunteering answers and responding to texts, writing and talking with his classmates about his work, his behavior during testing situations was considerably different. In response to my questions he would
consistently say, "I don't know." When I persisted my inquisition, Andrew emphatically repeated "I don't know," and on one occasion poignantly said, "Yourself. You know. Tell (inform) me." Even when I asked Andrew to read a book (Harste Task Four), he said "I don't know," a behavior he had not displayed in the classroom or at home. I abandoned my attempts to administer sections of the Diagnostic Survey (e.g., Concepts of Print, Word Text, Text Level Reading) after three very frustrating testing sessions.

As he had done in his preschool classroom, during testing situations (Diagnostic Survey, Letter identification) Andrew read letters of the alphabet as people's names. Unlike Sue, Andrew read A as both Andrew and Anna, B as both Bradley and Becky (the aide), C as both Carita and Cheri, demonstrating his understanding that alphabet letters do not "belong to" individual people. He identified D, J, K, L, and M as family members or friends. Andrew was also able to name alphabet letters A through D. (Anna had taught the names of those letters in her Alphabet Stories.)

When Andrew read books, he studied the pictures to make sense of the story. When he read independently, he infrequently signed/spoke. When he read aloud, however, he signed/voiced words for the pictures. Andrew's mother, Cathy, stated that she had seen Andrew point to words and say/sign them in the evenings when the family had their reading time. I rarely saw Andrew attending to the print when he read books independently or aloud. He seemed to attend only to the pictures. There was one exception to this, however, as the following vignette demonstrates.
Excerpt from Videotape Analysis (AVT 3, #4375), 12/10/90

I am reading *How Many Bugs in a Box?* (Carter) with Andrew. I
draw Andrew's attention to the print and s/v the words "How many
bugs are in the tall box?" Andrew opens the flap and s/v "Three
butterfly. Bugs, no. No Cheri. You." (i.e., You were wrong, Cheri.
These are butterflies, not bugs.)

**PN:** Throughout the text Andrew kept telling me that I was "wrong"
that I "forgot," that these were "Bugs, no."

During the same event, Andrew was clearly perplexed by what seemed to be
another inconsistency between the text and the picture. Two pages later, the
numeral 5, which Andrew could read, indicated that there should be five fish
on the page. There were, however, six fish. Andrew counted three times
trying to make sense of the text. The inconsistency occurred because the text
read, "How many bugs are in the blue box?" Andrew was counting all of the
fish on the page. These episodes demonstrated Andrew's understanding
that the text and the pictures relate to one another and should be congruous.
This understanding provides considerable sense-making strategy for young
readers.

When Andrew independently read Signed English books, he
focused on the pictures to make sense of the story. He realized, however,
that it was necessary to make sense of the sign print to read a Signed
English book aloud. Andrew would look at the sign print and execute the
signs he knew.

For the most part, Andrew read books from the front cover to the last
page and turned the pages one at a time. He frequently went back to
previous pages, however, as if to check his understanding of the story events.
Andrew would read several pages, turn back to a page he had already read,
study the pictures, then proceed with his reading. This "checking strategy" is a powerful tool for young readers attempting to make meaning of unfamiliar texts.

Andrew demonstrated an awareness and attempted to make sense of environmental print both at home and at the Preschool. He clearly recognized many of the items in Phase 1 (item labels) of Harste's Environmental Print Task. In Phase 2 (photocopies of item labels, minus contextual support), and Phase 3 (item names written on white 3 x 5 cards in black ink), however, Andrew responded to the majority of items signing and voicing "I don't know." In these instances, I did not know if Andrew was refusing to participate in the research task or if he truly did not know.

In many of the testing situations, Andrew clearly had the upper hand. When I asked Andrew to draw a picture of himself (Harste Task Three), he refused. Later, in an second attempt, he drew a picture of Bradley. In a third attempt, he first drew a picture of Carita, then, with considerable coaching ("I want your face, not Carita's, yours.") he drew "Face mine," (see Figure 17). The face had little detail. Andrew was clearly disinterested in the evaluative tasks. They had no meaning for him.
When I asked Andrew to "tell me a story" (Harste Task Two) and provided him with toys (carpenter, fireman, post woman, nurse, doctor, tiger, lion, giraffe, dog, mouse) to use as props, he picked up the carpenter and signed/voiced "house" and he picked up the fireman and signed/voiced "fire truck." I wrote his "story" on paper and the next day asked him to read it. When I pointed to the word house, he signed/voiced "truck," and when I pointed to the words fire truck, he signed/voiced "house." Andrew remembered his "story," and he realized that the print held the message, but he could not link the two. Andrew demonstrated that he understood the writing/reading task. The printed words, however, were unfamiliar to him.

When I asked Andrew to "write a story for me" (Harste Task Five, #3), he sat for a few moments, as if to think, then began to write letters and letter-like shapes across his paper. He began at the top left-hand corner of the page, wrote from left to right, and when he had finished one line, he returned to the left edge of the page (demonstrating return sweep) and began the next line. Andrew filled the entire sheet with his story (see Figure 18). I accidently recorded over the videotaped segment of this assessment, and,
consequently, did not have a record of Andrew reading the story he had written.

Figure 18. Andrew writes a story

Andrew demonstrated some understanding of the function of personal correspondence. In December, when he received a Christmas card addressed solely to him, Andrew "got very excited, opened the card, and hugged it." His mother said he did not understand who the card was from and seemed disinterested in its message. When I read a letter that my mother had written to Andrew (Harste Task Five, #1) and told him that she wanted to know what he "liked to play" and that he should write her back, Andrew wrote (from left to right) three lines of text which he read as "baseball, football, play" (see Figure 19).
Figure 19. Andrew's letter to Cheri's mom

Other than his name, Andrew did not write words conventionally. When he wrote his classmates' or Anna's name, however, his letters were very close approximations of conventional forms. On one occasion, Andrew told me that he could write the word "mom" (Diagnostic Survey, Writing Vocabulary Test). He wrote "wow" and then turned his paper upside down and read "mom."

**Biography Summary**

My observations in Andrew's home and in his Preschool II classroom and the results of the informal assessments demonstrated that Andrew knew a great deal about both the form and functions of written language. Except during testing situations, Andrew participated in both reading and writing events at home and at school with enthusiasm, actively seeking to make sense of and communicate through print. Andrew's delayed language development did not prevent him from exploring written language independently or through social interaction with both peers and adults. Rather, like Sue, he demonstrated considerable interest in written language, very frequently choosing literacy and literacy-related events over other available activities.
JOHN

More than likely, John was born deaf. He had an older, profoundly deaf sister, Whitney, and when he was born, his parents, Mary and Henry Lyon, knew there was a possibility that John was also deaf. They had already experienced the identification process with their daughter Whitney, and by two months of age they knew John was hearing-impaired.

When Whitney was four months old, Henry and Mary began to suspect deafness. The story they told was remarkably similar to the stories both the Osbrons and the Tysons had told about Andrew and Sue:

Excerpt from Home Visit #1, 10/17/90

H: Whitney was about four months old. She and her cousin, Beth, who were 19 days apart in age, have been together since day one. They would be out there fiddling around and I'd call them. Beth would turn around and Whitney wouldn't. Mary was out of town one night and Whitney was asleep. I picked up a metal pan and spoon and put it over her head. When she didn't wake up, I knew she was deaf. Then we went through all the doctors, and the pediatricians, and the specialists who said she wasn't deaf.
M: At four months they said she was much too visual to be deaf, come back at eight months. At eight months we took her to the hospital for an auditory brain stem and discovered that she had a profound loss.

Both Whitney and John had a profound, bilateral sensorineural hearing loss.

The Lyons believed that the deafness was hereditary.
The World of Verbal Language

In the two major sections that follow, Verbal Language at Home and Verbal Language at School, I will discuss John's experiences with verbal language in his home, in his kindergarten class at the Preschool, and in his mainstreaming kindergarten classroom.

Verbal Language at Home: A Total Communication Approach

When they learned of Whitney's profound hearing loss, the Lyons immediately called the local state university, and within twenty-four hours made contact with several professionals. Unlike the Tysons and the Osbrons whose initial contacts were with professional audiologists and speech pathologists who advocated the oral/aural option, the Lyons' initial contacts were with professional educators of the deaf who advocated a total communication approach. These educators encouraged Henry and Mary to learn sign language and interact with Whitney through simultaneous speech and sign.

When we were discussing these matters during my first visit in their home, Mary reflected on the vulnerability of parents making these decisions.

Excerpt from Home Visit, #1, 10/17/90

M: [The educator] told me what I wanted to hear. I wanted to communicate with my daughter. She laid it on the line. She told me about deaf culture. She told me about the future, and what we could expect from our child. She also said that if your child had an aptitude for speech, signing with your child would not interfere with that child's ability to speak. ... So we made the decision that sign language was the only way to go with our child because she had such a profound loss. I just accepted that Whitney was going to be a little bit different. I internalized deafness like that. So, we started signing with her at eight months. ... Right then I was motivated. I
made it a point to read almost every single book that was available, both TC and oral points of view. We sought the professionals out. ... When I look back on that, I think if I had had an Oralist who came into my living room and gave me the same pitch that she [i.e., the advocate of total communication] gave me, I wouldn't have signed with Whitney. I was vulnerable. I was sort of impressionable.

I asked Mary if she would choose total communication if she had to make the decision over again, and, reflectively, she responded, "Maybe. That's hard. Our decision to sign was motivated by the incredible desire to communicate with Whitney. We wanted to know what she was thinking about now, not ten years from now." I pursued Mary's response and learned that she and Henry were less than satisfied with the emphasis placed upon speech development in the total communication classrooms Whitney had attended. Mary explained, "We chose total communication, but we didn't choose a manual child. We wanted some speech if she could develop it."

By the time John was born, Mary and Henry were proficient signers, and in a real sense, John experienced and learned language naturally, similar to the language learning of a hearing child or a deaf child of deaf parents. When it was time to enroll him at the Preschool, unlike Sue or Andrew, John was linguistically proficient. He understood the verbal language of his interlocutors, and he used verbal language to communicate. For this reason, and others, the Lyons decided to place John in the oral/aural program at the Preschool.

Having attempted to maintain a total communication environment in their home for approximately five years, the Lyons were well aware of the difficulty of consistently using and requiring simultaneous speech and sign.
They knew from experience that much of the time, simultaneous communication translates into manual communication. They wanted more emphasis on speech and articulation for John than they were giving in their home and that they felt Whitney had experienced in the total communication environment.

Excerpt from Home Visit #1, 10/17/90

H: It's so easy for them (i.e., the children) to just sign it. They think, 'Why bother with speech because people don't understand it anyway.'
M: We know that it's really hard to have a 'true' total communication environment. It's very hard! And if anybody knows, we know, because we live with it everyday. And we know the simplicity of signing with profoundly deaf children versus the talking, the oral--saying to John, 'I can't hear you. What did you say?' etc. ... I'm not a trained speech therapist. So, we decided to give the oral/aural approach a shot. John's signing vocabulary was so well developed, we wanted his speech to 'catch up' with his signing. He was so normal in every way, what did we have to lose? There was nothing to lose, only to gain.

The Lyons wanted John to develop intelligible speech, but they stated that their primary reason for placing him in the oral/aural classroom was their concern for his written language development. Mary stated, "Reading is number one and speech is number two." Henry and Mary had educated themselves about deafness, and they knew research demonstrated that profoundly deaf children typically achieve low levels of literacy. Mary suggested that through conversations with educators of the deaf and speech therapists, and through conferences she and Henry had attended, they had begun to question if the use of sign language was supportive to literacy
development since there was not a one-to-one correspondence between signs and spoken or written language.

Excerpt from Home Visit #1, 10/17/90

M: I can't explain how it happened. It was like a light bulb went off. Someone said to me that one of the reasons deaf people have a hard time learning to read is because sign language is not English based. It hit home. They were right. We've got to get more of it on paper. The bottom line [i.e., the major reason they placed John in the oral class] was the reading skills. That really, to us, was the bottom line. In our experience, a lot of the communication in the TC classroom was 'through-the-air' with little written support.

Mary went on to say that she believed a phonetic approach to reading instruction was appropriate for some profoundly deaf children. For several years, the Lyons had been taking Whitney (and John) to a speech therapist who had, in years past, taught hearing-impaired children in an oral/aural program. The speech therapist used phonics to teach speech and articulation. Whitney had learned many letter/sound correspondences during her speech therapy sessions, and Mary believed this phonetic knowledge had contributed to Whitney's success with reading. Whitney's most recent reading achievement test score (SAT) placed her at a 3.9 grade level, equal to many of her hearing peers.

Excerpt from Home Visit #1, 10/17/90

M: The other thing I learned was that profoundly hearing-impaired children can be taught phonics. I sat in [the speech therapist's] basement for a year and a half watching Whitney learn phonics from the Northampton Charts. I am convinced the reason Whitney reads as well as she does today is because she had a taste of phonics. I've watched her sound out words! I can't help but
believe that somehow, someway that will aid her—for Whitney phonics is working. ... It's not the end-all and be-all, but a little bit of it, combined with a little bit of that—it has taken my two kids a long way. I feel that phonics is more an element of oral education than it is a TC education.

Mary believed that by placing John in an oral/aural classroom with mildly and moderately hearing-impaired children, he was more likely to receive instruction in phonics than he would in a total communication classroom typically composed of severely and profoundly deaf children.

During each of my visits in the Lyon's home we discussed the children's reading and writing development and their speech, but not always in that order. Henry and Mary wanted their children to be academically successful, but they made it clear that intelligible speech was important to them.

Excerpt from Home Visit #1, 10/17/90

M: There were times that I said I wanted it so bad I can taste it! But it was never going to come before everything else. Never.
H: We want our kids to be able to speak. That's important to us.
M: We went to McDonalds last night and we were sitting at the table and I told Whitney to go ask the man for some ice. ... It was as clear as a bell. I was so proud of her.
H: We want our kids to get along in a hearing world, so that they can go to McDonalds and order 'a double whatever.' But we don't want to make them hearing kids, because they never will be.
M: I want my kids to talk, but I'm gonna raise them to feel good about signing. If that is going to be their mode of communication, let's not hide it. Let's do it. What parents have to be convinced of is that a child's intellect is not based on his speech abilities.
John's Experiences with Verbal Language at Home

My visits in the Lyon's home were filled with verbal language. There was talk everywhere. Mary talked, Henry talked, but less frequently, Whitney talked and John talked. Often there were two conversations going on at the same time. Mary and I would be talking, and Henry would sign to one of the children. Or the three of us would be interacting while Whitney and John carried on their own conversation. There was lots of speech and lots of sign. In Table 31 I have described the kinds of experiences John had with verbal language in his home.

Table 31. John's experiences with verbal language at home

<table>
<thead>
<tr>
<th>John's parents:</th>
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<tbody>
<tr>
<td>• used simultaneous communication with John from the day he was born</td>
</tr>
<tr>
<td>• used simultaneous speech and sign when interacting with the children</td>
</tr>
<tr>
<td>• used sign only when interacting with the children</td>
</tr>
<tr>
<td>• used speech only when interacting with the children</td>
</tr>
<tr>
<td>• used speech only when interacting with one another in the children's presence</td>
</tr>
<tr>
<td>• used simultaneous communication when interacting with one another in the children's presence</td>
</tr>
<tr>
<td>• signed without voicing so as not to interfere with audio/ videotaping</td>
</tr>
<tr>
<td>• understood much of John's spoken English</td>
</tr>
<tr>
<td>• understood John's simultaneous communication</td>
</tr>
<tr>
<td>• signed more conscientiously to Whitney than to John</td>
</tr>
<tr>
<td>• emphasized speech</td>
</tr>
<tr>
<td>• emphasized speechreading</td>
</tr>
<tr>
<td>• encouraged their children to speechread</td>
</tr>
<tr>
<td>• engaged their children in extensive conversations</td>
</tr>
<tr>
<td>• sometimes lacked the sign language vocabulary they needed to explain complex concepts</td>
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<table>
<thead>
<tr>
<th>Whitney:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• used simultaneous communication when interacting with her parents in John's presence</td>
</tr>
<tr>
<td>• used sign only when interacting with her parents in John's presence</td>
</tr>
<tr>
<td>• used speech only when interacting with her parents in John's presence</td>
</tr>
<tr>
<td>• used simultaneous communication when interacting with John</td>
</tr>
<tr>
<td>• used sign only when interacting with John</td>
</tr>
</tbody>
</table>
When I asked Mary and Henry to reflect on John's early experiences with verbal language, Mary suggested that she and Henry had signed to him "from the crib, from day one." She explained, however, that they had been more careful to include articles, prepositions, and auxiliary in their signed language with Whitney than they had with John. Interestingly enough, both Mary and Henry stated that John's communique was much more English-like than Whitney's.

Excerpt from Home Visit #3, 12/19/90
M: John's sentence structure is better than Whitney's, and we probably signed more in English to Whitney that we did to him. We were very conscientious of the "the's" and "a's" with Whitney.
H: John does far more English stuff than Whitney ever thought of. We signed the "the's" with Whitney, but she didn't pick it up, but John did.
M: He must have been there watching us talk with Whitney the whole time!

The Lyons believed that constant exposure to verbal language had contributed to John's linguistic competence and academic success. Mary described John as "so normal."

During my first visit in the Lyon's home, I realized that my audiotaping (and, later, videotaping) was affecting the verbal language interactions taking place. When one parent was talking, and John or Whitney needed attention, the other parent would often sign without voicing so as not to interfere with the taping. Or when Mary and John were interacting in simultaneous speech and sign, Henry and Whitney would sign without voicing.
The majority of the time, both Mary and Henry used simultaneous communication when interacting with John and Whitney, and, for the most part, they required the children to speak and sign simultaneously. It was not uncommon for one of the children to begin an interaction and be reminded to "use your voice."

During my visits, Henry, Mary, and I either sat in the family room or in the kitchen. The children were typically in one room or the other, watching television, doing homework, or playing. The three of us did not sign when we were "interviewing." When one of the children would walk into the room, begin attending to our conversation, or, more often, begin an interaction, we would sign. Many times, when the children were in the room with us, Mary would sign, even though the children were not involved in our conversation. We all did this, somewhat inconsistently, however.

Mary and Henry had little difficulty understanding John's simultaneous communication, and they understood much of his speech. When I did not understand what one of the children had signed and/or voiced, Mary or Henry would interpret for me. In this sense, John's experiences with verbal language were very different from Sue's and Andrew's. Sue and Andrew spent a substantial amount of time negotiating meaning with their parents. John's parents normally understood him on the first go around.

Mary and Henry were both proficient signers, but Henry suggested that Mary was more adept than he. The following excerpt provides some insight into Mary's skill with simultaneous communication. The underlined
words are the words she signed. Words in parentheses are words she
signed but did not speak.

Excerpt from Videotape Analysis (JVT 7, #1287), 2/12/91
Mary is trying to engage the children in conversation.
M: **Who had a good day today?** What happened? **(doing)**
John raises his hand.
M: Whitney (making eye contact with her), **John has an interesting story**
to **tell us. What happened?** **Tell us what happened at school.**
J: **Fight with [sign name]**
M: **You fought with who? Who?**
J: **Boy (v/s)**
M: **Which boy?**
J: **____?____ (v)**
M: **Who?**
J: **Brown face. Before.**
M: **Scott?**
M: **Oh, I remember. What was his (doing) name? I can't remember.**
John gives the boy's sign name, "E."
M: **Oh that's right. I can't remember, E, E. Can't remember how to spell it. Why did you fight?**
J: **Because I don't want (John covers his signs so I can't see). (s/v)**
W: **(interpreting for me since John is covering his hands) Be sweetheart girl.**
(to John) **You love Katelyn (s/v).**
C: **Oh, Katelyn at [mainstream kindergarten]. They sit together all the time.**
M: **Katelyn is very very sick. I called her mom today. She stayed home for two days. Throwing up, Fever. Just like Whitney. Same as Whitney. Poor Katelyn.**
J: **Katelyn always says, 'Sit with me. Sit with me.' everyday (v/s).**
M: **She likes you.**
M: **(to Henry) Today, we're driving in the car, I told Whitney that I was in charge of the Valentine's Day party.**
W: **Me, pay attention you? (Am I supposed to pay attention to you?)**
M: **Yeah.**
M: **I said, Whitney, I'm having a hard time deciding what games to play at the party. Do you have any good ideas. Whitney had two wonderful ideas. Do you want to share with Dad?**
W: **I want story (or, I want interpret [?]). First is my idea is straw with balloon. Walk across classroom, then (she puts the balloon
between her legs, pantomiming) pass, pass, pass. And second one is named "Elephant." (to John) Remember Elephant? First, ___?___ play game before. Someone is in middle and all people around. Name, 'Elephant game.' ...
Signed=underlined
Signed but not spoken=(__)

When Whitney interacted with John, she often signed without speaking. When her parents were in the room, however, she typically used simultaneous communication.

While we most often talked about the children and their experiences, on one occasion Mary and Henry reflected on the frustrations they sometimes felt when trying to interact in meaningful ways with their children. Even though all four family members were proficient signers, the modality was, at times, inadequate for communication. The children lacked the vocabulary needed for interaction, and/or the parents lacked the sign language vocabulary for communicating concepts. Mary suggested, that during these times, she and Henry often resorted to pantomime.

Excerpt from Home Visit #2, 11/28/90
M: It gets to you sometimes. Like, you just can't go, "Hey, it's time for dinner." You've got to physically move. Nothing is easy. Sometimes I just want to yell out and be heard.
H: It would be nice to be able to, you know? Like when we were in Florida with Mary's dad last weekend looking at the moon and stuff. I wanted to tell Whitney about stars and the solar system.
M: And you did. I watched you. But it was tough.
H: Yeah.

John's Participation in Verbal Language at Home

John was an active participant in the verbal language interactions of his home. He talked with his parents, and he talked with Whitney. He used
speech, speech and sign, and sign without speech to communicate. Table 32 describes John's participation in verbal language at home.

Table 32. John's participation in verbal language at home

<table>
<thead>
<tr>
<th>John:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• used simultaneous speech and sign to communicate</td>
</tr>
<tr>
<td>• spoke to his parents without signing</td>
</tr>
<tr>
<td>• signed to his parents without speaking</td>
</tr>
<tr>
<td>• spoke to his parents in Whitney's presence without signing</td>
</tr>
<tr>
<td>• signed to Whitney without voicing</td>
</tr>
<tr>
<td>• used simultaneous communication to interact with Whitney</td>
</tr>
<tr>
<td>• used profanity when he was upset</td>
</tr>
</tbody>
</table>

The majority of the time, John used simultaneous communication when interacting with his parents. Through speech and sign he demonstrated considerable linguistic and communicative competence and performance. The following excerpt documents the linguistic complexity of John's verbal language.

Excerpt from Videotape Analysis (JVT 7, #1570), 2/12/91

John wants to play Nintendo. Mary is trying to get him involved in our conversation.
M: You have not seen Cheri in a long time, and this is the last time she is going to video you.
J: Before I saw long time (s/v).
M: All day, every day, all you want to do is talk, talk, talk to mom and dad. Now is your chance (holds her hands out like “here”).
J: I can see long time. I can see Wednesday and Friday. Interpret me (s/v).
Cheri: But not forever. Not for a long time.
J: But when Valentine's finished, other interpret me (s/v).
M: I know. We're going to have to look for one.
I ask John something to the effect of how he would feel without an interpreter.
John shakes his head 'no' with his mouth wide open and his eyes "bugged" as he turns to his mother.

