LANGUAGE USE IN NORMAL AND LEARNING DISABLED CHILDREN

A Thesis

by

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ABSTRACT

LANGUAGE USE IN NORMAL AND

LEARNING DISABLED CHILDREN. (August 1982)

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The language use of 30 normal and 30 learning disabled subjects matched on the basis of chronological age, 7-6 to 9-6, and sex, was compared using the Assessment of Communication in Everyday Situations, ACES. This instrument contains a series of structured role-playing episodes designed to elicit language use strategies from children. ACES is based on a functional taxonomy of language use and contains 36 strategies representative of two functions and seven uses of language regarded important to academic success. The social function consists of the self-maintaining and directing uses of language. While the reporting, logical reasoning, predicting, projecting and imagining comprise the representative (cognitive) function.

A discriminant analysis was employed to determine whether differences existed among the nine variables. There were statistically significant differences in the social and representational functions of language and in the self-maintaining and logical

reasoning uses. Further, the representational function and the self-maintaining uses were highly significant. The stepwise linear regression process revealed that self-maintaining, logical reasoning, and projecting were the variables contributing to the differences in the normal and learning disabled groups, causing the statistically significant differences observed in the two functions.

It was concluded that deficiencies in the self-maintaining use of language, particularly monitoring and mediating one's position in relation to others, may be an underlying cause of low social status in learning disabled children. Likewise, deficiencies in the use of logical reasoning skills, to employ rational thought and argument to interpret experience, and in the use of projecting skills, to place themselves into an unfamiliar context , may be factors contributing to poor learning strategies resulting in academic failure for the learning disabled. Valuable information about children's ability to incorporate the functions and uses of language into their communication skills can be elicited with the ACES. Further, since the reasoning, self-maintaining, and projecting uses successfully classified the subject groups 69% of the time, it is suggested that strategies within these uses are worthy of consideration for incorporation in the assessment and remediation procedures with the learning disabled.

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Additionally, I wish to thank the administrative staff and faculties of the schools in McDowell County, who invited me into their schools, so that I might interact with children. I especially appreciated the eagerness and enthusiasm of the boys and girls who were the subjects for the study.

My family has supported my "educational" endeavors and has graciously given me the time so critical for preparation of this manuscript; to them, I extend my deepest appreciation. Further, I could never have completed the task without the valuable assistance of Paula Burch. She never defaulted on any of the many editions which I handed her to type.

DEDICATION

This manuscript is dedicated to my son and daughter, William and Suzan, who along with all the other children I have taught, have challenged me to discover and to understand a very special group of human beings.

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CHAPTER I

Introduction

Although learning disabled children have been described since the early 1970's (Bryan & Bryan, 1978) as having a "disorder in one or more of the basic psychological processes involved in understanding and using language, spoken or written"...(USOE, 1977), little research has been conducted to determine how these children use language (Bryan, Donahue, & Pearl, 1981). The language focus in the definition relects popular thought in education, and psychology that learning disabled children often are language delayed. Hallahan and Kauffman (1976) observed that:

> the problem is truly one of lack of interest in investigating these disabilities, because experience in the classrooms for the learning disabled student readily reveals a multitude of comprehension and production difficulties. (p. 185)

Since an intact neurological system is assumed to be necessary for normal development of language to occur (Hammill & Bartel, 1978), learning disabled children are suspected to have disordered or delayed development as the result of subtle neurological impairments (Wiederholt, 1974). Bryan and Bryan (1978) identified language impairment as a central problem which could be related to difficulties experienced by learning disabled children in areas such as reading and attention. The results of their own research and that of

others, support the thesis that the learning disabled children exhibit pervasive and enduring language problems across a wide variety of language tasks (Bryan & Bryan, 1978).

Although learning disabled students have the intellectual ability to succeed academically, they score below their ability levels in academic subjects and often exhibit poor social skills in interactions with their peers and teachers. When discrepancies between potential and performance develop, they routinely are referred to specialists for formal evaluation. Areas for concern during evaluations frequently include oral language expression. Prior to the identification of learning disablilities as a handicapping category, regular educators frequently observed that educational discrepancies are primarily linguistically based (Simon, 1981). Bernstein's (1964) studies offered evidence that educational failure is embedded in the students' ability to use language in ways required by the school.