M: (laughing) Now that he knows what he's been missing for half the year, no way.

J: I want stay long, other interpreter. I don't want try (s/v).

M: You can't use your interpreter to talk to the other kids. You have to learn to talk by yourself.

J: No.

M: Why?

J: I am deaf! I not hearing, other (i.e., like the others) (s/v).

M: That doesn't matter. Whitney, tell John he's crazy. Because you (Whitney) talk with your hearing friends all the time. You're deaf, they are hearing. It doesn't matter. Whitney shrugs her shoulders. (I'm not sure what she intended by this action.)

John and Whitney often spoke to their parents without signing in each other's presence. I found this interesting and inquired about it. Henry and Mary suggested that the children could speechread one another. Mary said, "I've watched, and it's truly amazing!" When John interacted with Whitney, he primarily signed without speaking. Often, however, he used simultaneous communication.

During one of my visits when John was playing with his Nintendo, he made an error and used profanity. Mary told him that she was going to wash his mouth out with soap. I asked Mary and Henry how they thought John had learned the swear words, and, with chagrin, Mary responded, "Lipreading!"

Henry elaborated:

Excerpt from Home Visit #3, 12/19/90

H: Mary heard John swear, and she told him she was going to wash his mouth out, and John said he saw her say that word a couple of times!

C: He lipreads you when you swear and picks it up?

M: Now you know.
Henry also stated that John had learned profanity from reading the closed captions on television and “from the next-door neighbor kid.”

Throughout my visits, I was amazed with the quality of interaction in the Lyon home. Parents and children talked freely and frequently. They made sense of one another’s verbal language. They teased, commented, questioned, and argued with one another. Given the constraints and physical limitations of using sign language, the interaction was very natural.

**Verbal Language at School**

Although Sue and Andrew had multiple and varying experiences with verbal language in their instructional settings, John's experiences were, perhaps, the most diverse. John attended two kindergarten classes, one at the Preschool and another near his home, where, for two afternoons a week, John was mainstreamed into a regular kindergarten class with hearing children. Within one school day, it was not uncommon for John to experience verbal language in a variety of forms along a continuum ranging from the spoken English of his hearing peers in the mainstreaming kindergarten classroom to the simultaneous communication of interlocutors at the Preschool who were proficient signers. The following sections describe John's experiences with verbal language at the Preschool and in his mainstreaming kindergarten classroom.
Verbal Language at the Preschool

There were four kindergarten classes at the Preschool, two total communication classes and two oral/aural classes. John had been in oral/aural placements during Preschool I and Preschool II, and when he began his third year at the Preschool, he was placed in Denise Haines' oral/aural kindergarten classroom. Denise had taught in oral/aural placements for three years at the Preschool. Prior to her work there, she had been an itinerant teacher for hearing-impaired children in a small school district in the Southeast.

John's teacher: Denise

I had not observed in Denise's class long before learning that she had received her undergraduate degree in education of the hearing impaired from the same university at which I completed my master's degree in hearing impairment several years later. We had much to talk about and often swapped stories about professors, course work, and experiences at the residential school for the deaf. From the start, I felt comfortable with Denise, and we had an amiable relationship throughout the course of the investigation.

When discussing with me her beliefs about language acquisition and literacy development, Denise suggested that she believed profoundly deaf children learn language through "constant stimulation, ... constantly talking to them." She also placed considerable emphasis on reading to children, hearing or hearing-impaired, stating that children learn language through hearing or seeing (i.e., in sign language) stories.
Denise believed that hearing-impaired children who had no additional handicapping conditions should initially be placed within an oral/aural environment that emphasized speech, speechreading, and maximal use of audition. Denise felt that teaching profoundly deaf children to speak and speechread provided them access to the hearing world. She suggested that since many hearing parents do not learn sign language with any degree of proficiency during the infant years, an initial oral/aural approach was in the young child's best interest.

Excerpt from Interview, 2/5/91
Denise: I might try oral to start with because of the environment that we live in. I look at a lot of these kids that I work with and the area. [This city] is a little bit different because they do have the news interpreted and things like that, but other places don't have that, especially if they live way out. I've worked with students when I worked in [the Southeast] that, maybe, the only times that they signed was with me. Nobody in the community signed. The parents didn't even learn sign language. We have that a lot. So, it's not done at home.

Denise recognized that not all profoundly deaf children would be successful in an oral/aural environment. She suggested that after a year or less in an oral/aural placement at the Preschool, a young child who was not making satisfactory progress in developing language, speech, and speechreading skills should be transitioned into a total communication environment.

Denise believed that spoken or signed language was a prerequisite to written language development. She suggested that young children learn to read when they make associations between verbal language and written
language, when they understand "that what we say is written down." She elaborated: "A hearing child has a language for teaching them reading. They associate the language to print." Denise suggested that profoundly deaf children needed that language "to make them learn."

Denise stated that her primary approach to reading instruction for profoundly deaf children in kindergarten was through the sight word approach with some attention to phonics. In terms of phonics, Denise argued that teaching vowel sounds was ineffective and that primary emphasis should be placed upon initial and final consonants.

Excerpt from Interview, 2/5/91
Denise: My feeling of reading is comprehending. That's my problem with a phonetic base. Kids can sound out any word, but they have no idea what they have read. I do the sight word approach, but I was a phonetic learner myself, so it's hard to put that completely out of the way. The way I do phonics is learning the letters of the alphabet and making them aware of the sounds. I don't worry about vowels because they are so difficult. I don't see how they're going to hear those. I try to work mostly with the consonants. I start with a sight word, and if they can't remember it, I ask them what the letter is, and then the sound. They were having some trouble with number words. There's two and ten. They know I'm doing the number words, but they're guessing at what they are. So I would ask them what the letter is. I would say that they both have "t's," but then I would show them, instead of the middle, I would show them the "n" or the "o."

In terms of writing development, Denise stated that due to their lack of language, profoundly deaf children learn to write (i.e., composition) through a process of modeling the teacher's behavior. She suggested that the children could write independently only after they had been "immersed with the words."

Excerpt from Interview, 2/5/91
Denise: They need to begin with a model, because of the language base. Like the teacher writing on the board. The teacher models a sentence for them. Say that if we finish [our unit on] "Winter," and I wanted the kids to draw a picture and write about winter, then I would do one myself and write, "I like winter. It is cold," so they can see. Then, let them write. I've found that because they think so concretely ... that telling them to write down what they think, they're hesitant. They say, "I don't know." To begin with, they need the teacher showing them, modeling it for them until they can begin to do it on their own. The class I have this year, I could tell by the second half of the year that these kids were ready to start writing. ...They have been immersed with the words. I've been modeling all this time.

Denise stated that she felt her responsibility as a kindergarten teacher was to prepare her students for formal reading and writing instruction in the first grade. She suggested this preparation included the ability to identify and write the letters of the alphabet and comprehend a story that was read aloud. In Table 33, I have summarized Denise's beliefs about and orientations to the verbal language acquisition and literacy development of hearing-impaired children.
Table 33. Denise's beliefs about language and literacy

<table>
<thead>
<tr>
<th>About modality:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>* profoundly deaf children should initially be placed in oral/aural settings</td>
<td></td>
</tr>
<tr>
<td>* after one year or less, children who do not make satisfactory progress in the oral/aural placement should be placed in a total communication environment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>About language:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>* profoundly deaf children learn language through &quot;constant stimulation&quot; (i.e., constantly talking to them)</td>
<td></td>
</tr>
<tr>
<td>* reading to profoundly deaf children provides natural opportunities for language acquisition and development</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>About literacy:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>* spoken (or signed) language is a prerequisite to written language development</td>
<td></td>
</tr>
<tr>
<td>* children learn to read when they make associations between verbal language and written language</td>
<td></td>
</tr>
<tr>
<td>* profoundly deaf children best learn to read through the sight word approach with some attention to phonics</td>
<td></td>
</tr>
<tr>
<td>* profoundly deaf children learn to write through a process of modeling and being &quot;immersed&quot; in words</td>
<td></td>
</tr>
<tr>
<td>* if they are to be prepared for formal literacy instruction, children should be able to identify and write letters of the alphabet and comprehend a story read to them</td>
<td></td>
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</tbody>
</table>

**John's Classmates**

John and Tyler were the only children in Denise's class that were not truly oral/aural children. Tyler's parents were hearing impaired, and he, like John, was a proficient signer. Kelly, Michael, and Steven used spoken English as their primary mode of communication. While Kelly and Michael knew some signs and used them to communicate with John, they did not use sign language when interacting with the other children in their classroom. Steven was mainstreamed into a regular kindergarten class each morning and attended Denise's kindergarten class each afternoon. I never saw Steven use sign language. John actually had five classmates, but one
child's parents preferred that she not be involved in the investigation in any way.

During reading group, Craig, Brittany, and Alyssa from the other oral/aural class joined John and Tyler for reading instruction.

Table 34. John's classmates: Demographic information

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>PTA (unaided)</th>
<th>SAT (aided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelly</td>
<td>7.1</td>
<td>R=92, L=97</td>
<td>55</td>
</tr>
<tr>
<td>Michael</td>
<td>6.11</td>
<td>R=33, L=31</td>
<td>10</td>
</tr>
<tr>
<td>Steven</td>
<td>5.7</td>
<td>R=31, L=29</td>
<td>0</td>
</tr>
<tr>
<td>Tyler</td>
<td>5.3</td>
<td>R=82, L=77</td>
<td>40</td>
</tr>
<tr>
<td>John</td>
<td>5.10</td>
<td>R=99, L=95</td>
<td>50</td>
</tr>
</tbody>
</table>

Reading Group

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>PTA (unaided)</th>
<th>SAT (aided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craig</td>
<td>5.4</td>
<td>R=90, L=80</td>
<td>30</td>
</tr>
<tr>
<td>Brittany</td>
<td>5.7</td>
<td>R=83, L=62</td>
<td>20</td>
</tr>
<tr>
<td>Alyssa</td>
<td>5.5</td>
<td>R=63, L=38</td>
<td>20</td>
</tr>
</tbody>
</table>

PTA=Pure tone average
SAT=Speech awareness threshold

The daily schedule for Denise's kindergarten class included a short calendar activity, formal reading instruction, math instruction, snack/outdoor recess, individual language work, handwriting instruction, lunch, outdoor recess, individual speech and auditory training, language arts, and a science, social studies and/or health unit. I only made three observations during math instruction. The children in the two oral/aural classes were grouped into homogeneous ability groups for both reading and math
instruction, and John's math teacher was not participating in the research. All four kindergarten classes had snack together, and, consequently, I did not collect data during that time. As with Sue and Andrew, only occasional observations were made during lunch and outdoor recess, and very little data were collected during those observations. Each of the scheduled events will be described in some detail in the account of John's experiences with literacy within the Preschool kindergarten class.

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 - 9:15</td>
<td>Attendance/Readiness worksheets</td>
</tr>
<tr>
<td>9:15 - 9:30</td>
<td>Calendar</td>
</tr>
<tr>
<td>9:30 - 10:00</td>
<td>Reading Group</td>
</tr>
<tr>
<td>10:00 - 10:30</td>
<td>Math Group</td>
</tr>
<tr>
<td>10:30 - 11:00</td>
<td>Snack/Outdoor recess</td>
</tr>
<tr>
<td>11:00 - 11:30</td>
<td>Individual language work</td>
</tr>
<tr>
<td>11:30 - 12:00</td>
<td>Handwriting</td>
</tr>
<tr>
<td>12:00 - 12:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:30 - 1:00</td>
<td>Outdoor Recess</td>
</tr>
<tr>
<td>1:00 - 1:15</td>
<td>Rest room</td>
</tr>
<tr>
<td>1:15 - 1:40</td>
<td>Speech/Auditory Training</td>
</tr>
<tr>
<td>1:40 - 2:00</td>
<td>Language arts</td>
</tr>
<tr>
<td>2:00 - 2:50</td>
<td>Unit</td>
</tr>
<tr>
<td>2:50 - 3:00</td>
<td>Dismissal</td>
</tr>
</tbody>
</table>

Denise's kindergarten class: Schedule of daily events

**John's Experiences with Verbal Language at the Preschool**

Unlike Preschool I and II, the kindergarten program was decidedly academic. John and his classmates received formal instruction in reading, math, and handwriting. There was, however, a resolved focus on vocabulary development, speech, speechreading, and use of audition. Throughout the kindergarten day, Denise extended the children's vocabulary, corrected their speech and articulation, and required that the children make maximal use of
their residual hearing. Furthermore, Denise engaged the children in activities that required the exercise of their developing speechreading skills. Table 35 delineates John's experiences with verbal in his kindergarten classroom at the Preschool.

Table 35. John's experiences with verbal language at the Preschool

<table>
<thead>
<tr>
<th>Denise:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• emphasized vocabulary development</td>
</tr>
<tr>
<td>• extended John's vocabulary</td>
</tr>
<tr>
<td>• emphasized lexical items by repeating and saying them louder in the flow of speech</td>
</tr>
<tr>
<td>• emphasized use of audition</td>
</tr>
<tr>
<td>• emphasized speech</td>
</tr>
<tr>
<td>• used natural, informal gestures as she spoke</td>
</tr>
<tr>
<td>• used deliberate gestures as she spoke</td>
</tr>
<tr>
<td>• inadvertently signed as she spoke</td>
</tr>
<tr>
<td>• sometimes spoke louder to John than to the other children</td>
</tr>
<tr>
<td>• had difficulty understanding John's speech</td>
</tr>
<tr>
<td>• interpreted John's speech for his classmates</td>
</tr>
<tr>
<td>• required John and his classmates to speak in complete sentences for selected verbal language interactions (i.e., &quot;I want _____, please.&quot;)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other adults in the Preschool:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• used signs as gestures (i.e., art teacher used the sign for &quot;reindeer&quot; as a hand motion for &quot;mice&quot;)</td>
</tr>
<tr>
<td>• lacked the sign language vocabulary they needed to communicate with John</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>John's classmates:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• had difficulty understanding John's speech</td>
</tr>
<tr>
<td>• attempted to help Denise understand John's speech</td>
</tr>
<tr>
<td>• used signs to communicate with John</td>
</tr>
<tr>
<td>• did not use their voice when communicating with John</td>
</tr>
<tr>
<td>• told the researcher that &quot;John can't hear&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>John:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• was exposed to sign language during kindergarten activities and Preschool functions</td>
</tr>
<tr>
<td>• was able to or had difficulty speechreading and understanding his interlocutors' communique</td>
</tr>
<tr>
<td>• admitted to having difficulty speechreading during read aloud events</td>
</tr>
<tr>
<td>• was placed in situations where it wasn't feasible or was impossible to speechread</td>
</tr>
<tr>
<td>• had to make maximal use of his residual hearing in instances where speechreading was difficult and/or impossible</td>
</tr>
<tr>
<td>• saw the ease with which his classmates interacted with one another and especially with the teacher</td>
</tr>
</tbody>
</table>
Emphasizing speech, speechreading, and use of audition. As Table 35 demonstrates, John experiences with verbal language were, in many ways, similar to Sue's. Like Elizabeth, Denise emphasized speech, speechreading, and maximal use of residual hearing. She used informal gestures, deliberate gestures, and, at times, inadvertently signed as she spoke. She emphasized lexical items in the flow of speech. John was older than Sue, however, and Denise's expectations for his use of speech, speechreading, and audition were greater than the expectations Elizabeth had for Sue. The following vignettes are illustrative:

Excerpt from Videotape Analysis (JVT 3, #3630), 1/15/91
(Calendar). Denise holds up the "Today" word card and calls on John. He says "Today" and she says "Good." He says, "Today is /u/esday/" and she interrupts him.
D: John, wait a minute. I want to hear better speech.
J: Today is /u/esday/.
D: John, there is a t, /t/ (she flicks her index finger in the air [a speech therapy technique] to elicit the /t/) Tuesday.
J: Tuesday.
D: Good.
P:N: I have seen this kind of interaction almost every time I've observed. Denise seems keenly aware of her responsibility as an oral/aural teacher to emphasize speech and articulation. I also think she is cognizant of the value John's parents place on speech.

Excerpt from Field Notes, 10/29/90
(Individual language work). Denise has given the children four Halloween worksheets to complete while she works with individuals. John is busy working, and Denise wants to ask him a question, so she calls his name three times. He doesn't respond, so she asks Kelly to get his attention. Kelly taps John's desk and points to Denise. When John looks at Denise, she says, "I said your name three times (she holds up the sign for three), John, John, John Lyon." John smiles as if he is embarrassed.
There was considerably more interaction in John's classroom than there was in Sue's, and, consequently, more demands placed upon John to speechread and use his residual hearing. Unfortunately for John, the physical arrangement in Denise's classroom was not always conducive to speechreading. The children's desks were arranged in two rows with three children in each row. Except when I asked to move him for videotaping purposes, John's desk was in the back row to the far left. Consequently, he could not speechread the children who sat in front of him. He could not see their faces and had to rely solely on audition. As well, he could only see the sides of the faces of the children who sat beside him. Although John could hear Denise and his peers talking, he needed to be facing them to make sense of their verbal language. John had learned to rely on the use of audition and speechreading, and he needed access to both to understand his interlocutors' communiqué. Even when John was moved to where he could see his classmates' faces, however, it required considerable effort to follow the volley of spoken interaction.

Like Sue, John was continually faced with the enormous task of speechreading adults and peers in situations that were, at best difficult, and at times, impossible. During calendar time, as the children came to the board to tack the word cards "Today," "Tomorrow," and "Yesterday," to the appropriate space on the calendar, they frequently kept their backs to the classmates who were seated. Denise often reminded them to "turn around," but when she did not think to do so, John had no opportunity to speechread. During reading group, Denise frequently wrote on chart paper attached to the chalkboard. As she wrote, she read the words she was writing, a practice
that was supportive to the literacy development of the children who could understand her spoken English, but her back was toward the children, and John could not speechread what she was saying. Sometimes, Denise remembered to reread the words as she faced the children.

The following vignette provides a glimpse into the difficulty of the speechreading task.

Excerpt from Videotape Analysis (JVT 1, #5623), 11/27/90
(Social Studies unit on Pilgrims and Indians.) The children are sitting in a semicircle on the floor in front of Denise. She is showing the children pictures in a story book about Indians. She is reviewing vocabulary items, i.e., canoe, teepee, bow and arrow, etc.
D: I'm going to show you some pictures that have to do with Indians. We've talked about them before. I want to see if you know what they all are. I'm going to show you the picture, but don't say it (puts her finger to her mouth). Look (points to her eye) first, until I ask you, so that everybody can look first. Denise keeps her finger on her mouth as she passes a picture of a teepee in front of each child. She takes her finger down and says, "Okay," signalling them to respond. All the children call out "teepee."
D: Teepee, right. And that's the Indian's house. It's a teepee (emphasizing the word by saying it louder than the other words). Denise puts her finger back on her mouth and shows the next picture, passing it in front of each child. She takes her finger off of her mouth and says, "Okay, what is it?" All the children call out "feather," and Denise praises them. Then, Denise puts her finger back on her mouth and passes around the next picture. As she takes her finger down this time, instead of saying, "Okay, what is it?" she says, "What is it, Tyler?" John calls out "drum" as Tyler begins to answer. (The other children are quiet.)
K: (smiling) Is your name Tyler?
John covers his mouth with his hand and shakes his head 'no.' Even though Denise is teasing him, he seems embarrassed.
Other Adults in the Preschool. In Sue's biography, I described the ways in which the deliberate gestures that accompanied adult speech often had very different meanings in different settings (for example, Rhonda pointed to her eye for "blind" and Elizabeth pointed to her eye for "watch"). This was true in John's experience as well, and John's knowledge of sign language magnified this problem. The deliberate gestures adults used were often actual signs which had their own meaning apart from their use as a gesture.

Excerpt from Field Notes, 10/22/90
The two oral/aural kindergarten classes are at art. (Denise told me that the art teacher worked for the local school district and visited the Preschool once a week. She was not trained to teach hearing-impaired children. The TC children had an interpreter for art, but the oral children did not.)

At the end of the art lesson, the teacher led the children in singing "Three Blind Mice." As she sang, she used hand motions and encouraged the children to sing along. Her hand motion for "mice" was actually the sign for "reindeer." John sang along, copying the hand motions and vocalizing. After the session, I asked John about the song. "What was that song about?" He replied, "Don't know song. About three reindeer."

Because of his mainstreaming experience, John missed both library and High Scope at the Preschool. I was not able, therefore, to collect much data on John's verbal language experiences with other adults in the Preschool. As I was reviewing the data that addressed this topic, I realized that on at least two occasions while administering the informal assessments, I did not know the sign I needed to communicate with John and, consequently, limited my vocabulary to words John knew rather than extending his vocabulary in any meaningful way.
Excerpt from Videotape Analysis (JVT 4, #4360), 1/18/91
Before we started with our testing session, I showed John some Christmas pictures. One picture was of my mother reading to my two year old nephew, Blaine. John wanted to know if Blaine was my "mother's baby." I s/v, "No, he is my mother's ..." I didn't know the sign for "grandson." I said the word to see if he could speechread/understand. He did not, so I changed my sentence. "He is my sister's baby."

Excerpt from Videotape Analysis (JVT 7, #3991), 2/27/91
(Environmental Print Task, Phase 3, words written in black ink on white 3 by 5 cards). I showed John the card that read "12 Taco Shells." He said he didn't know, and he wanted me to explain. I didn't know the signs. I told him that a taco was "like a Mexican sandwich," but that did not suffice. In the end, I promised to bring the picture back to show him (i.e., the picture from Phase 1 of the task).

Peer Interaction. As in Elizabeth's class, the children in Denise's class had little opportunity to interact with one another during teacher-mediated events. John and his classmates often worked at their desks, however, and as they worked, they frequently interacted, signing to one another without using their voices so Denise would not hear them. Even when Denise gave the children permission to talk, however, they frequently signed without voicing. When this happened, Denise always reminded them that they needed "to talk."

Unlike Sue's, John's peers were old enough to understand the differences between the children who "heard" and those that did not. On one occasion when Denise was absent, the substitute teacher was allowing the children to play with puzzles. John was playing alone, and Michael wanted to join him. I was sitting next to John, and Michael asked me to ask John if he could play. I told Michael to ask John. Michael retorted, "He can't hear."
Of the children in his class and in his reading group, John's speech was the most difficult to understand. His peers were aware of this, and often when Denise was having difficulty understanding John, they would try to interpret for him, calling out their ideas about what John was trying to say.

Excerpt from Videotape Analysis (VT 3, #4458), 1/15/91
(Reading group) Denise and the children are making a map, and the children are sharing ideas about symbols they need to put on their map. Denise has just called on John.
J: _______ (unintelligible)
D: What?
John signs "city," but his speech doesn't sound like "city."
D: The city?
John repeats himself, still signing "city."
D: I'm not understanding that. Better speech (points to her mouth).
B: He said 'Downtown.'
John repeats himself. He then looks at me at the camera as if he is embarrassed that this interaction is being recorded or as if he is wanting my help [?].
D: I don't understand what you're saying. I need better speech.
John tries again.
T: He said 'House.'
B: No, he said 'Downtown.'
A: Downtown (agreeing with Brittany).
D: (to John) Downtown?
John repeats himself.
D: Downtown?
J: Yes.

Not only did the children try to help Denise understand John's speech, on occasion they "helped" her correct his speech.

Excerpt from Videotape Analysis (JVT 1, #4875), 11/27/90
(Reading Group.) Denise and the children have created an alternative text to Good-Night Owl (Hutchins). The name of their story is "Goodnight Baby." Denise is holding the text for the
children to see, and everyone is reading aloud as Denise points to the words.
D: (pointing as the children read) Baby tried to sleep.
John pronounces the word "sleep" with two syllables.
D: (to John) Sleep, not sleeping. Baby tried to sleep (emphasizing "sleep").
J: Sleep.
D: Okay, read this one (pointing as they read). Daddy threw a glass. Crash! And baby tried to sleep.
Again, John pronounces the word "sleep" with two syllables, but it is clear from the movement of his mouth that he was trying to pronounce the word correctly.
D: Not sleeping, sleep (emphasizing one syllable).
J: Sleep.
D: Okay (pointing as they read). Brother and sister fought. Scream! And baby tried to sleep.
Once again, John pronounces the word "sleep" with two syllables.
A: (to Denise) John said "sleeping" again.
D: (to John) You said "sleeping" again.
John smiles as if he is embarrassed, then says "Sleep."
D: (pointing as they read) Mommy vacuumed. Vroom! Vroom! And baby tried to sleep.
John correctly pronounces the word.
A: John said "sleeping" again.
D: No, not that time. He said "sleep."
D: (pointing as they read) The dog barked. Ruff! Ruff! And baby tried to sleep.
John appears to be concentrating on the reading. Again, he pronounces sleep with two syllables. Denise looks at him and he immediately realizes what he has done and covers his mouth with his hands. Alyssa laughs.
D: (pointing as they read) The cat cried. Meow. Meow. And baby tried to sleep.
A: He said "sleeping."
D: No he didn't. He stopped.
John looks at Alyssa and smiles, clearly pleased with himself.

John's Participation in Verbal Language at the Preschool

John had been in the oral/aural program since he was enrolled at the Preschool, and, consequently, many of the adults in the building communicated with him through spoken English. John was a fluent signer, however, and the total communication children and some of the adults
interacted with him through sign language. It was fascinating to watch John navigate in these multiple and diverse verbal language worlds. He spoke, he spoke and gestured, he spoke and signed, and he signed without speaking. Table 36 details John's participation in and uses of verbal language at the Preschool.

**Table 36. John's participation in verbal language at the Preschool**

<table>
<thead>
<tr>
<th>John:</th>
</tr>
</thead>
<tbody>
<tr>
<td>spoke without signing</td>
</tr>
<tr>
<td>spoke and gestured</td>
</tr>
<tr>
<td>spoke and signed</td>
</tr>
<tr>
<td>signed without speaking</td>
</tr>
<tr>
<td>knew when and when not to use sign language with his interlocutors</td>
</tr>
<tr>
<td>used sign language when interacting with Denise only after his spoken language failed to communicate</td>
</tr>
<tr>
<td>often did not attend to spoken interactions when the speechreading task became extremely difficult</td>
</tr>
<tr>
<td>often did not attend to his peers' contributions when he had his mind on contributing</td>
</tr>
<tr>
<td>was not always willing to work at making himself understood</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>John used verbal language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>to regulate the behavior of others</td>
</tr>
<tr>
<td>to share information</td>
</tr>
<tr>
<td>to gain information</td>
</tr>
<tr>
<td>to display his knowledge of words that were inappropriate for school (e.g., used profanity during videotaping to demonstrate his knowledge of these words)</td>
</tr>
</tbody>
</table>

As John communicated with his interlocutors at the Preschool, he knew when it was and when it was not appropriate to use sign language. On one occasion, John and I were walking down the hall conversing in sign and voice. His Preschool I teacher, known for her commitment to an oral/aural approach, met us on the way, and John immediately stopped signing.
John frequently signed to Denise, but, for the most part, he signed only after his spoken language had failed to communicate his message. That is, first John spoke to Denise, and if she did not understand, then he would speak and sign simultaneously. John realized that in this setting, speech was required and valued. He also understood, however, that Denise knew sign language, and that in many instances signs would effectively communicate what his speech could not. John's speech was often difficult to understand, and John and Denise frequently expended considerable energy trying to communicate.

Excerpt from Videotape Analysis (JVT 2, #3963), 12/4/90
(Unit on Christmas) Tomorrow the children will go downtown to see Santa Claus. Denise is preparing them for the trip by role playing Santa. Each child is taking a turn on her lap. It's John's turn:
D: Ho, Ho, Ho. What do you want for Christmas?
J: I want drum.
D: Drum (correcting his pronunciation). What else do you want?
J: ______ (speaking only).
D: Book bag?
J: Football (speaking and signing).
D: Okay, what else?
J: _______ (speaking only).
Denise looks at him with a puzzled expression, but she doesn't say anything.
J: Sword (speaking and signing).
D: A sword.
J: ______ (speaking only). _______ (repeating himself).
D: I don't understand.
J: Skates (speaking and signing).
D: Okay, what else?
J: And ______ (speaking only).
Denise shakes her head to indicate that she doesn't understand.
J: Lizard (speaking and signing).
D: You want a toy lizard?
J: No, real (speaking and signing).
**PN:** After John's turn, Kelly and Michael had their turns. Both of these children speak intelligibly. I couldn't help but wonder how John felt watching them sit on Denise's lap and interact freely.

Excerpt from Videotape Analysis (JVT 5, #1400), 1/29/91
(Reading Group) Denise has shown the children the outside cover of *Sheep in a Jeep* and has asked for their predictions about what will happen in the story. John contributes, but his speech is unintelligible.
J: Maybe __________ (speaking only).
D: I didn't understand that. What?
J: Maybe _____ bump wheel broke (adding signs to his speech).
D: Oh, they hit a hole and the wheel comes off?
J: Sharp, sharp, sharp (speaking and signing, repeating himself).
D: I don't understand.
Tyler tries to help: Knife.
D: Sharp?
John uses the ASL sign for a tire going flat.
D: Oh, the tire goes flat. Okay.

The data corpus was replete with these kinds of interactions. In most instances, John demonstrated the ability to adjust his use of verbal language by monitoring his interlocutors' feedback. There were some instances, however, when John could not make himself understood. On one occasion during an art lesson, John asked the art teacher two times for yellow paint, first through speech alone and then through speech and sign, saying, "I want yellow." The art teacher did not understand either time and handed John the green paint. John looked at her with some displeasure, but he did not object, acting as though the energy needed to make himself understood was not worth the effort.

Although there were times when John had difficulty making himself understood, this did not dissuade him from verbal interaction. John freely talked with both adults and peers at the Preschool using whatever modalities
were appropriate with his interlocutor. Furthermore, John used verbal language in a variety of ways, particularly to gain and share information. In the vignettes that follow, John demonstrated substantial control of verbal language.

Excerpt from Field Notes, 10/29/90
(Individual language work) Denise has given the children several worksheets to complete. She is sitting at the back table cutting out materials for an activity the class will do that afternoon. John has finished his work. He puts his papers in the "finished work" basket and on his way back to his seat, he stops to watch Denise.
J: What are you make? (v)

Excerpt from Field Notes, 11/1/90
(Calendar) Denise is presenting the new month and mentions Thanksgiving.
D: What do we do on Thanksgiving?
J: We eat turkey. (v)
---later---
D: We have two birthdays in November. John's and Michael's.
J: He's first birthday. Me second birthday (v).
D: Yes, Michael's is first and your birthday is second.
Denise has a birthday reminder tacked behind the numbers. John wants to see what is behind the number 30, his birthday.
J: I want see (pointing to the birthday reminder) (v).
D: (smiling, teasing) You'll have to wait.
J: (to Denise) When your birthday? (v)

Excerpt from Field Notes, 11/7/90
I went with John to observe during his speech therapy lesson this morning. As we came into the room, Joan had a game board on the table. Immediately John asked, "What's that for?" (v)

Excerpt from Videotape Analysis (VT 1, #5816), 11/27/90
(Social Studies unit on Pilgrims and Indians). Denise is reading a story about the Pilgrims and Indians. She uses a globe to explain where America is in relation to England and how the Pilgrims lived in England before coming to America. John doesn't follow the
interaction. He reaches over and touches England on the globe and asks, "What's this?" Denise explains, "That's England, where the pilgrims lived." John responds, "Oh, pilgrims," (understanding).

Excerpt from Field Notes, 2/ 4/91
John and I are walking down the hall toward the art room, our "testing" place. I notice a scratch and a small bump on John's forehead. I inquire, "What happened to your head?" John quickly explained (s/v): "Morning, I fell off swing and bumped my head. Little bit blood."

John enjoyed talking, but he was not always an active participant during spoken language interactions in Denise's classroom. When the speechreading task became extremely difficult and John tired of attempting to follow the volley of spoken interaction, he would look around the room, sign to me at the camera, play with his shoe strings or objects in his desk, or try to sign with his peers, especially Tyler. Then, when he rejoined the flow of spoken interaction, John had often missed his peers' contributions.

Excerpt from Videotape Analysis (JVT 3, #4550), 1/15/91
(Reading group) Denise is introducing Katy and the Big Snow (Burton) from the reading series. She is talking about maps (an activity suggested in the teacher's manual). Denise and the children are making a map, and the children are sharing ideas about symbols they need to put on their map (e.g., school, church, lake, etc.) Brittany has just contributed "You go to eat."
D: Good!
John looks away at this point and reaches inside his desk. He misses some of the interaction that follows.
D: 'Go to eat.' That's called a restaurant. A restaurant is where people go to eat (extending the children's vocabulary; emphasizing 'restaurant' in the flow of speech).
Denise writes 'restaurant' on the chalkboard and draws its symbol (a folk and knife on a small house) on the map. She talks a little more about the restaurant and then asks the children for other ideas. John raises his hand, and when Denise calls upon him he says,
"Restaurant." Denise responds, "I just said that" (she points to the word on the chalkboard).

These kinds of situations were repeated throughout the data set. Furthermore, there were many times when John was so intent on contributing his own ideas to class discussions that he did not attend to his classmates' or Denise's contributions. Once he had an idea he wanted to share, he held up his hand until Denise called upon him, and while he raised his hand, he did not attempt to follow the interactions that were going on around him. As a consequence, his contributions were often inappropriate.

Excerpt from Videotape Analysis (JVT 5, #5380), 1/29/91 (Unit on Winter). The children are sitting at the large rectangular table in the back of the room, and Denise is standing at the chalkboard beside the table. This is the last day of Denise's "Winter" unit. She is reviewing all that the children learned by webbing their contributions on chart paper. She begins by writing "Winter" in the center of the paper and asking the children what they remember. As the children share, Denise writes their contributions on the chart paper. There is a lot of interaction, and John does not appear to be attending. For whatever reasons, his contributions indicate that he is not following or not understanding his classmates' and Denise's spoken language.

D: Alright, we've talked about all the things that we do in winter. We make snowmen, we throw snowballs, the things we wear in the snow--mittens, hats, gloves--(pointing to each of the words as she speaks), now I want you to think about all the animals we talked about. John?
J: Snowmobile.
D: That's not what I'm talking about. You're talking about what you do in the snow. I want you to think about animals.
J: Squirrels.
D: Squirrels, okay. What do squirrels do?
J: Squirrels wake up and eat, sleep (speaking and signing).
---later---
D: Let's talk about the animals that hibernate. What animals hibernate in the winter? John?
J: Snow dog.
D: What about the snow dog?
J: My mom know how make snow dog.
D: We're talking about animals that hibernate in the winter.
---later---
D: Do you think rabbits hibernate in the winter? What did we say about the rabbits? What do the rabbits do in winter? John?
J: Eat hot soup.
D: John, we already said that (she points to the words on the chart paper). We're not talking about people, we're talking about rabbits.

Denise's soft reprimands did not appear to change John's behavior. He seemed to be focusing only on what he would share next.

Verbal Language in the Mainstreaming Kindergarten

On Wednesday and Friday afternoons each week, John was mainstreamed into a regular kindergarten classroom near his home. His older sister, Whitney, was in the third grade at the same school. Whitney had been partially mainstreamed since kindergarten and totally mainstreamed with an interpreter since second grade.

Before the school year began, John's parents and the school's instructional staff outlined their objectives for John's mainstreaming experience. The objectives were as follows:

1. John will communicate orally with the teacher and students.
2. The teacher will communicate to John orally in group discussions, giving direction, and reading stories.
3. John will make friends among the kindergarten students.
4. John will participate willingly and by choice in classroom activities.

Although the stated objectives focused on socialization and peer group interaction, the Lyons indicated that one of their primary goals for
John's mainstreaming experience was the academic challenge. Whitney was having great academic success in her mainstreaming experience, and the Lyons were considering similar options for John.

Late in January, John indicated that he was not enjoying his mainstreaming experience. He described his experience as "a little bit hard" because of all the "talk." The Lyons decided that the task of speechreading had become too difficult, and they decided to add an interpreter for whole group instruction. I volunteered to serve as John's interpreter for one month (eight class periods). This gave me an opportunity to observe John's experiences with language and literacy in the mainstreaming setting. During that time, John's parents requested that I interpret whole group instruction and the classroom teacher's directions. They wanted John to continue his attempts at peer interaction through oral English. They made it clear, however, that when communication became difficult and John called upon me to interpret during peer group interaction, I was permitted to do so.

**John's Experiences**

As would be expected, most of the interaction in John's mainstreaming kindergarten classroom was in spoken English. Janice talked to the children and the children talked to her and to one another. Janice encouraged interaction, and, except during circle time, the room was filled with the children's talk. In Table 37, I have delineated John's experiences with verbal language in the mainstreaming setting.
Table 37. John's experiences with verbal language in the mainstreaming kindergarten

**Janice:**
- spoke to John using gestures and sometimes used any signs she knew
- requested that the interpreter teach the children signs
- had difficulty understanding John's speech

**John's peers:**
- moved their mouths, but did not use their voices, and gestured when interacting with John
- used a few signs when interacting with John
- had difficulty understanding John's speech

**John:**
- often needed an interpreter to make sense of his teacher's and/or peers' spoken language
- was expected to participate in interactions that held no meaning for him (i.e., music theory lessons)
- experienced verbal language during read alouds that was less than a one-to-one correspondence with spoken English

When the children interacted with John, they had a tendency to move their lips and gesture without using their voices. Knowing that the auditory input would heighten John's chances of understanding, I often encouraged the children to talk. One child, Katelyn, knew a few signs and used them to interact with John, but she rarely used her voice when signing. During the month I was there, I taught the children several words and a few short phrases in sign language (e.g., Will you play with me?, Quiet, please [Janice's request], Please be my friend, etc.). Sometimes the children would use these signs to communicate with John, but, again, they rarely voiced. It is not uncommon for beginning signers to have difficulty signing and speaking simultaneously. When Janice spoke to John she always voiced, and she often gestured. On occasion, she used a sign she had learned. John could
often speechread Janice's one-on-one directions, but, for the most part, I had to interpret his peers' spoken language, and I always interpreted whole group discussions.

I had little difficulty interpreting the spoken language of Janice and the children. Interpreting some of the stories Janice read aloud was another matter. Believing that it would support John's language and literacy development, the administrator of the school had directed me to maintain as close as possible a one-to-one correspondence between spoken English and sign language. I am an adequate signer, but I did not know all the signs I needed to adequately interpret many of the books Janice read. At times, it was difficult to keep up with the pace of the reading. I was unfamiliar with some of the books. The greatest problem, however, was making instantaneous decisions about the best way to maintain a one-to-one correspondence with Janice's spoken English and yet interpret the story in such a way that it would be meaningful for John. For the consumers of this case report who know sign language and can vicariously enact the task of interpreting, the following excerpts will be at once humorous and disheartening.

Excerpt from Audiotapes, #3, 2/8/91

_The Mango Tooth_ (Pomerantz). In this story, a little girl is loosing her teeth. I did not know the story. Janice is almost singing as she reads these segments.

... Oh, the very first tooth was a mango tooth. Because she bit the pit and that's the truth. In the morning time, find a dime. A dime beneath the pillow for the mango tooth. ... Oh, my number two tooth was a chicken bone tooth. A P.S. 11 chicken bone tooth. She bit the bone and that's the truth. In the morning time, you'll find a dime. A dime beneath the pillow for the chicken bone tooth. ... Oh, the number three tooth was a squooshy pickle tooth. A
who, a what, a squooshy pickle tooth. Well, ha, ha, ha. That's not the truth. ... Oh, the real third tooth was the tootsie pop tooth. Or perhaps it was the Turkish toffy tooth. Oh, she's not quite sure, and that's the truth. ...
PN: What is the sign for mango? squooshy? tootsie pop? Turkish toffy? I fingerspelled, and consequently had a hard time keeping up with the pace of the singing. I signed "center" for "pit." What's the sign for pit?

Excerpt from Audiotapes, # 5, 2/15/91
Pezzettino (Leo Leonni)
His name was Pezzettino. All the others were big and did daring and wonderful things. He was small and surely must be a little piece of somebody else, he thought. He often wondered whose little piece he could be, and one day he decided to find out. "Excuse me," he asked the one-who-runs, "am I your little piece?"
"How could I possibly run if I had a piece missing," said the one-who-runs, somewhat surprised. "Am I your little piece?" he asked the strong-one. "How could I be strong if I had a piece missing?" was the answer. And when the swimming-one came to the surface, Pezzettino asked him too. "How could I swim if I had a piece missing?" answered the swimming-one, and he dove back into the deep water.
PN: In this situation, sign language vocabulary was not a problem, I knew the signs for every word in the text. I was unfamiliar with the book, however, and making instantaneous decisions about how to present the characters and maintain a one-to-one correspondence with spoken English was disconcerting. Familiarity with the books before interpreting is a must!

While these read alouds were supportive to the language and literacy development of John's classmates, one can only speculate about the quality of language input through the medium of sign.

The music teacher was the only other adult with whom John had extensive contact in his mainstreaming experience. On Wednesday afternoons, John and his classmates had music, an activity John despised.

The music lesson was typically divided into two parts, singing and music theory. When the teacher led the children in singing songs, John sang
along with his classmates as I signed the words for him. Sometimes he copied my signs. John seemed to enjoy the songs with hand motions and particularly those that required the children to move around the room. The segment on music theory, however, was another matter. The music teacher talked about the melody, the harmony, the chords, the keys on the piano, the pitch, and the ABAB pattern. These aspects of music had little meaning for John, and he became inattentive and restless during this portion of the music lesson. He often tried to talk with Katelyn or asked me to ask her questions, e.g., "Ask her if she wants to play with my dog." On occasion, the music teacher reprimanded John for his inattention.

Excerpt from Audiotapes, #2, 2/6/91
(Music) I have been interpreting, but John isn't paying attention. The music teacher is reprimanding John for his inattentiveness.
Teacher: John, John, John Lyon.
Child: He's deaf.
Teacher: I know he's deaf, but he also read lips.
One of John's classmates taps John on the arm. He looks at the child, who points to the music teacher.
Teacher: You need to pay attention.
John shakes his head 'yes' and turns back to watch my signs.
PN: A few minutes after this interaction, John signed to me: "I hate music. Boring!"

John's Participation in Verbal Language in the Mainstreaming Kindergarten

My observations in the mainstreaming setting indicated that John was a passive participant in spoken language interactions with his kindergarten peers. Unlike his behavior at the Preschool, in the mainstreaming kindergarten John interacted with only a few of his
classmates. John's participation in verbal language interactions in the mainstreaming setting is detailed in Table 38.

Table 38. John's participation in verbal language in the mainstreaming kindergarten

<table>
<thead>
<tr>
<th>John:</th>
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<tbody>
<tr>
<td>interacted primarily with Katelyn, a little girl who knew some signs</td>
</tr>
<tr>
<td>interacted with his cousin, Don, through speech, gestures, and signs</td>
</tr>
<tr>
<td>used speech, sign, and gestures to communicate with his peers</td>
</tr>
<tr>
<td>called upon the interpreter as needed to relate his message</td>
</tr>
<tr>
<td>called upon the interpreter as needed to explain his peers' communiqué</td>
</tr>
<tr>
<td>sometimes understood Janice's one-on-one communiqué</td>
</tr>
<tr>
<td>often signed to the interpreter without speaking</td>
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</tbody>
</table>

For the most part, John interacted with Katelyn, who had learned a few signs, and his cousin Don (who did not sign). When John wanted to communicate with his peers, he frequently asked me to interpret for him. As his parents wished, I encouraged him to try talking. John would attempt communication, and if his interlocutor failed to understand, I interpreted the interaction.

When John worked at the computer with a peer, he spoke, gestured, and signed to communicate. Playing computer games required little spoken interaction, and John never called upon me to interpret while he worked at the computer. When he worked at the tables with his peers, he participated minimally. Janice encouraged interaction around print at the work tables, and John was often surrounded by the talk of others.
Excerpt from Audiotapes, #7, 2/27/91

John sat at a table with four little boys, one of whom was his cousin, Don. The boys were involved in a conversation about what they were going to do on the playground, who was going to be "in," and who was going to be "out," and who was going to be on whose team. John did not participate in the talk. He worked on his paper. Once in a while he would look up from his work, but he did not try to interact. At one point, Don announced, "I'm going to John's house after school."

John was not attending, so Don tapped him on the arm and said, "I'm going to your house, right?"

John did not understand and looked to me for help. I interpreted the interaction.

John was less hesitant to interact with Janice. She understood his speech better than his peers. On one occasion, John tried to negotiate with Janice during independent reading time, saying "I want play with the computer." Janice kindly responded, "We're reading books." Even though John used his speech with Janice, I frequently had to repeat his comment and/or question so Janice could understand.

When John interacted with me, he frequently signed without voicing. I would remind him to use his voice, and often he repeated his question or comment using simultaneous communication.

Summary: John's Verbal Language World

John's experiences with verbal language at the Preschool and in the mainstreaming kindergarten classroom were dramatically different from each other, and both were different from his experiences at home.

At home John had ready access to verbal language. He and his family interacted without difficulty because they shared a common modality.
John had frequent and extensive conversations with both his sister and his parents.

At the Preschool, spoken language in Denise's classroom was at times difficult to follow. Speechreading the volley of interaction between Denise and the children often became tiresome, and John's attention waned. When John was actively attending, he frequently contributed through both speech and sign. John was able to communicate with both the oral and the total communication children and adults at the Preschool, and he was adept at changing modalities as appropriate.

In the mainstreaming experience, John's teacher, Janice, and his classmates interacted with John through spoken English which I interpreted as necessary. John was a passive participant in spoken language interactions in this setting. He infrequently conversed with his classmates for any extended period of time. For the most part, he limited his interactions to one child who knew a few signs. John frequently called upon me to interpret when he needed to communicate with Janice or his peers.

**The World of Written Language**

John's experiences with and participation in written language primarily took three forms: (1) He explored print on his own, (2) he interacted with his classmates around print, and (3) he interacted with adults around print. Written language was frequently used in John's home to carry out everyday activities. At the Preschool, written language was both embedded within and the focus of teacher-mediated events. In his mainstreaming kindergarten setting, John independently or socially explored written
language in the form of literacy-related games at the computer. The sections that follow detail John's world of written language across home, Preschool, and mainstreaming kindergarten contexts.

**Written Language in the Home**

Mary, Henry, and Whitney used written language in a variety of ways in John's presence. There were telephone numbers and notes on the calendar in the kitchen. There was a list of chores for the children on the refrigerator. Mary often left the children notes when she went to work early in the mornings. Both Mary and Henry were involved in private businesses, and each had appointment books and business-related materials in the home. The children's school work was displayed in the kitchen. The Lyons provided a host of writing materials for John and Whitney, and numerous books and literacy-related games. The children had a computer for their explorations of written language. The home was filled with print.