Until the early 1970's, most linguistic studies of normal and disordered development considered not language use but structural elements of language: phonology, syntax, and semantics (Prutting, 1979). Recently, sociolinguists have studied language use in its social context (Halliday, 1973, 1975). Halliday (1973) in support of a functional approach to the study of language noted that "the distinction of knowing language and how to use it is just a matter of terminology" (p. 19).

The function of language or language use has been referred to in the literature as pragmatics (Rees, 1978). Panagos and Griffith (1981) described the functions of language use as including: (a) requesting, stating, questioning, calling, protesting, answering, and labeling; (b) code switching; (c) turn taking, eye gaze, topic usage, and conversational sequences. In a more global characterization, Bloom and Lahey (1978) described language use as consisting of a number of language functions which modified according to contextual factors. The contextual factors included the people present, the time and place of the communication, the topic and the linguistic context (Hopper & Naremore, 1973). Study of the pragmatic aspects of language together with the structural components has given birth to the term, communicative competence. Hymes (1971) was among the first to advance this broader, more encompassing view of competence, which he defined as the speaker's ability to use language in ways appropriate to the situation.

While research is generally lacking in the area of communicative competence specific to learning disabled children (Panagos & Griffith, 1981), a number of newly developed procedures for assessing communicative competence have been reported (Johnson, 1981). One reason for the limited number of pragmatic studies with the learning disabled is the lack of specific operational procedures for the measurement of pragmatic development (Miller, 1978). According to Miller (1978), the most effective analysis of language use skills requires careful behavioral observation. Until more comprehensive

measures become available, techniques devised to analyze normal development of language use should provide the learning disabilities specialist with valuable data (Lerner, 1981).

Bryan et al. (1981) were among the first to report studies that attempted to examine the pragmatic skills of learning disabled children by identifying those situations, tasks, or linguistic demands which might present problems. Results of these studies showed that learning disabled children in grades one through eight experienced difficulties with pragmatic skills whenever linguistic demands became ambiguous or socially complex. Among the areas of difficulty were question asking, responding to inadequate messages, disagreeing or supporting an argument, sustaining or monitoring a conversation and holding the floor during debate. Bryan et al. (1981) cautioned that most of the tasks in the experiments did not require a wide variety of syntactic or semantic responses. Therefore, they concluded that assumptions must remain tentative until the many unexamined aspects of pragmatics were studied.

Bryans' studies provided valuable information concerning specific difficulties learning disabled children experience with language use, but failed to measure language use systematically by the function it serves. With Lieberman and Hutchinson's (1980) development of the Assessment of Communication in Everyday Situations, ACES, based on Tough's (1977) functional classification system, a tool with the capability of examining language use systematically is now available. ACES measures a child's ability to use 36 communication

strategies reflecting competence in social and representational language functions. Included within the social function are the directing and self-maintaining uses of language. Representational functions include reporting, logical reasoning, predicting, projecting, and imagining uses (see Appendix A for a complete description of Tough's classification framework, including definitions and examples of the 36 strategies).

Statement of the Problem

The purpose of the present study was to compare the language use of 30 learning disabled children, ages 7-6 to 9-6, with a group of 30 normal subjects matched on the basis of age and sex. Language use was measured by the Assessment of Communication in Everyday Situations (Lieberman & Hutchinson, 1980).

Delimitations

1. The study was confined to 30 learning disabled subjects, ages 7-6 to 9-6 and a matched group of normal subjects in a single school system. They were matched on the basis of chronological age and sex.
2. Data relative to the learning disabled subjects' ability to use language were confined to a single structured role-playing episode.

Limitations

1. If the researcher's awareness of subject status influenced the reactions to the tasks, results may be biased in favor of one group or the other.

2. If the learning disabled subjects selected were not representative of this population at large, results may not be generalized beyond the sample investigated.

Assumptions

The following assumptions were made in this study:

1. That the learning disabled group met the criteria for placement in a learning disabilities program as prescribed by the North Carolina Rules Govering Programs and Services for Children with Special Needs.
2. That the instrument used to collect the data was reliable and valid based on standardization studies completed on four-, six-, and eight- year-old children.

Hypotheses

The following hypotheses were developed and tested at the $p < .05$ level of significance.

Hypothesis 1: There will be no significant difference between the use of the representational functions of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 2: There will be no significant difference between the use of the social functions of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 3: There will be no significant difference between the reporting use of language in normal and learning disabled subjects as measured by the Assessement of Communication in Everyday Situations.