**John's Experiences with Written Language at Home**

As Table 39 demonstrates, in many ways John's experiences with written language at home were similar to Sue's and Andrew's. All of the children's parents provided them materials and opportunities to explore written language and regularly engaged them in literacy events. John had an older sister, however, and Whitney's experiences and participation in literacy often became John's experiences and/or participation.
Table 39. John's experiences with written language at home

<table>
<thead>
<tr>
<th>John's parents:</th>
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<tbody>
<tr>
<td>• frequently read to John and Whitney</td>
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<tr>
<td>• read in front of John, modeling their interest in</td>
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<td>and the value they placed upon reading</td>
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<tr>
<td>• answered John's questions about written language</td>
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<tr>
<td>• provided numerous books and literacy-related games</td>
</tr>
<tr>
<td>• played literacy-related games with their children</td>
</tr>
<tr>
<td>• used written language to extend John's vocabulary</td>
</tr>
<tr>
<td>• provided their children opportunities and materials for writing</td>
</tr>
<tr>
<td>• filled their home with literacy materials</td>
</tr>
<tr>
<td>• provided a computer and a Nintendo for the children's exploration of written language</td>
</tr>
<tr>
<td>• demonstrated a myriad of uses for print in their daily lives</td>
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</table>

<table>
<thead>
<tr>
<th>Whitney:</th>
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</thead>
<tbody>
<tr>
<td>• completed her homework in John's presence</td>
</tr>
<tr>
<td>• engaged John in literacy and literacy-related games</td>
</tr>
<tr>
<td>• read to John on occasion</td>
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</table>

During each of my visits, Henry helped Whitney with her homework. They had a regular routine. Whitney sat at the table in the family room, and Henry stood beside her, ready to help as needed. Sometimes he would stand beside her the entire time, particularly when she did her math. As they interacted, Whitney signed and used her voice. Henry signed and spoke softly because of the taping. As Whitney worked, Henry patted or rubbed her back, encouraging and praising her all the while. Sometimes when Whitney finished her homework, she would show it to Mary, who also praised her endeavors.

Excerpt from Videotape Analysis (JVT 7, #655), 2/12/91
Whitney has just finished her homework. She walks over to the couch and shows Mary her math problems.
W: (proudly) I'm smart. I know how all.
M: Wonderful! Wonderful. Because you're smart!
Whitney's teacher had suggested that Mary and Henry work with Whitney on her subtraction facts. During one of my visits, John "drilled" Whitney using a set of flash cards Mary had purchased. As John held up the flash card, Whitney called out the answer and then looked at Henry to see if she had responded correctly.

One of Whitney's homework assignments was to read a half hour each evening. Whitney's classroom teacher gave no specific requirement as to what she should read, as long as she read for thirty minutes. Mary stated that Whitney often read children's chapter books. Sometimes Whitney read to John.

Whitney's participation in written language had an impact on John. Mary suggested that John engaged in literacy-related games and activities at a much younger age than Whitney had primarily because Whitney played the games in front of him and sparked his interest. In one of our testing sessions when I had asked John to read for me, he commented on Whitney's reading ability, saying, "Whitney knows all the words."

When describing the family's literacy practices, Mary said that she and Henry typically read to John rather than asked him to read to them. Three or four nights a week at the children's bedtime, the family would go upstairs and get in bed and either Mary or Henry would read to the children for approximately thirty minutes. Mary stated that when she read, John insisted that she both sign and use her voice.

Excerpt from Home Visit #3, 12/19/90

M: I'll be reading a book, and I'm tired and I don't want to talk. He'll move my mouth for me because he has to watch my face. He
doesn't just watch my hands. He wants to see my face when I read. He really, in the true sense of the word, is a total communication child. Whitney is only really interested in the signs, and she likes to see the words to see if I am skipping any pages. Sometimes I skip, because it makes the story go faster!

John's Participation in Written Language at Home

Almost every time I visited in John's home he played with his Nintendo, engaging in literacy-related games and games that required considerable eye-hand coordination. On two occasions he wrote. On one occasion he read, and during one visit he played with literacy-related games and toys. Table 40 summarizes the ways in which John participated in literacy events during my visits and those described in his parents' retrospective accounts.

Table 40. John's participation in written language at home

<table>
<thead>
<tr>
<th>John:</th>
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<tbody>
<tr>
<td>drew detailed, elaborate pictures and added letters and/or words to describe what he had drawn</td>
</tr>
<tr>
<td>asked for the spellings of words he was writing</td>
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<tr>
<td>read books using simultaneous speech and sign</td>
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<tr>
<td>appealed for help when he came to an unknown word while reading</td>
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<tr>
<td>played educational games with his parents and sister</td>
</tr>
<tr>
<td>played literacy-related games on his Nintendo</td>
</tr>
<tr>
<td>used the family's TDD to explore written language</td>
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<tr>
<td>used written language to control the behavior of others</td>
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</table>

When I asked the Lyons how John spent his time, Mary said that John really enjoyed playing Nintendo and often invited a few neighborhood boys to play. Henry suggested that John loved to play sports of all kinds and often watched ball games on television. Both Mary and Henry said they
interpreted movies for John and Whitney, especially those with closed captions.

During my visits and our telephone conversations, Mary often shared with me John's latest literacy achievements, e.g., "John read an entire Berenstain Bears book to me!", "When we got out the Christmas decorations and books, John picked up a jingle bells book and read it to us!" On my last visit in their home, John read with his mother. He sat beside her on the couch and signed/voiced each word of text. When he came to a word he did not know, he rarely attempted it but asked, "What's that?" or "What's that word?" Mary would tell him the word in both speech and sign, sometimes elaborating on the meaning of the unknown word.

Excerpt from Videotape Analysis (JVT 7, #448), 2/12/91

John comes to the word parade.
J: What's that word? (pointing to it) (v)
M: Parade (s/v).
John repeats the word and continues reading until he comes to the words "fire engine."
J: What's that? (v)
M: Fire engine. It's the same as a fire truck (s/v).

John often drew pictures and on several occasions added words to describe what he had drawn. When I arrived for my second visit in the Lyon's home, John was sitting at the kitchen table with a large stack of drawings. He had drawn the helmets of several college football teams (see Figure 20). The helmets often included the name of the state or the college's initials (e.g., IOWA, OSU). John showed me the pictures, naming each team. I asked him to write the name of each football team on the bottom of the picture, so that I would know what team each picture was. While Mary and I talked, John
wrote several of the team names. He asked Henry to spell each one. Henry showed John the fingerspelled letters one at a time, as John wrote the words. Henry stated that John always asked for the spelling of words he wrote.

Figure 20. John's football helmet

John used written language in his home for a variety of purposes. In a retrospective account, Mary described one of John's earlier uses of print.

Excerpt from Home Visit, 11/28/90
M: Once, when John invited a few friends over, they kept messing with the TV. He came running in here [the kitchen] and asked me how to spell "Don't never touch." I fingerspelled the letters for him and he wrote it. He taped it on the TV.

The Lyons had a Telecommunication Device (for use with the telephone), and during one of my visits John decided to make a call. He typed B-I-L-L and Mary said he was calling his uncle. The Device was not connected to the telephone, so John started to count, typing in numerals one at a time. At Christmas time, John and Whitney made calls to Santa Claus.
Henry stated that as Santa "talked" back, John read several words in the
visual text (the speakers' words are displayed on a tiny screen for the
hearing-impaired). In every way, John was surrounded by and participated
in literacy in his home.

Written Language at the Preschool

John's experiences with and participation in written language at the
Preschool are described in the following sections of this biography. One
focal context, reading group, is used to describe, in detail, John's
experiences with written language at the Preschool. John did not have
opportunity to participate in free-choice writing in his kindergarten class.
Consequently, a focal context of his participation is not included.

John's Experiences with Written Language at the Preschool

In keeping with the goals of the Preschool, Denise focused on
language development, speech and articulation, speechreading, and use of
audition throughout the kindergarten day. Unlike Preschool I and II, however,
Denise explained that the teachers in the kindergarten program were "trying
to get into more of the academics." This was obvious; throughout the
kindergarten day Denise deliberately taught the children concepts about
written language (e.g., "You need a period. That means your sentence is
finished."; "I forgot the -s on my word. The -s means more than one. Without
the -s, it means only one.")

In addition to Denise's deliberate focus on literacy, she used written
language throughout the day. Denise used print, and the children used print.
Literacy events were consciously planned and/or the product of social interaction in all of the teacher-mediated activities I observed. Consequently, John experienced literacy in a variety of ways as he interacted with Denise and his classmates during kindergarten activities. Table 41 delineates John's experiences with written language at the Preschool.
Table 41. John's experiences with written language at the Preschool

**Denise:**

**Reading**
- read to children frequently to provide exposure to language and new lexical items and to foster an appreciation for reading
- read text verbatim and added clarifying remarks during read alouds
- engaged the children in shared reading activities (i.e., teacher held up a large book and pointed to the words and asked the children to read aloud with her)
- made "life to text" and "text to life" connections with written language
- modeled one-to-one correspondence while reading to the children
- linked the children’s present literacy knowledge to concepts they were learning
- drew children’s attention to pictures to help them make sense of print
- drew children’s attention to word configurations to help them read individual words (i.e., "This word is short.")
- taught the names of alphabet letters
- taught letter/sound correspondences for consonants
- focused the children’s attention on individual letters/words
- emphasized right to left directionality when using written language
- taught concepts about print
- interpreted environmental print for the children
- encouraged interaction around print during teacher-mediated activities

**Writing**
- taught the mechanics of printing the alphabet letters
- provided written models for the children to copy
- frequently engaged the children in readiness activities in the form of worksheets
- constructed written stories with the children (i.e., the children provided the ideas and she did the writing)
- acted as the children's scribe when they dictated stories for pictures they had drawn
- asked the children to copy her transcription of their dictated stories onto their drawings
- discouraged interaction during work time
- filled the room with print

**Denise used written language:**
- to teach language/extend vocabulary
- to communicate with parents
- to show ownership
- to help improve speech
- to test speechreading and listening skills
- to convey information
- to organize the children's responsibilities
- to organize the day's/week's/month's activities
- to assist in learning new information, concepts, skills
- to document what was learned/experienced
- as a source of authority
As Table 41 demonstrates, John experienced written language in a multitude of ways in Denise's classroom. The sections that follow describe the ways in which literacy was consciously taught and/or embedded within each scheduled event of the kindergarten day.

**Attendance.** While Denise took care of attendance and written correspondence to the children's parents, John and his classmates worked quietly at their desks on mimeographed reading and/or writing readiness worksheets. The worksheets primarily engaged the children in matching, counting, and sequencing activities, and they were very easy for John.

Around mid-January, Denise began to allow the children to write on plastic "Erase-a-Slates" when they had finished their worksheets. The children enjoyed this activity and walked around the room copying words from charts, bulletin boards, etc. They primarily copied each other's names. The children often talked about the words they wrote, and as long as they were not disruptive, Denise permitted them to do so.

**Calendar.** Each morning after attendance, the children would form a semicircle on the floor in front of a large calendar. Denise would hold up word cards that read "Today," "Yesterday," and "Tomorrow." She would call on a child to read the word and place it on the appropriate day on the calendar. The child had to say the day of the week, the date, and the month that matched the word card (e.g., Today is Wednesday, November 4; Yesterday was Tuesday, November 3; Tomorrow will be Thursday, November 5). The children used the print on the calendar to guide their sentences, looking at the day of the week, the number, and the month as they spoke.
At the beginning of the year when the children were first learning to read the words, Denise focused their attention on initial letters and word configurations to help them make sense of the print.

Excerpt from Field Notes, 9/25/90
Denise holds up the word card "Today," and Tyler says "Tomorrow." Denise tells him that "Tomorrow" is long and "Today" is short (in length). Next, Denise holds up the "Yesterday," card and Kelly says "Tomorrow." Denise tells her that "it begins with a 'y,' not a 't,'" and then Denise makes its sound.

Like Elizabeth and Anna, Denise used the calendar activity to talk with the children about upcoming events. Often, the children made comments about events that were important to them, especially their birthdays.

Excerpt from Videotape Analysis (JVT 1, #390), 11/14/90
Kelly reminds everyone that Michael's birthday is soon. Denise takes the opportunity to work on counting.
D: You're right! Let's see how many days till Michael's birthday. Let's count.
They count 6 days.
J: Mine long.
D: Yeah, yours is a little longer. What else are we doing on Michael's birthday?
J: Party.
D: Not party. Our Thanksgiving program. Our Thanksgiving program is the same day as Michael's birthday (she points to the date on the calendar).

Reading group. For reading group, Craig, Brittany, and Alyssa joined John and Tyler in the "high" reading group in Denise's class while Kelly and Michael participated in reading instruction in the other oral/aural
class. The children sat in their desks while Denise sat or stood in front of them at the chalkboard. For videotaping purposes, Denise moved John to the front row in the far right hand desk and turned the desk inward so that I could see his face. In this position, John could also speechread his classmates during whole group instruction. The events of reading group will be discussed in detail in the focal context on John’s experiences with written language at the Preschool.

**Individual language work.** During individual language work time, the children sat at their desks and worked quietly on worksheets and art activities while Denise worked with individuals at the back table. Most often, the worksheets coincided with the social studies or science unit the children were studying or the season of the year. The worksheets engaged the children in coloring, counting, finding same/different objects, etc.

After they finished their worksheets, the children were permitted to look at books or play with "egg carton" games. These games consisted of alphabet letters, color words, and number words written on playing pieces. The object of each game was to match the playing piece to its "partner" on the inside bottom of the egg carton. For example, in one game the playing pieces were uppercase letters of the alphabet. The lowercase letters were written on the inside bottom of the egg carton. The object was to match the uppercase with its lower case letter. The children would leave the completed games on their desks, and Denise would check them after she had finished the individual work.

While the children worked at their desks, Denise worked with an individual child on a variety of activities designed to develop speech and
language. For example, at the beginning of the year, Denise taught the children to say their names, addresses, and telephone numbers. To do so, she wrote the information on an index card and over the course of several days helped the child memorize the information. Consequently, several of the children learned to read their names, addresses, and telephone numbers.

Sometimes Denise read to the children during this time frame. On one occasion toward the end of the study, Denise asked the children to draw a picture in response to The Winter Bear (Craft), a story she had just read. After they finished their picture, Denise asked each child to dictate a sentence while she served as scribe. Then, Denise had each child copy the transcribed sentence onto his/her picture. John's picture is found in Figure 21 below.

![Figure 21. John's drawing in response to The Winter Bear (Craft)](image)

**Handwriting instruction.** During handwriting instruction, each child was given an HBJ Handwriting Kindergarten Readiness workbook. The children sat at their desks while Denise sat in front of them on a chair.
Together they went through the pages of the workbook. Denise orally read the text on each page, demonstrated the proper way to make the letters, made comments about the mechanics of writing (e.g., "Sometimes our lines will be tall, sometimes they'll be short, sometimes the lines go up and down and sometimes they go slanted."), and watched as the children printed in their workbooks.

**Language arts.** Denise engaged the children in a variety of activities during the language arts time frame. In general, the activities were designed to expose the children to the vocabulary words they were learning. At times, Denise talked about particular aspects of both verbal and written language (e.g., using adjectives "to tell more"). Often, the children worked on activities related to the unit they were studying. For example, during the unit on "Winter," the children colored a snowman and his clothes, cut out the clothes, and glued them onto the snowman. In another activity, the children had to color, cut out, and sequence pictures to tell the story of a little boy going outside to play in the snow. After the children finished the worksheet, Denise brought each child back to the table where he/she dictated a verbal text for the story as Denise wrote. John's story follows:

The boy look out the window and see snow.
The boy go outside.
The boy make a snow house.
The boy go in the snow house.
The boy take out boots.
The boy get hot chocolate.
Denise often combined her language arts and social studies activities in the afternoon, particularly when she engaged the children in events which required an extended period of time.

**Unit: Social studies/science/health.** Denise's units, like Elizabeth's and Anna's, revolved around the seasons of the year. Units often lasted two weeks, and since all four kindergarten classes studied the same unit, many activities took place in the art room or gymnasium to provide space for all the children.

While Denise wanted the children to learn new information (i.e., content) and understand concepts about the units she was teaching, one of the primary objectives for unit activities was vocabulary development. In fact, during the Christmas unit, Denise pretested and post tested the children's knowledge of Christmas vocabulary (e.g., wreath, stocking, present, etc.) to determine how many lexical items were learned though the activities of the unit.

Like Elizabeth and Anna, Denise used written language to present new vocabulary items. Denise frequently began her unit activities with an informational book. She would read a page or two and then stop to discuss the information presented and/or the vocabulary she was teaching. For the most part, when Denise read to the children, she read the text almost verbatim and added clarifying remarks.

Excerpt from Videotape Analysis (JVT 5, #2038), 1/29/91
Denise is reading The Winter Bear (Craft).
D: (reading) One hungry bird. How many could he feed? Birds in the winter take what they can find, berries and seeds and rinds, all the pickings the year leaves behind.
(commenting) He's counting the birds. The birds are hungry. It's hard to find food in the winter.

As she read, Denise allowed the children to contribute, touch the pictures, and interact around the story, and, like Elizabeth and Anna, she frequently made connections between the events in the story and the children's personal experiences.

Excerpt from Videotape Analysis (JVT 6, #2614), 2/5/91
Denise is reading The Post Office Book: Mail and How It Moves (Gibbons). She has just read a page about the functions of the zip code, and she stops to make connections with the children's experiences. Denise has all of the children's addresses written on 3 x 5 cards. Pointing to three of the children's zip codes, she explains that three of them live within the same city but have different zip codes because they "don't live close to one another."

As Denise read, she often directed the children's attention to the pictures, encouraging the children to use the illustrations to make sense of the story.

Excerpt from Videotape Analysis (JVT 4, #1269), 1/17/91
(Unit on Winter). Denise is reading a book about winter. She interacts with the children: How do you know it is snowing? How does the picture show that it is snowing? How is it different? Look at the picture. What is happening in the picture? What do you see? What's happening on this page? What's it doing? See, the pictures show what is happening in the story.

Learning to cross-check the information in the story line with the illustrations is a strategy young readers often find useful as they make sense of unfamiliar texts. Denise was modeling this sense-making strategy for her young readers.
Denise frequently used written language to conclude a unit of study. She would write the name of the unit in the center of a large sheet of chart paper and ask the children to talk about the information they "remembered." As they shared, she wrote their contributions. The children seemed to enjoy this activity and willingly and actively participated.

**Focal Context: Reading Group**

To explore in detail John's experiences with written language at the Preschool, I reexamined the data collected during reading group. In all other teacher-mediated events in John's kindergarten day, literacy was embedded within the activities but was not the focus of the event itself. During reading group, however, Denise deliberately focused upon literacy for literacy's sake.

The first time I observed during reading group, Denise and the children reviewed the letters of the alphabet using alphabet cards. Throughout the year, Denise emphasized identification of the alphabet letters and letter/sound correspondences. Denise felt strongly that children were better equipped for both reading and writing instruction if they knew their letters. For this reason, she suggested that she was postponing independent writing activities until the latter half of the second semester of the school year. (At the conclusion of the data collection phase of this investigation [February 28], Denise had not engaged the children in any independent writing activities during my observations.)

Denise and her colleagues at the Preschool used the Houghton Mifflin Literature-Based Reading Series for reading instruction. This was the first year the series was used in the public school system, and, consequently,
it was new to Denise. She used the teacher's manual as a guide and selected activities that she felt were appropriate for her students (examples to follow in excerpts). Toward the end of the year, I asked Denise how she felt about the reading series.

Excerpt from interview, 2/5/91
For the first year, I like it. It gives the teacher more flexibility because there are stories, and it has suggested activities. You can pick what activity is going to work with your group of students. ... My only concern right now is that I'm not sure what words they know, their sight vocabulary. So what I'm going to start doing one day a week, I will have on flash cards the words that we come across in our stories. I'll tell them they are going to see these words in our next story. I've found that as I've been reading with the kids, that some of them don't know and and the. I thought I needed to back up and make sure that they are getting that.

Denise spent approximately a week and a half on each story in the basal series. She began by introducing the story with the suggested activities in the teacher's manual. Then, she read the story to the children several times, and they talked about the events. After the children were familiar with the story, Denise gave each child a copy of the book and encouraged the child to follow along as she read. For the most part, the children did not follow the text. Those who could understand Denise without relying on speechreading looked at the pictures in their small books while she read. John had to rely on speechreading to make sense of the story, and, consequently, looked only at his book when Denise had finished reading each page.

Some of the stories in the basal series came in "big book" form, i.e., a large book with text large enough for the children to see and follow. When
Denise used the big books, she pointed to the words as she read and often encouraged the children to read along.

Denise often engaged the children in book extensions and follow-up activities recommended in the teacher's manual. For example, after several readings of *Good-Night Owl* (Hutchins) in big book form, Denise and the children made an alternative text following the format used in the original book. The children contributed their ideas, and Denise served as scribe. Denise said each word as she wrote the children's contributions on chart paper. Sometimes, she reread the words for the children, demonstrating one-to-one correspondence and left to right directionality as she pointed to each word she read. Table 42 provides the original text and the children's alternative story.
<table>
<thead>
<tr>
<th>Good-Night Owl</th>
<th>Goodnight Baby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owl tried to sleep</td>
<td>Baby tried to sleep</td>
</tr>
<tr>
<td>The bees buzzed, buzz, buzz, and Owl tried to sleep</td>
<td>Daddy threw a glass, crash, and baby tried to sleep</td>
</tr>
<tr>
<td>The squirrels cracked nuts, crunch, crunch, and Owl tried to sleep</td>
<td>Brothers and sisters fighting, scream! and baby tried to sleep</td>
</tr>
<tr>
<td>The crows croaked, caw, caw, and Owl tried to sleep</td>
<td>Mommy vacuumed, vroom, vroom, and baby tried to sleep</td>
</tr>
<tr>
<td>The woodpecker pecked, rat-a-tat! rat-a-tat! and Owl tried to sleep</td>
<td>The dog barked, wolf, wolf, and baby tried to sleep</td>
</tr>
<tr>
<td>The starlings chittered, twit-twit, twit-twit, and Owl tried to sleep</td>
<td>The cat cried, meow, meow, and baby tried to sleep</td>
</tr>
<tr>
<td>The jays screamed, ask, ask, and Owl tried to sleep</td>
<td>The doorbell rang, ring, ring, and baby tried to sleep</td>
</tr>
<tr>
<td>The cuckoo called, cuckoo, cuckoo, and Owl tried to sleep</td>
<td>The TV was loud, and baby tried to sleep</td>
</tr>
<tr>
<td>The robin peeped, pip, pip and Owl tried to sleep.</td>
<td>Baby could not sleep. Baby cried. Waa! Waa!</td>
</tr>
<tr>
<td>The sparrows chirped, cheep, cheep, and Owl tried to sleep.</td>
<td></td>
</tr>
<tr>
<td>The doves cooed, croo, croo, and Owl tried to sleep.</td>
<td></td>
</tr>
<tr>
<td>The bees buzzed, buzz buzz. The squirrels cracked nuts, crunch, crunch. The crows croaked, caw caw. The woodpecker pecked, rat-a-tat! rat-a-tat! The starlings chittered, twit-twit, twit-twit. The jays screamed, ask ask. The cuckoo called, cuckoo cuckoo. The robin peeped, pip pip. The sparrows chirped, cheep, cheep. The doves cooed, croo, croo, and Owl couldn't sleep.</td>
<td></td>
</tr>
<tr>
<td>The darkness fell and the moon came up. And there wasn't a sound.</td>
<td></td>
</tr>
<tr>
<td>Owl screeched, screech screech, and woke everyone up.</td>
<td></td>
</tr>
</tbody>
</table>

Table 42. Original text for Good-Night Owl (Hutchins) and the children's alternative text "Goodnight Baby.")

After the children created their story, Denise copied the lines of text onto individual sheets of paper, and each child illustrated at least one page. As she spoke to the children about their illustrations, Denise focused their attention on the text, explaining that "the pictures need to go with the words.”

Excerpt from Videotape Analysis (JVT 1, #4000), 11/27/90
Denise speaks to each of the children about their illustrations for "Goodnight Baby".
D: (to Craig) You have the front. Like the front of the book (Denise walks over and picks up the big book of Good-Night Owl). What do you think you will draw?
C: Goodnight baby.
D: What will you draw … a tree?
C: No, a house.
D: Okay. What else could you draw in the house?
C: The baby's bed.

---------------------
D: Brittany, what does yours say? (pointing and reading with her). "Brothers and sisters fighting. Scream. And baby tried to sleep." So what will you draw?
B: A house and a baby.
D: Okay, but yours says (points to the text) "brothers and sisters fought," so what do you need to draw?
B: Brothers and sisters fighting.
D: Yeah, and the baby in bed trying to sleep.

Denise duplicated all the illustrated pages and stapled them together into individual books. On the following day, the children read their texts "round robin" during reading group, and each child had a copy to take home "to read to mom and dad."

In contrast to the previous example, some of the activities that followed book readings were not meaningful to the children. On one occasion, using a suggested activity from the teacher's manual, Denise gave the children a small card and told them to look through the book, identify the
words they liked, and copy them onto the card. The children made meaning of the task by locating their favorite pictures.

Excerpt from Videotape Analysis (JVT 4, #2766), 1/18/91

Denise: What I want you to do today is look through the book, and on this card, write down the words that you like. Go through and write down the words that you like.

Craig begins to look through his book and, pointing to a picture, calls out, "I like this!"

D: Not the picture, the word. Find a word that you like.

A few minutes later, Tyler raises his hand. When Denise comes to his desk, Tyler also shows her a picture. Again Denise explains the directions. Approximately three minutes later, Craig raises his hand, and when Denise comes to his desk he again shows her his "favorite" picture.

D: You're pointing to the picture. I want you to look at the words. What words do you like?

When Denise pressed the children to find words they liked, John pointed to the word "hurried" and copied it onto his card. Denise then read the story to the children and directed them to hold up their word card when they heard their "favorite word." The word "hurried" was only used once in the entire story.

John's Participation in Written Language at the Preschool

John participated in literacy events in Denise's classroom in primarily two ways: (1) he actively participated (i.e., he attended, he attempted to follow spoken interactions, he contributed, etc.), or (2) he passively participated (i.e., he pretended to be attending when Denise looked his way, but he was not actively attempting to follow the spoken
interactions around print). Table 43 describes John's participation in and uses of written language in Denise's classroom.

Table 43. John's participation in written language at the Preschool

<table>
<thead>
<tr>
<th>John:</th>
</tr>
</thead>
<tbody>
<tr>
<td>actively participated in literacy events</td>
</tr>
<tr>
<td>passively participated in literacy events</td>
</tr>
<tr>
<td>read aloud by following the print in &quot;big books&quot; and turning to speechread Denise when he did not know a printed word</td>
</tr>
<tr>
<td>attempted to speechread Denise's read aloud rather than follow in his own copy of the text (i.e., he could not hear Denise well enough to follow the text in his own book)</td>
</tr>
<tr>
<td>stopped attempting to speechread Denise's read aloud when the speechreading task became too difficult or impossible</td>
</tr>
<tr>
<td>freely contributed his own ideas when he was following classroom interactions</td>
</tr>
<tr>
<td>asked questions when he did not understand while he was actively participating in literacy events (i.e., when he was following and &quot;missed something&quot; he would ask Denise a question)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>John used written language:</th>
</tr>
</thead>
<tbody>
<tr>
<td>to guide his pronunciation of words</td>
</tr>
<tr>
<td>to indicate ownership</td>
</tr>
<tr>
<td>to gain information</td>
</tr>
<tr>
<td>as an authority</td>
</tr>
<tr>
<td>in place of, or in addition to, verbal language messages</td>
</tr>
</tbody>
</table>

During reading group, John actively participated in all of the activities associated with big books (e.g., *Good-Night Owl*, *Hutchins*, *Sheep in a Jeep* [Shaw]). Denise's use of the large book made it possible for John to follow the text and speechread as necessary. As Denise pointed, John orally read the words he had learned to identify. When Denise pointed to a word he did not know, he immediately turned to look at her face to speechread the word. Although he could not read all the words in the stories, he attended and he attempted to read, behaviors he did not consistently demonstrate during stories that did not have a big book, lacked repetitive language, or were long
and/or difficult to speechread. During those kinds of stories (e.g., *Katy and the Big Snow* [Burton]), John pretended to be attending when Denise turned his way, but while she was reading aloud he did not attempt to follow.

The first time Denise read *Katy and the Big Snow* aloud, she revised the text. Normally, Denise read the text in stories almost verbatim and then added clarifying remarks. As she read, John actively attended: He tried to speechread, he looked at the pictures when she turned the book around, he tried to follow his classmates' interaction around the pictures, and he contributed. The story was difficult to speechread, however, and although Denise was revising the text, gesturing as she read, and adding clarifying remarks, John did not follow the read aloud.

Excerpt from Videotape Analysis (VT 3, #5233), 1/16/91
Denise is revising text as she reads. The words in parentheses are her revisions.
D: (reading) One by one the truck snow plows broke down. The roads were blocked. No traffic (cars) could move. The schools, the stores, the factories (offices) were closed. The railroad station and airport were snowed in.
(commenting) No planes or trains could go out.
(reading again) The mail couldn't go through. The Police couldn't protect the city. The telephone and power (electric) lines were down. There was a break in the water main (line). The doctor couldn't get his patient (the person) to the hospital. The Fire Department was helpless (could not work). Everyone and everything was stopped.
(commenting) So much snow everything was closed. ... All the snow plows are breaking.
(reading again) But,
(commenting) 'But' --what do you think? 'But.' (pointing to the word) What do you think is going to happen?
J: ________
D: What?
J: ________
D: I need better speech.
J: (speaking and signing) Maybe trucks will push.
D: But I already said the trucks were broken.
J: Oh (wiggles, seems embarrassed).

Not long after this (seven pages of text), John's attention began to wane. He looked at me at the camera and started signing. Denise saw his hand motions in her peripheral vision and looked up. He pretended to be attending, and she continued her reading. As soon as she resumed her reading, John began signing again.

Excerpt from Videotape Analysis (JVT 3, #5301), 1/16/91
J: (signing to me at the camera) Are you going [name of the school] school? (i.e., John wanted to know if I was coming to interpret for him in his mainstreaming kindergarten that afternoon).
Denise sees him signing.
D: What John?
John repeats his question, speaking and signing to me as if Denise has given him permission to do so.
D: You need to pay attention to what were doing right now and not talking to Cheri.

John attended so poorly during the remainder of the story that after the lesson, Denise asked him why he had not attended. John told her that he "didn't like" the story, that it was "long" and "hard." The speechreading task was clearly too demanding for John, and he had consciously decided not to attend. Although one of Denise's goals for reading to her students was to support their language development, the difficulty of the speechreading task made it impossible for John to have a meaningful experience with language. For the children who could understand Denise without relying heavily upon speechreading, the read aloud was supportive to both their language and
literacy development and meaningful and enjoyable to them. Not so for John.

When John was actively participating in literacy events, he seemed to enjoy contributing. As Denise gave the children opportunities to share, John almost always commented, related a personal experience, or asked a question. The vignettes that follow provide insight into John's response to literacy events.

Excerpt from Field Notes, 9/24/90
(Calendar) Michael has just finished "Yesterday" on the calendar.
John shares:
J: Yesterday Dad sick. Two vomit church (s/v).
D: Oh really? Your dad was sick?
John shakes his head 'yes.'

Excerpt from Videotape Analysis (JVT 2, #1260), 11/29/90
(Reading Group) Denise has given each child his/her copy of "Goodnight Baby." The children are looking through the book. When John comes to the illustration of the doorbell, he points to the picture, looks up at Denise and says, "What's that?"

Excerpt from Videotape Analysis (JVT 5, #658), 1/29/91
(Reading Group) Denise is holding up the big book Sheep in a Jeep (Shaw).
D: What I want you to do now is think--if sheep are driving a jeep--
John interrupts.
J: No! (shaking his head and laughing at the idea)
D: --but they are in this story! What do you think maybe will happen in the story?
J: Maybe hit bump, hit the tree, fall in the water. Maybe drive, can't see, crash night time (s/v).

Excerpt from Videotape Analysis (JVT 2, #550), 11/29/90
(Calendar)
D: Tomorrow is John's birthday!
J: November will be finished. It will be ... (John leaves his seat, walks to the bulletin board, and points to the word December) Christmas time! (v)
D: (pointing to the word December) What is that?
J: Christmas time.
D: Yeah, Christmas comes in that month, but what month is that?
J: December.

As demonstrated in the last excerpt, John often used print to communicate. On one occasion when Denise was absent, the substitute teacher asked Michael to pass out the morning worksheets. John tried to tell her that it was his job to pass out the papers that week. When his attempts at communication failed, he jumped from his seat, ran to the job chart and pointed to his name under "pass out papers." John also used print as a source of authority.

Excerpt from Field Notes, 11/9/90
Denise has just finished the reading lesson and is passing out a worksheet. John turns to look at the job chart and then "reminds" Denise that it is Tyler's job to pass out the papers.
J: Tyler pass!
D: That's okay. I'm gonna do it this time.

Unlike Sue and Andrew, there was no time during John's kindergarten day that he had opportunity to explore written language on his own. He missed both library and High Scope due to his mainstreaming experience, and Denise did not schedule time for free-choice reading or writing during the regular school day. Consequently, a focal context for John's participation in written language could not be included in this section.
**Written Language in the Mainstreaming Kindergarten**

Literacy was constructed in three major ways in the mainstreaming kindergarten class: (1) Whole group instruction, (2) peer group interaction, and (3) personal construction. In the following sections, I will describe the ways in which John experienced and participated within literacy events in his mainstreaming kindergarten classroom.

**John's Experiences**

As Table 44 clearly demonstrates, John's experiences with written language in Janice's classroom, the mainstreaming kindergarten setting, were, in many ways, remarkably similar to his experiences with written language in Denise's classroom at the Preschool. Like Denise, Janice used print in a myriad of ways as she engaged the children in classroom activities. As was the case at the Preschool, literacy was embedded in all of the activities in Janice's room. I will not elaborate on these similarities, but, rather, in this section, I will discuss the ways in which John's experiences with literacy in his mainstreaming experience were different from his experiences with written language at the Preschool.
Table 44. John's experiences with written language in the mainstreaming kindergarten

**Janice:**

**Reading**
- allowed children to read to one another
- encouraged interaction around print
- introduced the children to authors of books
- read to children frequently to provide exposure to language
- read text verbatim and added clarifying remarks during read alouds
- modeled one-to-one correspondence while reading to the children
- linked the children's present literacy knowledge to concepts they were learning
- drew children's attention to pictures to help them make sense of print
- taught the names of alphabet letters
- taught letter/sound correspondences for all letters of the alphabet, particularly focusing on the consonants
- focused the children's attention on individual letters/words
- emphasized right to left directionality when using written language
- engaged the children in shared reading activities (i.e., teacher wrote messages on the chalkboard, pointed to the words, and asked the children to read aloud with her, or used books)
- invited more experienced readers into the classroom to read with the kindergarteners
- interpreted environmental print for the children
- made “life to text” and “text to life” connections with written language
- encouraged interaction around print
- filled the room with print

**Writing**
- taught concepts about print (i.e., "When we write we use a pencil, and when we color we use our crayons.")
- taught the mechanics of printing the alphabet letters
- provided written models for the children to copy
- provided daily opportunities for the children to independently and socially explore print

**Janice used written language:**
- to extend the children's vocabulary
- to communicate with parents
- to show ownership
- to convey information
- to organize the children's responsibilities
- to organize the day's/week's/month's activities
- to assist in learning new information, concepts, skills
- to document what was learned/experienced
- as a source of authority
Schedule of daily events. The schedule of events in Janice's classroom on Wednesdays and Fridays included circle time, work time, work choice, recess, music or math, snack, and independent or buddy reading.

12:30 - 12:35 Attendance/Jobs/Coloring
12:35 - 12:55 Circle Time
12:55 - 1:20 Work Time
1:20 - 1:45 Work Choice
1:45 - 2:05 Recess
2:05 - 2:35 Music (W); Math (F)
2:35 - 2:45 Snack
2:45 - 3:05 Independent or Buddy Reading
3:05 - 3:15 Dismissal

Janice's mainstreaming kindergarten: Schedule of daily events

Emphasizing letter/sound correspondence. In a brief conversation, Janice stated that she felt it was very important that the children learn to identify, write, and "be able to make the sound" for each letter of the alphabet. Classroom practice clearly demonstrated this belief. Each week, Janice introduced the children to one or two letters of the alphabet. Using "Letter People," Janice emphasized letter/sound correspondences and modeled for the children the proper way to write each letter. She talked about the words that the "Letter People" liked, and often engaged the children in writing these words during their work time. When she worked with the children individually, Janice modeled the correct way to make letters, particularly the letters in their names. The following excerpts are illustrative:

Excerpt from Audiotape, #1, 2/1/91

Boys and girls, I want to tell you a secret. Earlier today, just before you came in, there was somebody here waiting for you. Somebody was w-w-waiting and w-w-watching. ... It's Mr. W. He
has a wonderful wink. Can you wink back at him? His favorite day is W-W-Wednesday. And he loves W-W-Work time. ... Where is Mr. W's letter in the alphabet? At the beginning, in the middle, or at the end? He comes at the end! Look (Janice picks up a children's dictionary and begins to show the pictures). Let's see if we can read the words that begin with "w." They first one is wagon, walrus ...

PN: For work time that day, Janice directed the children to "draw three pictures of things that begin with "w" and, underneath each picture, copy the words from the dictionary."

Excerpt from Audiotape, #5, 2/15/91
Mr Q would like to hear his quiet song ... Quiet, queen, quarter, quilt, quart. Questions is another word ... I'm going to show you how to make his letter. We're going to write about Mr. Q today. We're going to make our Quiet Books.

Excerpt from Audiotape #1, 2/1/91
Janice is checking John's written work. She looks at his name, and notices that he has used uppercase and lowercase letters throughout his name. She tells him that his J and his L should be "capitals" but that the other letters should be "lowercase."

Janice not only emphasized alphabet letters, she focused the children's attention on individual words. Each afternoon during circle time, Janice engaged the children in reading messages she had written to them on the chalkboard. She always talked about the words in the message. Sometimes she wrote a "mystery message," and the children had to guess the letters that were missing.

Excerpt from Audiotape, #2, 2/6/91
Janice: Do you know what is funny about a? It is a letter that can be a word all by itself.

Excerpt from Audiotape, #3, 2/8/91
(Mystery message)
Dear _irls _nd _oys,
Ha _ y F _da !  (Happy Friday) We will find out more about our teeth.

Excerpt from Audiotape, #7, 2/27/91
Dear Class,
Did you all bring your library books back? Today we will read a special Leo Leonni book.

After they had talked about the message, one child would use a pointer to touch each word as his/her classmates read along. Janice assisted as necessary to maintain a one-to-one correspondence between the text and the reading. Often, Janice called on a child to "underline the words that are the same."

After circle time, Janice sent the children to the tables to work. Many of the activities focused on writing words, especially the "Letter People" words. Often when Janice read to the children, she asked them to respond to the story by drawing pictures. Sometimes Janice directed the children to write sentences underneath the pictures they had drawn. She would write several words on the chalkboard for the children's reference, and/or she would encourage the children to use their "inventive spelling."

Excerpt from Audiotape, #2, 2/6/91
Janice: (to the children) If you do not know how to spell a word, listen for the letter sounds, whichever ones you can hear, and spell it the best way you can. We can use the inventive spelling. You may use your own spelling today. But I'm going to put a couple of the words on the board for you.

Later that day, Janice suggested that she sometimes encouraged inventive spelling to give the children "practice in listening for sounds in words."
Introducing authors and/or illustrators of children's books. Like Denise, Janice used thematic units throughout the school year, however, she also regularly introduced the children to authors and/or illustrators of children's books. Once a month Janice would introduce an author, and throughout the month she would read his/her books. After she read the book, Janice displayed it in the classroom and made it available for the children's exploration. During the month of January, Janice introduced the children to Eric Carle, and in February, to Leo Leonni. Many of the children's table activities coincided with their study of the authors. When Janice was ending their exploration of Eric Carle's books, she brought all of his books to the front of the room and briefly reviewed the events of each one. Then, she sent the children to the tables directing them to draw a picture from their "favorite book." She told them that their picture would be used as a ballot, "a vote for the best Eric Carle book."

Buddy reading. Approximately every two weeks during reading time, students from the fifth grade class came to the kindergarten for "buddy reading." They read books from the class library and books Janice had borrowed from the school library. As his buddy, Elaine, read to John, I interpreted. John seemed to enjoy being read to, and he freely interacted with Elaine, often asking her questions and/or commenting on the story.

Excerpt from Audiotape #7, 2/27/91

John's buddy Elaine is reading Swimmy (Leonni).
Elaine: (reading) A happy school of little fish lived in a corner of the sea somewhere. They were all red. Only one of them was as black as a mussel shell. He swam faster than his brothers and sisters. His name was Swimmy.
John: The black fish?
Elaine: Yes.
John: Is it a boy?
Elaine: Yes. (reading) One bad day a tuna fish, swift, fierce and very hungry, came darting through the waves. In one gulp he swallowed all the little red fish. Only Swimmy escaped.
John: Let me see (She gives him a closer look at the picture).
Elaine: (reading) He swam away in the deep wet world. He was scared, lonely, and very sad. But the sea was full of wonderful creatures; and as he swam from marvel to marvel, Swimmy was happy again. He saw a medusa made of rainbow jelly, a lobster, who walked about like a water-moving machine, strange fish, pulled by an invisible thread, a forest of seaweeds growing from sugar-candy rocks ...
Elaine: (reading) ... an eel whose tail was almost too far away to remember, and sea anemones, who looked like pink palm trees swaying in the wind.
John: What is that? (pointing to the picture)
Elaine: Sea animals.
John: I never saw that before.
PN: Elaine read a little slower than normal for my sake. If she saw that I was still signing, she waited before she turned the page. I was amazed at her sensitivity. How do you sign "anemones"?

Although it was clear that John enjoyed being read to, he did not particularly like reading to Elaine. He expressed himself succinctly, "I don't like read, because I'm shy." I found this interesting, for I had never thought of John as a shy child. He did read to Elaine, however, and he did so successfully.

Excerpt from Videotape #7, 2/27/91
John reads to his fifth grade buddy, Elaine:
The Birthday Cake (Cowley)

Shoo! (Cowley)
Shoo! The cow went away. The sheep went away. The pig, (correcting) duck went away. The farmer went away. The duck came back. The pig came back. The sheep came back. The cow came back. Shoo! Shoo! The cow went away. The sheep went away. The pig went away. The duck went away. The farmer went
away. The duck came back. The pig came back. The sheep came back. The cow came back. Shoo!

On one occasion, the fifth graders were unable to come for buddy reading. Instead, the third graders came. This was an exciting day for John. Whitney, his older sister, became John's buddy for that day. Whitney read two stories to John in simultaneous speech and sign. At one point, John asked Whitney questions about the story, and she pointed John's attention to the illustrations as she answered his questions. The time was well spent. John and Whitney interacted in meaningful ways around print, without the interference of an interpreter.

**Shared reading.** On two occasions during independent reading time, Janice brought the group together for a shared reading. She sat in a chair and held a book for the children to see. The books were small, and not all of the children could see the print, but the books were familiar stories. First Janice read the book for the children, and then she invited them to read along. As she pointed, the children chimed in on the words they knew. Janice made comments about comprehension strategies, e.g., "The pictures give you a lot of clues," and she read the book twice, saying, "It's good practice to read it again." During one of my observations, Janice let "the birthday girl" read to her classmates during independent reading time.

**John's Participation in Written Language in the Mainstreaming Kindergarten**

During whole group instruction in Janice's class, John actively participated as I interpreted. He behaved as he did at the Preschool. John was a passive participant, however, during small group work. Table 45
details John's participation in literacy events in the mainstreaming kindergarten setting.

Table 45. John's participation in written language in the mainstreaming kindergarten

<table>
<thead>
<tr>
<th>John:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• actively participated during circle-time events</td>
</tr>
<tr>
<td>• actively contributed during circle-time events</td>
</tr>
<tr>
<td>• was very interested in his peers' interactions during circle-time</td>
</tr>
<tr>
<td>events</td>
</tr>
<tr>
<td>• used books as a source of reference for his own writing endeavors</td>
</tr>
<tr>
<td>• participated in shared readings by following the print as Janice</td>
</tr>
<tr>
<td>pointed and speechreading or watching the sign for unknown words</td>
</tr>
<tr>
<td>• asked questions about both the form and function of print</td>
</tr>
<tr>
<td>• interacted with Katelyn about her writing</td>
</tr>
<tr>
<td>• revisited favorite books during independent/buddy reading</td>
</tr>
<tr>
<td>• taught Katelyn and Don signs using sign language books</td>
</tr>
<tr>
<td>• primarily chose to play literacy-related games at the computer</td>
</tr>
<tr>
<td>during work choice time</td>
</tr>
</tbody>
</table>

John was an active participant during the language and literacy events of circle time. When Janice asked questions he quickly raised his hand, often calling out, "Oh, Oh," or "I know, I know," hoping that she would call on him. He often answered correctly. John enjoyed guessing mystery words and reading the message, and he particularly enjoyed using the pointer to guide his classmates' reading. He frequently was disappointed when he did not get a turn to do so. At the Preschool, John had five classmates and almost always had a turn at each activity. In the mainstreaming setting, John was one of twenty-five. Janice was sensitive to John, however, and frequently called upon him saying, "John doesn't get to do this very often," or "John's only here Wednesdays and Fridays."
John was very interested in his peers' interactions during circle time. The children spoke freely, and often simultaneously, and as I tried to keep up with the volley of interaction, John often said, "What say?" (i.e., what's he/she saying?) John attended, he contributed, and he seemed to enjoy the activities of circle time.

When Janice read to the children and sent them to their tables to work on a project related to the story, John, almost without exception, picked up the book as she laid it down and took it to his seat. He knew that the book would serve as a reference for his work. If someone beat him to the draw, John asked if he could have the book after the child was finished.

John chose to work at the computer during work choice time six of the eight afternoons I observed/interpreted in his mainstreaming kindergarten class. At the computer he played literacy-related games, particularly math games in which he had to add and subtract and reading games in which he identified letters of the alphabet and matched pictures to words. John preferred to play alone, but Janice allowed two children at the computer at a time, so John often invited his cousin, Don, or his friend, Katelyn, to play with him. If another child was working on the computer before John finished his table work, John asked the child if he could play along.