Hypothesis 4: There will be no significant difference between the logical reasoning use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 5: There will be no significant difference between the predicting use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 6: There will be no significant difference between the projecting use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 7: There will be no significant difference between the imagining use of language in the normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 8: There will be no significant difference between the self-maintaining use of language in the normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 9: There will be no significant difference between the directing use of language in the normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

CHAPTER II

Review of the Literature

> Children's communication must be viewed as an internal part of their total development as human beings. As they learn to communicate with both words and patterns of words and with their voices and their bodies, they also learn about the world they live in. Children have a wish: they want to understand their world, themselves, and others. They struggle to discover a system of beliefs about reality, self, and others. Their most important tool for discovering beliefs is communication (Wood, 1976, p.2).

While studies of how children become competent communicators have been designed with much theoretical sophistication, many researchers readily acknowledge there is much more to be learned about the total communicative process. Interest in how children use language to be effective communicators in their social environment has challenged those professions involved in the study of language to reassess and refocus their research activities on a more functional approach (Green, 1980).

In 1978, Bloom and Lahey published a comprehensive treatise of language development and language disorders. They advanced a three-dimensional view of language which focused on form, content and use, to describe the development of language and to assist in understanding language disorders. This tripartite approach to language study was apparent in the work of Morris as early as 1938. Only recently has the contextualist aspect of this model been

expanded to focus on language users and communication in a context (Halliday, 1975).

Rees (1978) emphasized two important issues characteristic of the pragmatic approach to language study:

1. the awareness that structural description of sentences is only one part of the picture and that to the analysis of structure must be added an account of the utterance in relation to its relevant linguistic and nonlinguistic context;

2. and the growing interest in conversation or discourse as contrasted with the study of sentences one at a time. (p. 194)

According to Halliday (1973), vocabulary is learned easily in response to opportunity combined with motivation, and impoverished grammar or narrow range of syntactic form does not appear to cause language difficulties. Rather, he attributes language problems to, "a deeper and more general problem of the fundamental mismatch between the child's linguistic capabilities and the demands that are made on him" (p. 18). For this reason, Halliday advocated the investigation of how language is used; how it achieves purposes through spelling, listening, reading and writing; how it is shaped by use and in what ways; and how form has been determined by the function it serves. Language, as viewed by Halliday, is not a subject; it is a process with each exploration focused upon a meeting point between the insights of linguistic science and those of the other sciences. During language studies of his own son, Nigel, Halliday defined seven functions which language serves, in development through study of his children.

Evidence that language use is a primary component of communicative competence has been supported by other disciplines. In a 1980 technical report sponsored by the Center for the Study of Reading, it was concluded that a large share of communicative competence lies in the ability "to infer a speaker's plans, goals, and purpose from his or her utterances and to plan and execute speech in such a way that inferences are most efficiently made" (Green, 1980, p. 5).

Domain of Competence

Prior to the 1970's, while form was most often used to describe a child's language, use was infrequently described. Neither was done in conjunction with content (Bloom & Lahey 1978). Furthermore, no consideration was given to the interaction of these three dimensions of language as essential to communicative competence. Accordingly, Bloom and Lahey (1978) took the position that "language is knowledge of the integration of content/form/use, such knowledge underlies the behavior of speaking and understanding" (p. 22). Within this general domain of language use, Bloom and Lahey (1978) identified a number of subdomains that are related to one another but that carry different emphasis and levels of analysis.

According to their recent perspective, the two major aspects of language use consist of language functions and situational contexts. Aspects of language functions include speech acts performed with words and functions served in meeting the needs of individuals.

With conceptualization of the pragmatic aspects of language a number of taxonomies have been developed for describing speech acts (Dore, 1975; Bates, 1976) and language function (Halliday, 1973; Tough, 1975). The contextual influences involve comprehension and use of information that is not explicit in the literal meaning of the message, as well as information from the listener and the context for deciding among alternative forms of messages. In the past, any attempt to study the functions of language was conducted according to grammatical structures for declarative, interrogative, imperative, and exclamative mood (Lyons, 1968). With the advancement of the pragmatic aspects of language, a number of different taxonomies of language use have been generated from a functional framework. Halliday (1975) believed that speech does not occur in a vacuum, but in relation to other persons. The speaker and context are affected by the message as well as the form the message takes. Pragmatic models emphasize the importance of linguistic and nonlinguistic contexts necessary for successful communication (Miller 1978).