At the Preschool, John had little opportunity to independently explore written language. Although he had ample opportunity in his mainstreaming setting to independently write, he only chose to do so on two occasions, the two afternoons he did not work at the computer during work choice. On both occasions, John asked about either the form or the function of print. On the first occasion, John was copying words from Bears on Wheels (Berenstain)
when he noticed that the \textit{a} in \textit{bear} was "different." I explained that the \textit{a} we write with our pencils and the \textit{a} a typewriter makes are "a little different."

The second time John chose to work at the writing table during work choice (the computer was unavailable), he sat next to Katelyn who was writing in a journal. John was interested in Katelyn's writing and requested that I ask her about it. She explained that she was "making a book about a birthday party." John asked if her birthday was "soon," and she said "no." He inquired further if her sister's birthday was "soon." Again Katelyn said "no" and explained that her mother's birthday was "coming up pretty soon."

During independent reading time, John frequently revisited \textit{Bears in the Night}. (Berenstain). Sitting on the rug, he would read through the book, often signing the words on each page. As well, John often read with Katelyn or Don, and they frequently looked through sign language books Janice had brought into the classroom. Sometimes, John taught them to sign words and/or letters of the alphabet as they perused the books.

When Janice engaged the children in shared readings, I interpreted for John, but he did not always watch. Sometimes he followed the print as Janice pointed. Because he sat toward the front, he could see the print even though the books were small. When Janice pointed to a word he did not know, he either tried to speechread Janice or looked to me for the sign.

\textbf{John's Knowledge and Understanding of Written Language}

I had little opportunity to observe John exploring written language independently or socially in his kindergarten classroom at the Preschool, and in his mainstreaming setting, John infrequently chose to independently write.
He spent the majority of his work-choice time exploring literacy at the computer, however, and I was able to gather some data on his knowledge of written language while he played. During the administration of the informal assessments, John demonstrated a great deal of knowledge about both the form and function of written language. In Table 46, I have delineated the knowledge and understandings John demonstrated by February 28.
Table 46. John's demonstrations of written language knowledge

**Book-handling knowledge:**
- began at the front cover and proceeded to the back page when reading a book
- leafed through a book one page at a time

**Concepts of print:**
- distinguished between the top and bottom of a page
- understood that the print carries the message
- read the left page of a book first
- read from left to right
- wrote from left to right
- demonstrated return sweep when reading
- demonstrated return sweep when writing
- demonstrated one-to-one correspondence when reading
- named all of the alphabet letters, both uppercase and lowercase, except for X, x, and q.

**Sense-making strategies in reading:**
- used pictures to make sense of text
- for the most part, read for meaning (i.e., expected the text to make sense and tried to make sense of it)
- attended to the patterns in repetitive texts and read as though he expected them to continue
- did not worry with words he did not know if the text made sense without them (i.e., The text read: "How many bugs are in the box?" John consistently read, "How many bugs in the box?")
- reread to check his accuracy while reading
- used one-to-one matching to check his accuracy
- demonstrated some (but very little) risk-taking (i.e., would attempt words he didn't know)
- knew when to ask for help
- did not use his sense-making strategies consistently

**Sense-making strategies in writing:**
- rereads words he has written
- uses verbal language to direct and/or monitor his writing endeavors
- searched the environment for words he wanted to write
- knew when to ask for the spelling of words
- used one-to-one reading as he reread the text he had written
- used books as a source of information for his writing endeavors

The first time I asked John to read for me (October 29) he quickly replied, "I don't know how read." I assured him that, in fact, he could read, and together we read a line of text. Thereafter, when I asked John to read, he did so, knowing that I would assist as necessary. From my interactions with
John and his family, I knew that John was both a reader and a writer, and my primary objective during the testing sessions was not so much to document what he knew, but, rather, what strategies he used to acquire his knowledge and understandings.

For the most part, John read for meaning. That is, he expected the story to make sense, and he attempted to make sense of it.

Example 1:
John has just read, "Baby could not sleep."
Text: Baby cried.
John: Baby could
("correcting") woke up.

John knew the word was not "could" so he "corrected," choosing a word that was congruous with his knowledge of the story. His miscue (woke-up) indicated that he was trying to make sense of the text. If the baby could not sleep, he/she must be awake!

John used several other "sense-making strategies" while reading during our testing sessions. For example, he identified patterns in repetitive texts and read as though he expected the pattern to continue. When faced with an unknown word, he looked for information in the illustrations.

Example 2:
Text: A bug sat on the table.
John: A ladybug sat on the table.
Note: The bug in the illustration was a ladybug.
Example 3:
Text: A table was on the porch.
John: A boy was on the porch.
Note: There was both a table and a boy on the porch in the illustration.

In these examples, John used the information in the pictures to predict what might be in the text, the unknown words *bug* and *table*. His miscues (*ladybug* and *boy*) were semantically and syntactically appropriate; they made sense in the sentence. John did not, however, attend closely to the graphophonemic (visual) information provided in the print. That is, *ladybug* does not begin with a *b* [although it does have a /b/ sound within the word], and *boy* does not begin with a *t*. For accurate reading, John must learn to check information provided in the illustrations with graphophonemic information provided in the text.

On one occasion, when John read a bit of text that seemed incongruous with his knowledge of the story, he reread the words to check his accuracy.

Example 4:
Text: Baby could not sleep.
John: (pointing as he read) Baby could (he pauses)
      (he rereads, pointing again) could
      not sleep.

John knew from previous readings that the baby could not sleep. The word *could* was disconcerting; it did not mesh with his knowledge of the story. (Another interpretation might be that John's miscue was related to sign
language. John typically signed the contraction can't [one sign] rather than can not [two signs]).

John did not use his sense-making strategies consistently, and I often reminded him of his own knowledge. For example, when he appealed for help and had not looked at the picture, I reminded him to do so. ("Did you look at the picture?" "Look at the picture.") When he had difficulty with a line of text and appealed for help, I suggested that he "start again."

In most cases, John took few risks when reading or writing. As he had done during my observations in his home, when he did not know a word in a text, he often appealed for help. When John wrote during our testing sessions, he always asked for the spelling of an unknown word. On one occasion, however, John looked around the room for a word he wanted to write (pig). The room was devoid of print, and when John realized the environment would not support his writing endeavors, he abandoned this strategy and, thereafter, asked for the spelling of unknown words.

Although John frequently asked for the spelling of words, he had little difficulty determining what he wanted to write. When I asked him to write a story (Harste Task Five, #3) and assured him that I would help him spell the words, John sat for a few minutes, told he was "thinking," and then began to write "The Three Little Pigs" (see Figure 22).
Although John did not often reread words as he read books, he consistently reread the words he was writing. He would write a word or two, reread the words, say and/or sign the word he would write next, then continue writing. The following excerpt demonstrates these writing strategies.

Excerpt from Testing, (JVT 6, #4638) 2/7/91
John's story: The words that he asked me to spell are underlined.

The **Three little Pig Paint a House to show How to Build the one Pig made Hay** and The **Wolf Puffed at number one and the number one is Dead now number 2 HAVE** (out of time)

After John wrote "The Three little," he reread the text, said "pig" and looked around the room for the word. When he could not find it in the room, he asked for the spelling. He wrote "pig," then reread the text and asked for the spelling of "paint." I misunderstood and gave him the word "build." He wrote "build," reread it, and s/v "a," then wrote it. He reread the text from the
beginning, pointing to each word as he read, mouthing the words, without voicing: "The three little pig build a" then he asked for the spelling of "house." He wrote "house," then reread "build a house" and said "to." He turned to me for the spelling of "to," then remembered that he knew how to spell the word and wrote it. Then he asked me to spell "show." He wrote it, then s/v "how" and asked for the spelling of "how." He reread "show how," and moved his mouth without voicing for "to." He wrote the word "to," and then, pointing to each word with his pencil, he reread his entire text out loud. ...

Throughout the writing process, John consistently reread his text as if to monitor the accuracy of his story and/or to prompt the word he would write next. Then, most often, John would say and/or sign the word his rereading strategy had prompted.

John not only wrote stories, he told them. As I had done with Andrew (Harste Task Two), I provided John props (carpenter, fireman, post woman, nurse, doctor, tiger, lion, giraffe, dog, mouse) and asked him to tell me a story. John took a few minutes to think, chose the carpenter and the dog and told this story:

The boy met the dog. And boy asked mom and dad, "Look at my dog." And boy said, my mom and dad, "Can I keep dog for long time?"

John's story had a beginning, a middle, and an ending. It was coherent, and it communicated a message. I asked John if he wanted to tell me another story, and he did so, without props. In simultaneous communication, John told "The Three Little Pigs," his "favorite" story.
The mommy said, "Go work. Build house yourself." And first pig made straw house. And wolf knocked, said, "I come in." Pig said, "No way!" Wolf said, "or I will blow." Puff and eat. The second pig ___?___ wood stick. And wolf said, "I come in." And pig said, "No way!" And wolf said, "Or I will huff and puff. ___?___ Third pig. Wolf knocked, "I will come in." The pig said, "No way!" "Or I will puff you." Puff, can't. Puff, can't. Puff. Puff. ___?___ pig fire ___?___ fire die.

During our testing sessions (Harste Task Five, #1), John demonstrated considerable understanding of the function of personal correspondence. As I had done with Andrew, I read John a letter from my mother in which she asked what he "liked to play." John wrote a letter that answered my mother's questions (I provided the spellings of words), and he prepared an envelope to send it (see Figure 23).

Figure 23. John's letter and envelope to Cheri's mom
After I withdrew from the Preschool site at the end of the data collection phase of this research, I wrote to Sue, Andrew, and John. John not only wrote back, he continued correspondence with me for some time thereafter (see Figure 24).

![Figure 24. John's letter to Cheri](image)

**Biography Summary**

John was both a reader and a writer. He knew how to make sense of and through written language. He demonstrated a keen interest in print. My observations in his home and in both kindergarten classrooms and the results of the informal assessments indicated that John knew a great deal about both the form and functions of print. Except in situations where speechreading was extremely difficult or impossible, John participated in literacy events at the Preschool with enthusiasm. In the mainstreaming situation, John actively participated in whole group literacy events, and he
chose to play literacy-related games at the computer over other available activities.
MAJOR FINDINGS

In this chapter, I described the ways in which the children experienced, participated in, and used verbal language and literacy within their homes and preschool classrooms. In addition, I documented the children's knowledge and understanding of written language. The findings of this investigation can be summarized in six major points:

1. The three children's verbal language worlds can be characterized as highly divergent. Regardless of the mode of communication used, each child's verbal language world was multiple, diverse, and varying.

2. The three children's written language worlds can be characterized as highly convergent.

   a. Despite the great diversity among their verbal language worlds, the children demonstrated remarkably similar interests and participation in as well as similar uses for written language.

   b. Despite the great differences between the verbal language worlds of these profoundly deaf children and the spoken language worlds of their hearing peers, the children's interests and participation in, uses of, and knowledge/understandings of written language were remarkably similar to those of hearing children of comparable ages.

3. Proficiency in verbal language was not a prerequisite for the children's literacy learning. Verbal language and written
language development were occurring concomitantly, mutually reinforcing the other in development.

4. Written language understanding was developing apart from the connections that normally occur between written English and spoken English.

   a. The children did not map spoken English directly onto written language.
   b. The children did not demonstrate use of letter/sound correspondences.
   c. The children appeared to bypass the sound element of English and relate meaning to written language.

5. Mode of communication did not appear to have any bearing on the children's knowledge and understanding of written language at the preschool level. Regardless of modality, all three children demonstrated literacy knowledge and understandings that were age-appropriate.

6. Lack of a common modality among the Preschool I oral/aural children and among John and his classmates in the mainstreaming situation prevented them from interacting in any meaningful way around print. From the perspective of the social construction of literacy, these circumstances could mitigate against further literacy development.

In Chapter Five, I will discuss these six major findings and present the implications of the investigation.
CHAPTER V
DISCUSSION

The purpose of this study was to investigate the verbal language worlds and early childhood literacy development of three profoundly deaf preschool children. In the conclusion to Chapter Four, I presented the six major findings of the investigation. In the sections that follow, I discuss these six major findings. At the close of the chapter, "working hypotheses" (Lincoln & Guba, 1985, p. 362) and recommendations for further research are presented. Additionally, the key participants’ reactions to the case study report are provided as a final member check on the research. The chapter concludes with a personal epilogue.

Divergence in the Children’s Verbal Language Worlds

As most hearing-impaired children do (cf. Moore, 1982), Sue, Andrew, and John navigated within multiple, diverse, and varying verbal language worlds. Each child's experiences with verbal language varied from home to Preschool contexts and often within contexts at the Preschool. Each child's verbal language world was also dramatically different from the verbal language worlds of the other two children participating in the study. To illustrate this multiplicity, diversity, and variability, I have borrowed a strategy from Taylor and Dorsey-Gaines (1988) and presented the data in a comparative frame (see Table 47).
<table>
<thead>
<tr>
<th>Multiplicity of Verbal Language Worlds</th>
<th>Diversity within the Multiple Worlds</th>
<th>Variability</th>
</tr>
</thead>
<tbody>
<tr>
<td>наблюаемый: verbal language world at home: oral/aural English</td>
<td>Diversity at home:</td>
<td>inconsistency among interlocutors in the use of deliberate gestures</td>
</tr>
<tr>
<td>наблюаемый: verbal language world at school: oral/aural English supported heavily with gestures and some signs</td>
<td>- mother spoke, signed, and gestured</td>
<td>experiences changed as parents learned new signs</td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>Diversity at school:</td>
<td>inconsistency among interlocutors in the use of signs</td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- Elizabeth spoke, gestured and inadvertently signed</td>
<td>experiences changed as mother learned new signs</td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- &quot;oral&quot; peers spoke - some were intelligible - others were not</td>
<td>unknowingly, interlocutors used signs as gestures thereby giving the signs different meanings</td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>Diversity at school:</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- Anna used simultaneous communication</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>peers primarily signed without speaking</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>Diversity at home:</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- most often, parents used simultaneous communication</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- sometimes parents signed without voicing</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- sister often signed without voicing</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>Diversity at school:</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- oral/aural English of peers in Oral classroom</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- spoken English of Denise</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- simultaneous communication of peers in TC classes</td>
<td></td>
</tr>
<tr>
<td>наблюаемый:</td>
<td>- spoken English of hearing peers in mainstreaming class</td>
<td></td>
</tr>
</tbody>
</table>
Multiplicity

Like most profoundly deaf children, Sue, Andrew, and John navigated within multiple verbal language worlds. While most hearing children hear and speak one language (e.g., English) in their homes, at school, and in their communities, the three children in this study had at least two fundamentally different verbal language worlds, that of their home and that of their preschool classroom.

Sue's two verbal language worlds were more similar than were Andrew's or John's. The primary mode of communication in Sue's home and in her preschool classroom was spoken English. The similarity ends there, however, for the spoken English of her interlocutors at the Preschool was more heavily supported by deliberate gestures and signs than was the spoken English of family members, particularly in the beginning of the investigation when Sue's mother knew few signs. Quite obviously, the spoken English of Sue's oral/aural peers was fundamentally different from that of her hearing adult interlocutors.

Andrew's verbal language worlds were dramatically different. At home, the dominant mode of communication was spoken English and Cathy added signs as possible. In Andrew's Preschool II classroom, however, Anna maintained a total communication environment where verbal language was consistently presented in simultaneous speech and sign.

John navigated within at least three different verbal language worlds. At home, John's interactions were, for the most part, in simultaneous communication. At the Preschool, however, verbal language was presented
in oral/aural English. In John's mainstreaming kindergarten class, spoken English was the dominant form of communication.

**Diversity**

Within each of Sue's, Andrew's, and John's verbal language worlds there was also much diversity. That is, the children's experiences differed within each world depending upon their interlocutors' use of verbal language. For example, Andrew's verbal language world at home took two forms: Cathy, Andrew's mother, primarily used spoken English to communicate, while his younger brother most often gestured when interacting with Andrew. Andrew's verbal language world at the Preschool also took two forms: Anna always used simultaneous communication, but Andrew's peers infrequently voiced when they signed.

Sue's experiences were more diverse than Andrew's. As Table 47 indicates, Sue experienced verbal language at home in at least four different forms. Her mother spoke, signed, and gestured to communicate. Her father infrequently signed. Sue's baby-sitter spoke to Sue as if she were a hearing child, and Sue's grandparents most often gestured to Sue without voicing. At school, Elizabeth spoke, gestured, and inadvertently signed. Sue's oral/aural peers spoke to communicate while her friends in the total communication classes most often signed without voicing.

John's experiences with verbal language in his instructional settings were dramatically different. The spoken English of John's oral/aural peers was very different from the spoken English of his hearing peers. As well, John's friends in the total communication classes at the Preschool interacted
with John in simultaneous communication or they signed without speaking. John's verbal language world at home also took several forms. For the most part, John's parents used simultaneous communication. At times, however, they signed without voicing. Whitney, John's older sister, often signed without voicing, and she frequently spoke to her parents in John's presence without signing.

Table 47 clearly demonstrates that each of the children's interlocutors used the modalities available to them to communicate. This resulted in a presentation of verbal language that was not only different from home to school (multiple worlds) for each child, but was also different within the home and within the school.

Variability

In addition to the multiplicity and diversity which characterized the children's verbal language worlds, verbal language was often presented inconsistently both within and across these worlds. This, too, is a very typical situation for profoundly deaf children. For example, at the Preschool, adults used deliberate gestures and signs inconsistently. The meanings of these gestures and/or signs varied from context to context. For Sue and Andrew, signs used at home sometimes had different meanings at the Preschool. This situation, a common one for hearing-impaired children, is due to a lack of agreement on forms of sign language among educators. Within each signed system, many signs are invented and/or develop as variations around commonly used signs (Moores, 1982), and, consequently, hearing
interlocutors have dramatically different ways of using sign language with young hearing-impaired children.

Furthermore, the children's experiences with verbal language were constantly changing. As family members learned new signs and as the children met new interlocutors, the children's experiences with verbal language changed. John's experiences with verbal language changed dramatically throughout the year as he participated in his mainstreaming kindergarten class. At the beginning of the year, he did not have an interpreter and depended entirely upon his speechreading skills and maximal use of his residual hearing to make sense of spoken interaction. In February, an interpreter was added, and in March a new interpreter worked with John.

The multiplicity, diversity, and variability which characterized the children's verbal language worlds appears to be less than conducive to language acquisition and development. Yet, the three children were active constructors of meaning, and each child appeared to be making sense of these inconsistent experiences with verbal language and developing a verbal language base. While all three children were acquiring a verbal language base, however, the amount of English they were acquiring is unclear. That is, each child was acquiring spoken and/or signed language that in some way reflected English but was not the spoken English of their parents or teachers. This, again, is the typical situation of profoundly deaf children. What most profoundly deaf children acquire is a verbal language base that has elements of English but cannot be considered intact English. Because of their hearing impairment, English is not entirely accessible to
profundely deaf children. Neither oral/aural English nor the signed systems of English can provide a linguistically coherent presentation of English which is a spoken language. Regardless of modality, profoundly deaf children do not experience English in the whole, consistent, patterned, ruled-governed form that hearing children do. As a result, what profoundly deaf children generally acquire in terms of a meaning base is verbal language, but, for the most part, it is not intact English.

At the same time that profoundly deaf children are experiencing these dramatically different verbal language worlds, they are trying to make sense of the written language in their environments. Unfortunately, the match between the children's verbal language and written English is often very poor. This mismatch does not appear to be supportive to written language development.

Because profoundly deaf children do not acquire spoken English, acquiring literacy with written English is truly, for them, a different task than it is for hearing children who do acquire spoken English. Consequently, it is truly amazing that Sue, Andrew, and John related to, used, and made sense of written English in the ways that they did. Perhaps this is due to the fact that written English is the only form of language that has linguistic coherence for young profoundly deaf children of hearing parents. (Deaf children of deaf parents who communicate through American Sign Language do experience a linguistically coherent language. Interestingly enough, these children tend to achieve higher levels of literacy than do deaf children of hearing parents [see Vernon & Koh, 1970]).
Convergence in the Children's Written Language Worlds

Despite the dramatic differences among the children's verbal language worlds, Sue's, Andrew's, and John's experiences with, participation in, and uses of written language both at home and at the Preschool were, in most instances, remarkably similar. The differences that were noted often related to the varying uses of verbal language. Furthermore, Sue's, Andrew's, and John's literacy worlds were very similar to those of hearing children of comparable ages as documented in recent early childhood literacy research (Cochran-Smith, 1984; Dyson, 1981, 1989; Rowe, 1989; Taylor, 1983). These assertions will be developed further in the sections to follow.

Family Literacy

Despite the diversity among their verbal language worlds at home, family literacy practices for Sue, Andrew, and John were in many ways strikingly similar. All of the parents provided their children numerous books to support and encourage their children's reading development. Parents read to their children, with their children, and/or provided opportunities for the children to explore books on their own. The differences noted in social interaction around books was related to the parents' abilities to communicate with their children rather than to differences in family literacy practices. As well, Andrew's mother, Cathy, and John's parents, Mary and Henry, read in their children's presence, demonstrating the value they placed upon literacy and their own interest in and enjoyment of reading. Both Andrew's mother
and John's parents stated that success at literacy was what they wanted most for their children. For them, literacy was "the bottom line."

Reading was the most frequent type of literacy event in the children's homes, but all three children participated in writing events. All of the parents provided materials and opportunities for their children to explore written language. Sue's and Andrew's opportunities for writing increased throughout the course of the investigation.

The families demonstrated a myriad of uses for print in their daily lives. Although I did not focus broadly on family literacy during my visits in the children's homes, the types and uses of literacy that emerged during data analysis were, again, remarkably similar. For example, all three mothers frequently used written language to communicate with their child's classroom teacher. Each family used written language to extend their child's vocabulary and to explain complex or abstract concepts. Each of the parents shared retrospective accounts about interpreting print in the environment for their children. All three families displayed their children's written work from the Preschool in their homes.

The types and uses of literacy evident in Sue's, Andrew's, and John's homes were not unlike the literate practices of the groups Taylor & Dorsey-Gaines (1988) compared in their book *Growing up Literate*. In that monograph, the authors built a theoretical frame in which they compared the literate practices of several diverse groups, e.g., the white and black working-class communities (Roadville and Trackton) and the mainstream community (Townspeople) of Heath's (1983) ethnographic investigation of literacy in the Carolina Piedmont; the white middle-class families in Taylor's (1983)
investigation of suburban family literacy; and the inner-city families of Taylor & Dorsey-Gaines' (1988) investigation of literacy in urban settings. Despite the differences in the families' socio-economic and educational status, similar types and uses of reading and writing were found in each of the three studies. In Table 48, I have compared several of the types and uses of reading found in those studies to the types and uses of reading found in the present investigation. Table 49 is a comparison of the types and uses of writing. The tables document the similarities in the ways in which literacy was used by each group despite the dramatic differences between them.
<table>
<thead>
<tr>
<th>Types and Uses of Reading</th>
<th>Group Studied</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumental types and uses of reading for gaining information for scheduling events of daily life, meeting practical needs, dealing with agencies</td>
<td>Shay avenue neighborhood (Growing Up Literate, Taylor &amp; Dorsey-Gaines, 1988)</td>
<td>Notes left on refrigerator of items to buy at the store; applications for food stamps; phone numbers and addresses in address books</td>
</tr>
<tr>
<td></td>
<td>Roadville (Ways with Words, Heath, 1983)</td>
<td>Patterns for dressmaking; telephone dials; school messages; notes; labels on products; bills</td>
</tr>
<tr>
<td></td>
<td>Suburban families (Family Literacy, Taylor, 1983)</td>
<td>Food coupons in papers and magazines; address books; bills and checks; knitting and dressmaking patterns; notes to oneself and others; lists</td>
</tr>
<tr>
<td></td>
<td>Case study families</td>
<td>Notes to oneself and to the children; lists of chores; phone numbers and addresses in address books; appointment books; calendar with reminder notes</td>
</tr>
<tr>
<td>Social-interactional types and uses of reading to gain information pertinent to building and maintaining social relationships</td>
<td>Shay avenue neighborhood</td>
<td>Letters from friends; greeting cards; storybooks shared with children; notices of local events; births</td>
</tr>
<tr>
<td></td>
<td>Trackton (Ways with Words, Heath, 1983)</td>
<td>Greeting cards; political flyers; letters; newspaper features; announcements of community meetings</td>
</tr>
<tr>
<td></td>
<td>Suburban families</td>
<td>Letters from family and friends; greeting cards; notices of school/church events; phone messages</td>
</tr>
<tr>
<td></td>
<td>Case study families</td>
<td>Greeting cards; letters from family/friends; notices of Preschool events; storybooks shared with children</td>
</tr>
<tr>
<td>Educational types and uses of reading to fulfill requirements of school courses; to build and maintain career; to discuss educational, political, and social issues</td>
<td>Townspeople (Ways with Words, Heath, 1983)</td>
<td>News magazines; the Bible; popular novels and nonfiction books; reviews of Broadway plays</td>
</tr>
<tr>
<td></td>
<td>Roadville</td>
<td>Advertisements for home shows, movies or musical programs; ball game schedules</td>
</tr>
<tr>
<td></td>
<td>Case study families</td>
<td>Books/journal articles on the education of the deaf; textbooks; nonfiction books; computer visuals and printouts; magazines; office paperwork</td>
</tr>
</tbody>
</table>
Table 49. Family Literacy in a Comparative Frame: Types and Uses of Writing

<table>
<thead>
<tr>
<th>Types and Uses of Writing</th>
<th>Group Studied</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforcement /substitute for oral messages types and uses of writing</td>
<td>Roadville (<em>Ways with Words</em>, Heath, 1983)</td>
<td>Messages left by adults for children coming home before parent; notes for absence from school; assignments following class discussions</td>
</tr>
<tr>
<td></td>
<td>Townspeople (<em>Ways with Words</em>, Heath, 1983)</td>
<td>Notes for tardiness to school; notes left by family members for one another</td>
</tr>
<tr>
<td></td>
<td>Shay avenue neighborhood (<em>Growing Up Literate</em>, Taylor &amp; Dorsey-Gaines, 1988)</td>
<td>Letters written to teachers regarding homework; messages written to children and other family members</td>
</tr>
<tr>
<td></td>
<td>Case study families</td>
<td>Daily/weekly correspondence with Preschool teacher; print used when speech was unintelligible; messages left by one family member to another</td>
</tr>
<tr>
<td>Social-interactional types and uses of writing</td>
<td>Trackton (<em>Ways with Words</em>, Heath, 1983)</td>
<td>--- --- ---</td>
</tr>
<tr>
<td></td>
<td>Suburban families, (<em>Family Literacy</em>, Taylor, 1983)</td>
<td>Letters to and from children; greeting cards; writing and drawing with young children</td>
</tr>
<tr>
<td></td>
<td>Shay avenue neighborhood</td>
<td>Letters to family members and friends; cards sent at Christmas, Valentine’s Day, and birthdays; writing and drawing with young children</td>
</tr>
<tr>
<td></td>
<td>Case study families</td>
<td>Letters to family and friends; greeting cards of all kinds; notes to parents and children; children's writing and drawing</td>
</tr>
<tr>
<td>Memory-Aids types and uses of writing</td>
<td>Roadville</td>
<td>Grocery lists; frequently called numbers written in front of phone book; labels in baby books</td>
</tr>
<tr>
<td></td>
<td>Shay avenue neighborhood</td>
<td>Bathroom schedule for potty-training youngsters</td>
</tr>
<tr>
<td></td>
<td>Case study families</td>
<td>Notes on refrigerator; notes written on calendar lists; telephone numbers and addresses</td>
</tr>
</tbody>
</table>
The home environment has long been viewed as significant to children’s success with literacy, particularly reading development (Almy, 1949). Leichter (1974, p. 2) suggests that "the family is always a setting in which important educational encounters occur." The significance of the home environment for early literacy learning is documented in Taylor’s (1983) investigation into family literacy. In their homes, the children "reinvented" writing forms, constructing knowledge of written language as they used print to serve their own personal needs and mediate and sustain social interaction. The parents were not consciously teaching their children to read, yet each regularly read to their children, a practice which has been positively related to success with beginning literacy instruction in school (Almy, 1949; Heath, 1983; Snow & Ninio, 1986; Wells, 1986). As well, numerous unnoticed, momentary writing events occurred daily that supported the children’s understandings of written language. Taylor’s study highlights the ways in which young children’s early experiences with print are influenced by both their parents’ and older siblings’ experiences.

Interestingly enough, the family literacies of Sue, Andrew, and John were striking similar to the literate practices of parents and children in the six suburban families in Taylor’s (1983) investigation. As in the present study, the parents in Taylor’s investigation provided their children with books and writing materials. They read storybooks to their children and interpreted print in the environment. The families’ homes were filled with written language, from calendars and family correspondence to school and work-related papers. Literacy was embedded within everyday activities of the home.
Not only were the family practices similar, Sue's, Andrew's, and John's participation in literacy events was notably similar to the ways in which children in Taylor's investigation participated in literacy in their homes. Like the three children in the present research, the children in Taylor's investigation wrote letters, made drawings, and read a host of print in their homes. Sometimes they asked their parents or siblings for assistance as they wrote. Sue, John, and, especially Andrew, frequently solicited help during writing events. The older children in Taylor's study did their homework in the younger children's presence, just as Whitney had done with John in this investigation.

Taylor found that name writing "was a notable feature of the children's literate endeavors" (p. 61). One 4-year-old child was "noticeably interested in the alphabet" (p. 59), and, like the children in this study, he frequently wrote his name on his drawings. The child asked his parents to write for him and he copied the words, just as Sue had done with Jordan. The child read books by looking at the pictures and creating the tale, reading behaviors that Sue and Andrew demonstrated repeatedly throughout this investigation. When the child's mother read to him, he made comments that reflected the connections he was making between the text and his own personal experiences. Sue frequently responded in this fashion during interactive story events at home, and both Andrew and John did so during storyreading at the Preschool.

Sue, Andrew, and John experienced and participated in literacy events in their homes in ways that were very similar to the experiences and participation of hearing children of similar ages. Parents used literacy and
children participated in literacy events in ways that reflected our society's uses for written language despite the fact that the children had limited and/or delayed verbal language. Furthermore, the three children in this investigation demonstrated interests and participation in and knowledge and understandings of written language that were noted of hearing children in studies of preschool literacy. The similarities between the case study children's and hearing children's preschool literacy worlds will be discussed in the next section.

Preschool Literacy

Although Sue and John were in oral/aural classes and Andrew was in a total communication class, the ways in which their teachers used literacy was notably similar. All three teachers established a print-reliant approach to learning. That is, they used written language to teach new information, concepts, and/or skills. The teachers routinely used written language in functional ways throughout the preschool day demonstrating for their students the ways in which reading and writing can be used for personal and social purposes. As they used written language, they also demonstrated the mechanical competencies involved in reading and writing.

Elizabeth, Anna, and Denise regularly used print to "teach language" and extend the children's vocabulary. They organized the day's, week's, and/or month's activities and documented what was learned and/or experienced in those activities through written language. They regularly used print to assist the children in learning new concepts. Print was used as an authority and was respected by both teachers and children alike.
When they used written language, Elizabeth, Anna, and Denise emphasized left to right directionality, one-to-one correspondence between verbal language and written language, and attention to individual words. They frequently focused the children's attention on the illustrations in books, helping their young students make meaning of print and develop sense-making strategies for independent reading.

Some of the ways in which Denise, Anna, and Elizabeth presented and used literacy were similar to the ways teachers in Cochran-Smith's (1984) investigation of preschool literacy used written language (e.g., communicating with parents, using books to gain information, using written language to organize and present information efficiently). The similarity in storyreading events was notable. As the teachers in Cochran-Smith's investigation had done, the three teachers in the present study engaged the children in interactional sequences that Cochran-Smith suggests contribute to literacy development.

Cochran-Smith's "readiness for reading" interactions helped to establish and maintain the norms for storyreading behavior. These norms included sitting on the rug facing the storyreader, visually attending to the book being read, and attending closely to relationships between words and pictures (p. 120-121). In their "readiness for reading" interactions, Anna, Elizabeth, and Denise explained and required very similar behaviors, behaviors they deemed appropriate for storyreading time at the Preschool (e.g., sitting on your bottom with your legs crossed; attending to the teacher; refraining from individual conversations with peers; visually attending to the book being read).
Cochran-Smith defines "life-to-text" interactions as those interaction sequences which "helped listeners make sense of the events, characters, action, and information in the particular books being shared" (p. 169). Denise, Elizabeth, and Anna frequently used "life-to-text" interactions to help their young readers make sense of books. Most often, they related the children's personal experiences to events in the stories (e.g., "Remember when we made peanut butter and jelly sandwiches? Well, he's doing that.").

"Text-to-life" interactions assisted the children in using the information, themes, or messages in books that were shared (p. 169). In their "text-to-life" interactions, Anna, Elizabeth, and Denise most often applied the information in books to events outside of books (e.g., "This book is called Dear Zoo, and it's about the animals we'll see at the zoo on Thursday." ; "Do you remember the story about Round Robin? This bird is the same as Round Robin. He eats seeds like Round Robin did.")

In these interactional sequences, Denise, Elizabeth, and Anna were helping the children learn to be "readers" and were instructing them "in behaviors that accompanied and supported the activity of reading" (Cochran-Smith, 1984, p. 106). As did the teachers in Cochran-Smith's investigation, each teacher in this study frequently "overrode the textual narrator and became the narrator herself, annotating the text, ... constantly mediating by alternating between two roles--spokesperson for the text and secondary narrator or commentator on the text" (Schieffelin & Cochran-Smith, 1984, p. 10). In these ways, Sue's, Andrew's, and John's experiences with storyreading at the Preschool were similar to the storyreading experiences of the hearing children in Cochran-Smith's investigation.
Not only were their experiences similar, Sue's, Andrew's, and John's participation in literacy events at the Preschool resembled that of hearing children in the preschool literacy studies of Cochran-Smith (1984), Dyson (1981, 1989) and Rowe (1989). Like the children in Dyson's (1981) investigation of oral language and early writing, Sue, Andrew, and John used verbal language to support their writing endeavors. Often, they used verbal language as a self-monitoring strategy to direct their writing. Before they wrote, they frequently said and/or signed the name of the crayon they would use or the word they would write next. This "planning strategy," as Dyson called it, appeared to control or direct the children's text construction. Ewaldt (1985) also found that the hearing-impaired children in her investigation used fingerspelling and sign language to plan, direct, or monitor their writing.

Also like the children in Dyson's investigation, Andrew frequently used representational and interactional language; that is, he verbally labeled what he wrote ("My name, Andrew."), and he interacted on a personal level with his peers at the writing table ("Birthday, you!"). Sue did the same with adults. All three case study children demonstrated Dyson's "heuristic language" as they asked for demonstrations of how to form specific letters and write and/or spell particular words.

When Andrew worked at the writing table, he often took the author/audience stances that Rowe (1989) described in her study of 3- and 4-year-old children's literacy learning. As author, he requested assistance from Carita, acting as though she were the expert writer in the group. As audience, Andrew evaluated his peers' work even though his critiques where often uninvited and unwelcomed. When evaluating his own work, Andrew
learned to shift from the author to the audience role, just as the children in Rowe's study had done. In the audience role, Andrew used verbal language to evaluate and judge the quality of his work, and when his writing did not meet the standards of his audience stance, he revised what he had written, often looking to written language models in the classroom as a source of information. Sue's behavior at the writing table appeared to demonstrate both author and audience stances as well, but because we could not communicate effectively, this point can only be speculative. As author, she often spoke individual words or vocalized unintelligibly as she pointed to her work, appearing to label and/or elaborate on her drawings. She frequently handed me her marker communicating that she wanted me to write for her, and, as audience to my work, she often watched as I wrote. (John did not participate in those kinds of writing events.)

The children in Cochran-Smith's study "initiated, directed, and accomplished" many literacy events at the nursery school (p. 74). Their teachers used print for the children, and the children themselves used print in at least five major ways: as oral message substitutes, as sources of information, for social interaction, to express their feelings, and to clarify the status of material items. The data presented in Chapter Four demonstrated that the three children in the present research used print in very similar ways either in their homes or at the Preschool. All three children used print to show ownership ("to clarify the status of materials items"), for social interaction, and as a substitute for, or in addition to, verbal language messages. Andrew and John used written language to gain information.
During a social studies unit on mail, John wrote a letter to his parents using print to express his feelings of love.

In Table 50, I have summarized the comparisons made here. The comparative frame documents the similarities in the ways literacy was experienced and used by the three case study children in this investigation and the hearing children in Cochran-Smith's (1984), Dyson's (1981, 1989), and Rowe's (1989) investigations. Despite the dramatic differences between their spoken and verbal language worlds, their literacy worlds were remarkably similar.
<table>
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<th>Experiences with, Participation in, and Uses for Written Language</th>
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<tr>
<td>Teachers' uses for written language</td>
<td>Preschool children (Cochran-Smith, 1984)</td>
<td>To communicate with parents; to gain information;</td>
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<td></td>
<td>Case study children's teachers</td>
<td>to organize and present information efficiently; to clarify the status</td>
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<td>Teacher's storybook readings</td>
<td>Preschool children (Cochran-Smith, 1984)</td>
<td>Teachers engaged the children in &quot;readiness for reading&quot; interactions,</td>
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<td></td>
<td>Case study children's teachers</td>
<td>&quot;life-to-text&quot; interactions, and</td>
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<td>&quot;text-to-life&quot; interactions. Teachers annotated the storybook text.</td>
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<td>Children's uses of oral or verbal language</td>
<td>Kindergarten children (Dyson, 1981, 1989)</td>
<td>Teachers engaged the children in &quot;readiness for reading&quot; interactions,</td>
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<td>Case study children</td>
<td>&quot;life-to-text&quot; interactions, and</td>
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<td>&quot;text-to-life&quot; interactions. Teachers either revised the text or read</td>
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<td>the text almost verbatim and added clarifying remarks.</td>
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<td>Children's participation as authors/audience during the writing process</td>
<td>Preschool children (Rowe, 1989)</td>
<td>As authors, children asked for assistance; As</td>
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<td></td>
<td>Case study children</td>
<td>audience, they challenged others' literacy knowledge</td>
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<tr>
<td></td>
<td></td>
<td>As author, the children requested assistance from adults and/or peers;</td>
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<td></td>
<td></td>
<td>As audience, they evaluated their own as well as peers' and/or adults'</td>
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<td></td>
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<td>writing; they shifted from author to audience stances</td>
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</table>
Not long after Cochran-Smith had completed the monograph that described her investigation (The Making of a Reader), she commented on the literacy development of the children in her study:

... [T]he child was very actively involved in employing print for his/her own social purposes and, in the process of doing so, was sorting out the rules for using and interpreting print in various situations. ...The children were beginning to internalize the ways of using reading and writing that were accomplished or modeled for them or explained to them by adults in the community. The children gradually were acquiring ways to use print as well as some of the initial skills of encoding, decoding, and printing (Schieffelin & Cochran-Smith, 1984, p. 9).

The same could be said of Sue, Andrew, and John. The data from this investigation clearly demonstrated that despite their dramatically different verbal language worlds, Sue, Andrew, and John experienced and participated in preschool literacy events in ways that were similar to hearing children of comparative ages. This finding corroborates that of Rottenberg (1990, p. 191) who found that the hearing-impaired children in her investigation of early literacy "made gains in literacy knowledge comparable to those made by hearing children." This finding seems to suggest that preschool hearing-impaired children, who do not demonstrate other handicapping conditions, may not be constitutionally different from preschool hearing children. That is, their hearing loss does not cause cognitive deficits (Rosenstein, 1961; Furth, 1964, 1966).

This finding raises further questions: If preschool hearing-impaired children demonstrate interests and participation in and knowledge and understandings of written language comparable to hearing children of similar
ages, why do they tend to fail at literacy instruction during the elementary school years and beyond? What are the possible reasons for their failure? These are the kinds of questions that researchers of other minority cultures have asked. In a sense, the experiences of profoundly deaf children are similar to the experiences of other minority groups who demonstrate a wealth of literacy knowledge during the preschool years but tend to make minimal gains during formal literacy instruction in the elementary school years and beyond. For example, in her ethnographic investigation of cultural variation and aspects of learning behavior in three communities of the southern Carolina Piedmont, Heath (1983) described the language and literacy experiences of three communities, a black working-class, a white working-class, and a middle-class (both black and white) community. Heath documented the literate behaviors of the children from each of the communities and suggested that all of the children demonstrated a rich literacy heritage. Despite their wealth of literacy knowledge, children from both working-class communities did poorly in comparison to children from the middle-class community in formal literacy instruction at school. The uses of language and the orientations to literacy of the children from both working-class communities were not consistent with those needed for success at school learning tasks.

Unlike the children in Heath's investigation, Sue's, Andrew's, and John's experiences with literacy at home and at the Preschool were similar, despite the fact that they were from different communities (a rural community, an urban neighborhood, and an affluent suburb). Longitudinal study is necessary to determine if factors will mitigate against the literacy
achievement of these three children during their elementary school years and beyond.

The Concomitant Development of Verbal and Written Language

This investigation demonstrated that proficiency in verbal language was not a prerequisite to literacy learning for Sue, Andrew, or John. Although their verbal language was limited and/or delayed and not an exact representation of English, all three children demonstrated considerable knowledge and understanding of both the form and functions of written language. Furthermore, as Sue, Andrew, and John were acquiring verbal language, they were learning about written language. They were learning to read and write as they were learning to speak and/or sign. Both language processes were developing concomitantly, and one was not dependent upon the other. Rather, for these three children, reading, writing, and verbal language interaction (speaking and/or signing) were mutually reinforcing one another in development.

The children's proficiency with verbal language supported their growth in reading and writing. When John came to an unknown word while reading a book, his mother was able to say and sign the word thereby providing him sufficient meaning to continue the reading. His knowledge of verbal language supported his reading development. Sue often asked her mother for the written counterpart to spoken/signed words. At the age of four, she understood that her verbal language could be transformed into printed symbols. All three children used verbal language as a self-monitoring strategy to direct their writing endeavors. Through talk, Sue, Andrew, and
John learned about the form and function of written language. Verbal language was not a prerequisite to these activities; the children were exploring print and used their verbal language to support their exploration.

The children's developing reading abilities influenced their growth in writing. As Sue and Andrew were learning to read their names and their classmates' names, they began to write them. When John wrote during our testing sessions, he independently wrote the words he had learned to read (e.g. and, the, and, to).

It was also clear that the children's experiences with reading had great impact on their verbal language development. In many instances, written language was used to 'teach' language. All three teachers understood that reading was a language learning opportunity, and they read to their children to "expose" them to language. Sue learned to say her classmates' names when she saw them in print. (My emphasis here is not on her speech or articulation but rather her investment of meaning in the visual symbol.) She read the name, then learned to say it; or, perhaps more accurately, she simultaneously learned to read and say her name. Taylor (1983) suggested that some of the children in her study learned to read many of the words they were learning to say.

The children's experiences with writing also influenced their verbal language development. At the writing tables, through social explorations of print, the children verbally interacted with either adults and/or their peers. When Sue and her classmates wrote, they talked with adults who sat at or near the writing table. Sometimes the children initiated interactions about their writing. Often, adults asked the children questions or commented on
what was written. Andrew interacted with both adults and peers as he explored written language. The children asked about the others' writing, or they talked about their own. They evaluated one another's work, asked for assistance, and explicitly modeled ways to write. As they worked, they talked. When Anna joined them at the writing table, she always asked about their work. Each child had a turn to describe, explain, and/or share information about his/her writing endeavors. The writing gave reason to talk, and through talk, children learn language (Genishi & Dyson, 1984; Heath, 1983; Lindfors, 1987; Nelson, 1973; Wells, 1986).

The children's writing experiences provided opportunities for reading. When adults asked the children about their work, most often the children pointed to their written text and read it. As Andrew and his classmates worked at the writing table, they often left their seats or leaned over to see the writing of a peer, read what was written, then commented on and/or asked about it. When John wrote during our testing sessions, he continually reread what he had written. He reread phrases, sentences, and the entire text. Rereading appeared to prompt what he would write next. His rereading strategy was very much like that of the hearing children in Dyson's (1981) investigation.

For Sue, Andrew, and John written language development was not dependent upon proficiency in verbal language or knowledge of spoken English. Rather, written language development occurred simultaneously with verbal language development. For these three children, the language arts mutually reinforced one another in development. Vygotsky (1978) suggests that a child's understanding of written language emerges as a part of his/her
entire symbolic repertoire. This appeared to be the case for Sue, Andrew, and John.

A Distinctive Pathway to Written Language

While written language was related to the children's experiences with verbal language, in many ways it was different and separate from their verbal language worlds. Written language was accessible to the children in this study, and it was consistent in their experience. It was, in fact, the only form of language that was consistent across all contexts. While their verbal language worlds were multiple, diverse, and varying, written language remained constant across home and school settings and within settings at school. Written language was a world in and of itself, its own world to be explored. As active constructors of meaning, Sue, Andrew, and John, like their hearing peers, were exploring the world of written language. Harste et. al., (1984) cogently argue:

From a socio-psycholinguistic perspective it seems ludicrous to assume that, given a literate society, young children, while actively attempting to make sense of the rest of their world, would selectively decide not to attend to print.

The children in this study did not have a strong oral language base. Although each child could articulate intelligible words and phrases, as a whole, the children's speech was unintelligible to the majority of people with whom they interacted. Yet, the children were learning to read and write. The conventional theoretical and pedagogical notion that oral language must be in place before written language can be learned was not supported by the
findings of this investigation, which was, in essence, a natural test of this "oral language supremacy" assumption (see Harste, et al., 1984). The research presented here suggests that for Sue, Andrew, and John there was a distinctiveness between spoken and written language acquisition.

Because the children did not have a strong oral language base, they did not map spoken English directly onto written language. Furthermore, the children did not listen for sounds in the words they wrote. Their writing did not appear to be mediated through the spoken word, that is, there was no evidence of letter/sound correspondence. The children were bypassing the sound element in their writing. They had concepts for words, and they related meaning to written language. The children's uses of and participation in written language related to the power of print, its function in their lives. As Sue, Andrew, and John wrote, they appeared to attend to the form and functions of written language rather than its spoken properties. They seemed to understand that meaning could be expressed in the symbols of art and the symbols of print. Sue, Andrew, and John made meaning and related to written language separate from the links that often normally between spoken language and written language.