Development of Competence

Prutting (1979) discussed the acquisition of communicative competence level using a stage model comparable to Piaget's developmental stages. Her model, which is a synthesis of current research in the study of language development, was offered as a beginning point for further study of the complex process of language acquisition. Within the model the communicative competencies

(pragmatic, semantic, syntactic and phonological skills) should be viewed synergistically when attempting to make observations about and descriptions of language development. Although these four linguistic features are interwoven during the actual processes of listening, thinking, speaking and communication (Schuster, Panagos, & Berger, 1975), the focus of this review will be the aspect of pragmatic development.

Prelinguistic Stage: 0-9 months

Underlying the development of language is the structure and development of the brain. Before the second half of intra-uterine development, all neurons of the neocortex are generated. Following birth, repeated stimulation of the infant produces perceptual recognition, which in turn, develops into intention and adaptation, as defined by Piaget. At this stage, the infant's crying, touching, smiling, laughing, vocalizing, grasping, and sucking generates some sort of reciprocal interaction from individuals in the environment.

This interaction characterizes children's earliest conversations. Bates (1976) referred to this behavior as perlocutionary, since a signal used by one person has some effect (intentional or unintentional) on the listener. During this period, illocutionary acts, sending messages by means of pointing, giving, and showing also begin to develop. According to Bates (1976), these acts may be an indicator of how highly communicative the child will be later. Additionally, occasions of conversational turn-taking have been documented during this stage (Prutting, 1979).

Stage I: 9-18 months

During this stage, children refine their intentional communication, incorporate new objects into their experience, and use one word utterances for specific purposes, although no real vocabulary or grammar is present (Prutting, 1979). Halliday (1973) has provided a classification of the functions which children begin to develop during this period. In his investigations of how language is used, Halliday cautioned that the notion of functions of language is not as straight forward as it appears. He contended that use and function can not be equated at the adult level, rather a more general and abstract view of the nature of linguistic function must be taken.

According to Halliday's description of language functions, the first and simplest language model to develop is the instrumental. Children use it to get things done and to satisfy material needs. Sentences are not required for this function. Regulating the behavior of others is the next function to emerge. Bernstein's studies (1971) indicated that the regulatory behavior of parents provided clues to children about what they may derive from experience as they construct their own model to use with peers and siblings. The interactional function is used to describe the mediation between children and others. Children use this function to define and consolidate the group, to produce affect and to deceive the listener. They begin to internalize the language as they are talking. The personal model emerges as children become aware of their own

individuality. Here the personality is shaped as interaction with others occurs; consequently, the awareness of self is closely bound up with speech. Children can offer to someone else that which is unique to themselves and make it public (Halliday, 1973). The exploration of the environment, a way of learning about things, is achieved through the heuristic model. Asking questions plays a large role as children seek out facts. Bernstein (1971) offered some insight into questioning and answering and its role in relation to success in formal education. Also, he has demonstrated a significant correlation between mother's linguistic attention and success in the first grade. The imaginative model also allows for a relationship with the environment, but in a creative way. Children control situations with language and define them as they want them to be. The informative or representational model is the last to develop. It is the only model which many adults use, but for children it is quite inadequate for transmission of content and is the least important function. In summary, Halliday (1973) defined language at Stage I by its uses, with each utterance consisting of one use. For children, all language is doing something; it has meaning, not just for learning. Adults must redefine meaning in relation to the children's conception of language, not just context, but in all uses (Prutting, 1979).

Stage II: 18-24 months

Cognitively, children at this stage learn that things exist even though they can not see them, and they begin to understand cause and effect relationships. They learn how to engage in dialogue, taking on communication roles such as respondent, speaker, or questioner. During this transitional stage, two macrofunctions, as defined by Halliday (1973), are derived from the earlier seven functions. The personal and heuristic models form "mathetic" function, or language as learning, and the remaining functions merge to form the "pragmatic" or social function, or language as doing. The need for grammar develops out of these two functions and grammatical structure is introduced, both functions can be combined in a single utterance (Halliday, 1975). Halliday (1973) described the "pragmatic" ability of learning "how to mean" as the central role in the processes of social development, while the "mathetic" function assumed greater significance for cognitive development. By mastering the functions one by one, children discover what they can do with language as they produce and practice its meaning potential (Prutting, 1979).