**Mode of Communication**

In the field of education of the hearing-impaired, the modality controversy, that is, whether to use an oral/aural or a total communication approach, still causes conflict and anxiety in the lives of families and educators, as was evident in the present study. The data presented here clearly demonstrated, however, that regardless of the modality used,
language input was multiple, diverse, and varying. Neither modality presented spoken English naturally. Rather, what the children experienced was a variation of English, verbal language that in some way reflected English, but was not the English that the children's parents and teachers spoke. Furthermore, neither modality provided the children with the kinds of language experiences hearing children have. It is virtually impossible, through the modalities that exist, to provide profoundly deaf children the types of experiences with English that hearing children typically have.

Fortuitously for the children in this investigation, literacy learning bypassed modality. That is, regardless of the modality used, all three children were interested in and sought out opportunities to engage in reading and writing events and demonstrated extensive knowledge and understanding of written language. This finding corroborated that of Ewoldt and Altwerger (1981) who found that for the hearing-impaired children in their investigation, mode of communication did not appear to affect the children's ability to read environmental print. Rottenberg (1991, p. 194) also found that "mode of communication did not seem to be a salient factor in the children's development of literacy. No major differences were observed in the literacy learning of the two groups of children (i.e., oral and total communication)." Rottenberg suggests that "the discussions, debates, and philosophical stances on oralism versus Signed English [might be] mute points" (p. 194), then hastily asks if, "over time, would differences appear in literacy development for hearing-impaired children enrolled in oral or total communication programs?" (p. 198).
Lack of a Common Modality

One difference related to modality did emerge. Differences in modality made difficult, and perhaps prevented, verbal language interaction around print for both Sue and John when they were writing with their classmates. As Sue worked at the writing table during High Scope time, she and her classmates did not interact. They did not share a common modality for communication. Sue's speech was unintelligible to the children who could hear her, and their speech was unintelligible and/or inaudible to her.

In his mainstreaming kindergarten setting, John could not communicate with his peers around print. When he sat at the writing table with Katelyn and was interested in her composition, he could not easily ask her about the work. He had to use the interpreter. Perhaps this is why John spent the majority of his time at the computer. He was interested in literacy, and participation at the computer did not require extensive verbal language interaction.

Because they lacked a common modality for communication, Sue and her classmates, and John and his, did not interact around print, an activity that has been shown to support young children's writing development (Dyson, 1983, 1989). From a social construction of literacy perspective, written language and the social world are inextricably bound; literacy is rooted in social relationships (Hall, 1987). Harste et. al (1984, p. 28) elaborate:

Language, whether oral or written, is a social event of some complexity. Language did not develop because of the existence of one language user, but of two. If we are to understand language, we must see it as an orchestrated transaction between two language users which has as its intent to convey meaning in a given context of situation.
When children cannot communicate around print, their opportunities for both social interaction and to develop knowledge and understandings of written language have been limited.

**Implications for Instruction: "Working Hypotheses"**

This research was a naturalistic investigation employing an ethnographic orientation to data collection and analysis. The findings are related to a specific setting, the Preschool, and particular participants, the three case study children. The results of the study are a function of the contexts under investigation. Consequently, generalizations can only appropriately be made to settings similar to those described here. The consumer of this case report must judge the transferability of the findings based upon his/her knowledge of similarities between contexts. Lincoln and Guba (1985, pp. 297-298) explain:

"... [A]t best only working hypotheses may be abstracted, the transferability of which is an empirical matter, depending on the degree of similarity between sending and receiving contexts. ... Transferability inferences cannot be made by an investigator who knows only the sending context. ... If there is to be transferability, the burden of proof lies less with the original investigator than with the person seeking to make an application elsewhere. ... The responsibility of the original investigator ends in providing sufficient descriptive data to make such similarity judgments possible."

Chapter Four provides substantial descriptive data to enable applying researchers, practitioners, and parents to make judgments about the transferability of this study's findings to their own contexts.
Six assertions provide support for the implications to follow:

1. Sue, Andrew, and John demonstrated considerable interest in and uses for written language.

2. Profoundly deaf children typically make minimal gains in literacy development after the preschool years.

3. Proficiency with verbal language is not a prerequisite to literacy learning.

4. Verbal language and written language development occur concomitantly and mutually reinforce one another in development.

5. Written language is the most consistent form of language profoundly deaf children experience.

6. Sue's, Andrew's, and John's interests and participation in, uses for, and knowledge and understandings of written language appeared to be comparable to those of hearing children of similar ages.

Based upon these assertions, suggestions for Sue's, Andrew's, and John's literacy instruction are provided. Teachers should give consideration to the following:

1. Consciously focus on supporting and encouraging literacy learning in the preschool years. Seize every opportunity to integrate and weave written language in natural, informal ways throughout the preschool day. Make literacy a part of the children's everyday lives.

2. Provide for, create, and encourage a variety of print experiences that are intimately related to the children's personal interests and social purposes.

3. Provide for, create, and encourage the children's personal uses of print (e.g., for self-expression; to demonstrate individuality; to gain knowledge and information; to show ownership; for personal enjoyment).

4. Provide for, create, and encourage the children's social uses of print (e.g., to communicate with others; to share their enjoyment of print; to
demonstrate their literacy achievements; to be members of a group).

5. Organize literacy events in which teachers and children jointly participate in the construction of literacy.

6. Plan reading and writing events in which the children verbally interact with one another. Encourage talk, particularly talk that is related to reading and writing development.

7. Organize classroom events in such a way that children are provided frequent opportunities to author written messages. Children should feel free to dictate and/or physically write their own messages. Print media should be made available in all areas of the classroom.

8. Provide opportunities for the children to generate print during social interaction. Help children transform their talk (i.e., speech and/or sign) into print. In this way, children will make connections between verbal language and written language.

9. Initiate uses of print. Children need to be exposed to the variety of ways print can enhance their school and play experiences (e.g., construct contracts for appropriate behaviors for playing in the housekeeping, block, or quiet areas).

10. Use print to serve the needs of the children's social issues and personal interests (e.g., delineate both appropriate and inappropriate behaviors for when one is feeling angry, sad, tired, etc.; permit the children to share events they want written on the classroom calendar).

11. Use literacy as a vehicle to facilitate play themes. Help children transform their play into print (e.g., take Polaroid pictures of the children as they play in the block area, the housekeeping area, at the writing table, etc., and ask the children if they would like to dictate and/or author a message about their play).

12. Engage the children in socially interactive, cooperatively-negotiated storyreadings. Provide frequent opportunities for the children to respond in a variety of ways to the stories read. Engage the children in interaction sequences that help them make sense of the books being read and then apply the information gained to events outside of books.

13. Base explicit demonstrations about the form and functions of print on the children's interests in, uses for, and understandings of written language.

14. Consider approaches to early literacy instruction that build upon the consistency of written language in the lives of the children.
Knowing that profoundly deaf children typically make minimal literacy gains after the preschool years places greater emphasis on the importance of literacy during those years. A conscious focus on creating contexts that support the children’s literacy development is needed.

Teachers need to be opportunistic in that they facilitate the children’s socially-constructed knowledge of written language in naturally-occurring, informal ways that meet the children’s own personal needs. They should create and actively encourage opportunities for children to use literacy in ways that are meaningful to them, that is, in ways that connect to the children’s actions, interests, and intentions. Schieffelin & Cochran-Smith (1984, p. 22) suggest that "for an individual to become literate, literacy must be functional, relevant, and meaningful." Activities which divorce reading and writing from meaningful purposes (e.g., isolated instructional tasks that focus on specific skills taught out of context) are not conducive to literacy learning (Schickedans, 1989). Rather, literacy events must be incorporated into every aspect of the children’s daily experiences and "founded on the needs of children as they naturally develop and on their own activity" (Vygotsky, 1978, p. 105).

Teachers should approach "formal" early literacy instruction in ways that will build upon the consistency of written language in the lives of profoundly deaf children. Use of books that have repetitive, predictable language, especially "big books" that are visually accessible are recommended. Daily experiences with writing in the form of teacher demonstrations, joint teacher-child constructions, and independent and
social child explorations, will provide opportunities for children to learn of the form and function of print.

Implications for Developmental Theory

Perhaps the most powerful implication of this research is that despite the fact that Sue's, Andrew's, and John's verbal language worlds were dramatically different from one another and from the spoken language worlds of hearing children, their interests and participation in as well as their knowledge and understandings of written language were remarkably similar to those of hearing children of comparable ages. For Sue, Andrew, and John, there seemed to be some universality in the processes of written language development that crossed verbal language ties. In a literate society, individuals connect meaning to written symbols. Because they are active constructors of knowledge, young children have a natural tendency to make meaning of whatever is salient in their lives. Further research is needed to determine if there is, in fact, some universal tool for making sense of written language. That is, is there some basic rule of nature that governs written language development under all circumstances?

Limitations of the Study

There were three major limitations to this investigation:

1. Researcher bias.

My own bias toward a total communication approach for all profoundly deaf children undoubtedly influenced my perception of activities and events both in the children's homes and in their preschool classrooms.
2. **Lack of a common modality.**
Because Sue and I lacked a common modality for communication, we could not effectively communicate when interacting around print at the writing table and during the administration of the informal assessments.

3. **Time frames during which no observations were made.**
Because of personal time constraints, there were time frames during which I made no observations. As well, due to the integration of both oral/aural and total communication children in the afternoons, I was not able to collect data during most of the afternoon activities. The language and literacy events that took place during these time frames may have provided disconfirming evidence for the findings presented here.

**Implications for Further Research**

Seven directions for future research are suggested:

1. **Longitudinal study of the three case study children's language and literacy development.**
Do the children continue to demonstrate strong interests and participation in literacy events? Do they continue to acquire developmental understandings about written language? Does mode of communication influence later literacy achievement?

2. **Replication of this study with other groups of profoundly deaf preschool children.**
How do the language and literacy experiences and participation of other profoundly deaf preschool children compare to those described here? Are their literacy achievements similar?

3. Investigations of specific preschool practice.
   What pedagogical strategies (e.g., free choice writing, use of "big books," shared readings, storybook read alouds, etc.) support profoundly deaf preschool children's literacy development? Are the instructional practices that have been found to be successful with preschool hearing children supportive to the language and literacy development of profoundly deaf children?

4. In-depth investigations into family literacy.
   What literate practices of the home appear to be supportive to the children's language and literacy development?

5. Investigation of "early readers" among profoundly deaf preschool children.
   Do some profoundly deaf preschool children learn to read prior to formal literacy instruction? If so, what were the children's experiences with literacy in the home? in preschool settings?

6. Retrospective investigations of the language and literacy experiences of profoundly deaf children who compare favorably to their hearing peers in terms of academic achievement (e.g., John's sister, Whitney).
7. Research on teacher change.

Would increased awareness of current theoretical and pedagogical thinking eventually lead to more active fostering of literacy use in the preschool classroom?

**Final Member Checks**

Believing that there are multiple realities (Lincoln & Guba, 1985) in any research endeavor, I provided a draft of the case studies to the parents, teachers, and the administrator of the Preschool and asked them to "check the truth validity" of the case report. I suggested that the case study descriptions were my interpretations of observed events in the children's homes and preschool classrooms but that mutual validation of the research outcomes were essential and important to me. I stated that I was willing to negotiate meanings and/or append an informant rebuttal to the case report (Anderson & Kelley, 1987). The following sections describe the key participants' responses to the case report as I was able to obtain them. The comments add another dimension to the investigation.

**Alan and Jordan**

Alan described the case study as "motivating." He stated he had been "on vacation" in terms of supporting Sue's language and literacy development during the summer months, and he suggested that reading the case report caused him to be "interested and motivated" once again. He stated, "We've learned so much. Reading this paper opened my eyes."
Alan voiced concern over the fact that Sue and her classmates did not talk with one another at the writing table.

Excerpt from Final Member Check, 8/10/91
I thought there was total communication among all the kids. Why didn't Nancy and Chet talk? They can hear each other. Maybe it's because they don't see the other kids talking--so they don't talk.

Jordan suggested that, for her, the case study report emphasized the importance of sign language in addition to spoken communication.

Excerpt from Final Member Check, 8/10/91
Jordan: It just emphasized how important signing is. There is a need for signing even in an oral classroom, especially right now when their [the children's] lipreading skills aren't good. I noticed that Sue used signs, voice, and print to communicate with Aaron. She used all of it. It gave me goosebumps when I read that. I still feel there needs to be a class where they can sign and talk, where there's as much emphasis on speech as sign. We observed in a total communication classroom. There wasn't much emphasis on speech at all.

Cathy

Cathy stated that she found the case study of Andrew interesting. She said, "I couldn't put it down until I finished reading the whole thing." Cathy suggested that reading Andrew's case study was somewhat painful for her. She was not aware she interacted more with her younger son, Bradley, than with Andrew but stated that when she saw those words in print, she
knew they were true. Cathy suggested that this information was helpful to her, and that she was "going to be more aware of it." Cathy also stated that she was disappointed to read of the inconsistency in the use of sign language among adults at the Preschool.

Mary and Henry

After reading the case study report, Mary expressed concern over the fact that John was a passive participant in spoken language interactions in the mainstreaming kindergarten setting. She was also saddened by some of the interactions that took place in the oral classroom at the Preschool, particularly those in which John's classmates tried to interpret his speech when Denise had difficulty understanding. Mary questioned, "Which is worse, the oral classroom where he is not understood when he speaks, a mainstreamed classroom where he is not an active participant in spoken language interactions, or a TC classroom, where he may not be academically challenged?"

Mary suggested that reading the case study prompted her to rethink the consequences of the choices she and Henry had made in terms of mode of communication and instructional options. She stated, "You have to explore all of your options, and do what's right for your family, even if it goes against popular belief. The total communication option worked for our family. It doesn't work for everyone." Mary stated that she believed John's academic success was a result of the use of sign language from a very early age, "from the crib, from day one." She stated, "It isn't just the use of sign language, it's the use of sign language during the critical language learning years." Mary
also suggested that she felt all profoundly deaf children should have access to total communication environments "to put them on as much equal footing with their hearing peers as possible." Both Mary and Henry suggested that parents of hearing-impaired children had to "go with their gut feelings."

Anna

One of Anna's first comments in response to Andrew's case study related to his experiences with verbal language. Anna voiced concern over the differences between Andrew's language experiences at home and at the Preschool and the inconsistency in the use of sign language among adults at the Preschool.

Excerpt #1 from Final Member Check, 8/12/91

I didn't realize that the children's language input was so diverse. Knowing this helps me understand why their language development is so delayed. ... I had no idea I wasn't signing word for word. I didn't purposefully leave out all those words. I want to continue to expose the children to good literature and the language of storybooks, but I want my signs to be closer to my oral rendition of the text.

Anna also commented on the children's use of verbal language in her classroom. Although she was aware of the "talk behind her back," she suggested that she was not aware of its variety and complexity.
Excerpt #2 from Final Member Check, 8/21/91

It was so interesting to me to read about the interactions among the children that I was unaware of while I was teaching. They used language to tease each other, prompt each other, compete with each other. I guess I need to expect that in my own communications with them. I don't see that in our interactions.

Anna's primary response to the case study report focused on the children's written language development. Anna stated that she was not fully cognizant of her students' abilities or their interests in written language. She suggested that the case study confirmed her own beliefs about literacy development and that she planned to change her classroom practice based upon what she had learned in reading the case study report.

Excerpt #3 from Final Member Check, 8/12/91

I didn't realize how much the kids could do with written language. I didn't realize the steps they took. It made sense to me to let them write, but I didn't realize how important it was. ... When I read the case report, it struck me that the children consistently chose the writing area during High Scope. That validates my philosophy that children will learn when they are ready to learn. We cannot "teach" them to write. We must immerse them in writing opportunities and print--and let them play (Anna's emphasis) with it. Because I didn't realize it, how many opportunities did I miss to allow them to play more with written language? I plan to provide more opportunities for writing. ... And I learned how important it is to make the connection between written language and verbal language. I want to begin pointing out the written words during story time, like running my finger underneath the printed words to show the children where the story is coming from. Maybe making
these connections is most important at the preschool level. It doesn't just happen all of a sudden in first grade.

Anna suggested that participating in the research had stimulated her interest in further study in the area of early childhood literacy. She stated that she hoped to pursue her masters degree with a focus in that area.

Denise

Denise suggested that the case study descriptions of John's experiences with language and literacy at home and in his mainstreaming kindergarten classroom "were informative" and that they helped her "understand John." She stated that she "got some ideas from the other teacher."

Concerning John's seating position in her classroom, Denise explained that she placed John in the back row because he was gone two afternoons a week, and because she felt one of the other children especially needed to be in the front row. Denise suggested that reading the case report made her mindful of the importance of always facing the children as she spoke: "I didn't realize I wasn't turning around. I need to watch that."

In terms of independent writing, Denise shared that she felt, as a rule, "the kids were not ready for writing" but that John might have been an exception. Denise stated that she was anxious to learn more about the writing process and was looking forward to working with the reading/writing consultant in the fall. (Denise was scheduled to teach first grade the following school year. The elementary faculty were supported by the services of a reading/writing specialist).
The Administrator

After reading all three case studies, the administrator of the Preschool stated that he was "rejuvenated" and wished all of his faculty would read the case report. Reading the three teachers' theoretical beliefs was validating for him; he stated that it was "good to see other people who believe what I believe and practice it."

The administrator suggested that the support staff needed to be more aware of their verbal communication, and that teachers and support staff who worked with the oral/aural children needed to consciously remind themselves of the necessity of facing the children as they spoke. The administrator also suggested that it was "truly remarkable how exposed the children were to literate behaviors" and that he was beginning to pondered the importance of consciously emphasizing literacy at the preschool level.

Epilogue

On the topic of choosing a research study, Bogdan & Biklen (1982, p. 57) write:

Whatever it is, it should be important to you and excite you. ... Without a touch of passion you may not have enough to sustain the effort to follow the work to the end, or to go beyond doing the ordinary. ... [B]e sure it is of sufficient interest to you to maintain your spirit.

The research presented here was, and is, important, interesting, and exciting to me. I have, perhaps, more than a touch of passion for this work. This epilogue is designed to share with the reader a few of my own personal reflections on the investigation.
There were some surprises. I had no idea the children's experiences with verbal language would be so dramatically diverse and variable. I expected the multiplicity, but I did not anticipate the extent to which the children experienced diversity and variability in their verbal language worlds. Witnessing the multiplicity, diversity, and variability first hand caused me to reconsider the complexity of language acquisition for young profoundly deaf children. Sue, Andrew, and John were constantly coping with communicative and linguistic complexity that hearing children do not experience. It was evident to me that the case study children had learned a great deal about communication and language. As they moved from one linguistic structure in the home to another in the school, and then within the school, they switched linguistic codes (i.e., modalities), demonstrating considerable linguistic sophistication. I speculate that, in some sense, Sue, Andrew, and John know more about verbal interaction than do many of their hearing counterparts who do not deal with such complexity. Furthermore, I was amazed that despite these diverse experiences, the children were able to make sense of and acquire some form of verbal language. I am now moved to value more highly the verbal language accomplishments of profoundly deaf children.

I did not expect the case study children to demonstrate such a wealth of literacy knowledge or uses for written language. In particular, I did not expect them to demonstrate literacy accomplishments that were comparable to those of hearing children of similar ages. I was confident that the children would have some knowledge and understanding of print, but I assumed that because their verbal language was delayed, their written language
development would also be delayed. Such was not the case. Written language is the only consistent form of English profoundly deaf children experience. This consistency may be so powerful that profoundly deaf children attend to written language more so than hearing children do. This is, quite obviously, a working hypothesis, but one I suggest must be seriously considered in further research and investigation. For profoundly deaf children, written language provides an immediate form of communication with any hearing individual who is literate (whereas the children's speech and/or sign language may or may not be communicative). In essence, written language provides access to the hearing world.

As I wrote the individual case studies, I was reminded anew of the ways that teachers' and parents' underlying assumptions about language and literacy learning are reflected in the children's experiences. Adults' theoretical and pedagogical beliefs and values were played out in the children's language and literacy worlds. There were many players in the script (e.g., parents, teachers, administrators, audiologists and speech pathologists, university professionals, etc.) and often their "lines" were not in agreement. I was frequently reminded of how value-laden and politically sensitive the education of young hearing-impaired children has come to be.

I am bothered in some sense that I was not able to discuss with Sue, Andrew, or John in any meaningful way their responses to this investigation. It seemed inequitable to discuss the findings of the research with the parents, teachers, and the administrator and not talk with the three children who were, in essence, the study. The children should have a voice here. Were they changed in any way by this research? What did they make of my visits in
their homes and classrooms? What meaning did they make of research process?

I am challenged now to explore further both the informal and formal ways in which teachers can promote and support preschool hearing-impaired children's early literacy development. I am particularly interested in the ways that teachers can be opportunistic and facilitate the children's socially-constructed knowledge of written language in naturally-occurring, informal ways that meet the children's own personal needs. I am interested, as well, in the formal aspects of literacy learning for profoundly deaf children, especially pedagogical strategies that support literacy development.
APPENDIX A

FOCUSED INTERVIEW QUESTIONS FOR HOME VISITS
FOCUSED INTERVIEW QUESTIONS FOR HOME VISITS

About deafness:

1. When did you realize (child’s name) had a hearing impairment?

2. What do you think caused this hearing impairment?

3. Were there any particular reasons/influences that helped you decide (to/not to) sign?

4. When did you begin signing to _____ ?*

5. When did _____ begin signing?*

6. Does _____ always sign when he/she speaks?*

7. Who in this home can sign to _____?*
   a. Do any extended family members or close friends sign?*

8. When did _____ begin auditory training/speech reading?

9. How often does he/she receive these lessons?

About literacy:

10. Did you or anyone else read to _____ before he/she started preschool?
   a. What kinds of books?

11. Do you read to him/her now?
   a. What kinds of books?

   b. How is this reading done? (i.e., tells the child words he/she asks about, points out words while reading, discusses pictures, identifies letter names, signs while reading, voices while reading, etc.)
12. Does ____ read books on his/her own?
   a. How often?
   b. What kinds of books?

13. When did ____ first show an interest in reading?
   a. in writing?

14. When did ____ first begin to try to write? (If the parents did not refer to scribbling, I asked, "Did ____ scribble?"

15. When did ____ begin to try to read?
   a. What did he/she do? (If parents did not refer to pretend reading, I asked, "Did ____ ever pretend to read a book?")

16. When did ____ begin to write his/her name?

17. Does ____ ever ask you questions about print?
   a. What kind of questions?

18. What types of reading and writing activities does ____ do at home now?

19. Does ____ go to the library?
   a. How often?

20. Do you take out books from the library?

21. Do you read in the home?
   a. What do you read?
   b. How often?

General information:

22. If I was going to care for ____ for a few days, what would you feel was especially important for me to know about him/her?

23. Could you give me some words that best describe your child?
24. When the children play together, what do they usually do?*

25. When no other children are available, what does _____ do to occupy his/her time?

26. What kinds of activities does _____ enjoy?

27. How much television does _____ watch?
   a. What types of programs?

**Family Background:**

Mother:

   Highest Degree:

   Occupation:

Father:

   Highest Degree:

   Occupation:

(*If appropriate)
*adapted from Durkin (1966) and Dyson (1981)
APPENDIX B

CHILDREN’S BOOKS RECOMMENDED BY THE RESEARCHER
CHILDREN'S BOOKS RECOMMENDED BY THE RESEARCHER

Predictable Pattern Books


LIST OF CHILDREN'S TITLES


407


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