Stage III: 2 to 3 years

Through cooperative conversation, children share a system of symbols and move away from the earlier action oriented world. In this stage they remain concrete in their thinking and are not able to return to the point of origin in their thinking. They cannot assume another person's viewpoint or center on one aspect or detail

of an event. They reason from particular to particular. These cognitive limitations are directly related to the way children comprehend and produce language during this stage. There is inconclusive evidence that children can respond to a request for clarification at this stage. It is believed that their limited attention span may account for the rapid topic change during discourse. Piaget believed that conversation was egocentric because children were functioning at the preoperational level of cognitive development. Prutting (1979) suggested that this area needs further investigation to determine if monologues produced by young children have more than one function.

Stage IV: 3 years and older

From 3 to 7 years of age children continue to operate with conceptual constraints, gaining cognitive skills by actively reconstructing their experiences. Pragmatically, they move toward adult level conversational skills. Around age 3 1/2, they acquire an ability to maintain a topic over several conversational turns. At age 4, they vary the complexity of their speech as a function of age of the listener (Shatz & Gelman, 1973) and they begin to use indirect requests. When asked to role-play the children assumed stereotypical male-female and child behavior patterns, indicative of their ability to reconstruct normative behavior. At about 5 years-old children develop "metalinguistic" awareness, or the ability to think about language and comment on it, as well as, to produce and comprehend it. This development serves as the basis for future

aesthetic choices. Strategy errors continue to be unique, as the young child deletes, inserts, substitutes, and transposes words and sounds (Prutting, 1979).

Stage V: Adult Communicative Competence

The adult brain can generate propositions that are the result of experience and hypothesis building and not dependent on concrete reality of experience. Halliday (1975) described the adult as capable of unlimited language use which may be expressed through utterances serving two functions, ideational and interpersonal. The ideational function of language focuses on the cognitive goals of communication, while the interpersonal function emphasizes social purposes. Adult utterances serve both functions at once. These metafunctions evolved out of the two macrofunctions which emerge during Stage II. Conversational interaction through verbal, nonverbal and vocal behavior needs to be specified to understand what is it that speakers and listeners do when they talk to one another. Although there is a lack of specific information on competence with the adult populations, descriptions of incompetent communicators have been offered (Prutting, 1979).

Measurement of Language Use

The assessment of a child's language ability remains one of the most challenging tasks for psychologists and educators, (Hammill and Bartel, 1978). Assessment is complex because linguistic competence can be masked by a variety of performance variables such as poor memory, distractibility, or lack of interest. Competence itself

can never be directly observed because it represents the underlying knowledge that an individual has about a given language. At best, performance is the expression of that competence in understanding or producing a well-formed sentence.

To participate successfully in an academic setting children need to know how to use language (Halliday, 1973). According to Halliday (1973), the ability to operate institutionally in personal and heuristic modes is critical to academic achievement. Learning "how to mean" does not automatically follow the acquisition of grammar and vocabulary. The kinds of words and structures children know or use are not as important to the attainment of meaning potential as significance and interpretation. The failure to acquire adequate meaning potential is not an easy problem to diagnose and is more difficult to treat. At minimum the children's linguistic experience should be taken into account and differences which could cause difficulties should be noted. Social experiences should be relevant to the linguistic demands that society will eventually make on the child, the demands of school.

During the course of a language research project, Tough (1977) a British nursery and primary school educator, reviewed several classification systems of children's language use. While Halliday's system was designed to classify the potential for expression and meaning that particular structures hold, it cannot be assumed that "children deliberately select and employ structures with the intention of realizing the potential meaning of the structures"

(Tough, 1977, p. 40). For example when the young children say "You must because you must", they have not yet discovered a causal relationship.

Using Piaget's theory of egocentric and socialized speech as a point of departure, Tough (1977) developed a functional classification system borrowing from Vygotsky, Luria, Lewis, Bruner and Bernstein (Tough, 1977). The system includes the seven uses of language which Tough believed necessary for children to achieve academic success:

1. Self-maintaining - use of language to create an awareness of the speaker's identify and to promote or regulate the individual's position in relation to others.
2. Directing - use of language to control or regulate the physical actions and operations performed by others.
3. Reporting - use of language to provide information about past and present experiences.
4. Toward Logical Reasoning - use of language which employs rational thought and argument to interpret experiences.
5. Predicting - use of language to extend communication beyond the immediate present or past experiences to events that have not yet occurred and which may never take place.
6. Projecting - the use of language within an unfamiliar or external context.
7. Imagining - use of language to create one's own world.

Each of these seven uses was further divided into a number of strategies of language use (see Appendix A for an outline of Tough's language uses and strategies). The strategies, as described by Tough, are the means by which children reveal the purpose or intent of their speech, such as labeling or comparing. At the broadest level, the seven uses can be grouped into a social function, consisting of the self-maintaining and directing uses, or a representational (cognitive) function, including the reporting, logical reasoning, predicting, projecting, and imagining uses. Tough used a tri-level composite classification system to analyze use during the four year longtudinal study of language development in advantaged and disadvantaged children. She sampled children's language at age 3 and later at 5 and 7 years to determine whether differences in early language use continued to contribute to the children's relative advantage or disadvantage in school. Using a structured interview technique, she selected communication situations to elicit those uses of language which might be needed by the child as "educational strategies". The advantaged children used strategies representative of all language uses; the disadvantaged children's use was somewhat restricted.

The classification system devised by Tough (1977) was adapted by Lieberman and Hutchinson (1980) as the basis for an assessment of communicative competence that would preserve a naturalistic communication environment for children. The Assessment of Communication in Everyday Situations, ACES includes a series of

role-playing interactions to elicit use of 36 different communication strategies. The familiar topics of a birthday party, a picnic, and the first day of school serve as the organizational framework of the three forms of ACES which have been evaluated for validity and reliability. Preliminary results indicate that the instrument has the potential to provide speech and language clinicians and teachers with a valid and reliable sample of children's use of language.

Muma and Pierce (1981) support a descriptive model of language assessment, rather than a normative approach, which provides only data and not evidence. Descriptive information offers evidence of children's language performance, taking into account shifts in orientation resulting from improved insights about language. Leonard et al. (1978) also recognized the value of informal observations of children's communicative competence, especially for the evaluation of language use. In time, the diagnostician will be able to predict and describe the rules of language in context just as presently is done with grammar (Hymes, 1971).

In a review of tests available to measure language use Peebles (1980) noted that none, with the possible exception of the Preschool Language Assessment Instrument (Blank, Rose, & Berlin, 1978) were designed to assess functional language, i.e. communicative competence. A more recent review by Lieberman (1981, b) of existing measures of language use in children reported on standardized tool and a variety of nonstandardized approaches to evaluate isolated aspects of the area. Lieberman (1981,b) suggested that the ideal

approach for measurement of language use should present a skillful simulation of real life encounters while maintaining the motivation and interactional richness of familiar academic and social communication events.

Johnson (1981) also noted few formal assessment tools for measuring language use. She suggested naturalistic sampling of language use through the use of audiotapes, videotapes, films, and observations. While she believed that assessment of language use should take place in naturalistic contexts, she suggested that there were times when more structured tasks were needed to determine whether children have difficulty perceiving, comprehending, or using knowledge.

The Learning Disabled and Language Use

Panagos and Griffith (1981) reported rapid change in the past few years in management strategies used with language disabled children. Psycholinguistic models using diagnostic-prescriptive teaching based on the Illinois Test of Psycholinguistic Ability were replaced by procedures stemming from Chomsky's syntactic-semantic movement. By the end of the 70's, the social-pragmatic approach emerged, spurred by research from anthropology, sociology, linguistics, psychology, education, and the clinical sciences (Bloom, 1978). Still, confusion about how to organize, implement, and evaluate language intervention programs has prevailed because much remains to be learned about language development and language disability in the learning disabled (Panagos & Griffith, 1981) and

about disordered communication systems (Prutting, 1979). To date qualitative and quantitative differences have been reported when the language use in normal and learning disabled students has been compared.

Soenksen, Flagg, and Schmits (1981) analyzed the conversations of normal and learning disabled children using mean length of utterance during thirty-minute play situations over six months without an adult present. Results showed that normal subjects matched on the basis of chronological age (8-9 to 8-11), were more likely to code-switch; change their conversational style to suit the listener or situation, than the disabled. The mean length of utterance of the disabled was more like that of younger children. When their utterances were analyzed further using Halliday's pragmatic functional system, the learning disabled subjects tended to make more personal statements, while the non-disabled used heuristic, imaginative statements, and interactional patterns. The researcher suggested that the learning disabled children appeared more egocentric, talking more about themselves without taking their listeners into consideration. Also, they appeared to be more concrete in their use of language, since they initiated no imaginative conversation. These researchers suggested that in future investigations, it might be helpful to document the difficulties that learning disabled children have in social relationships. They believed that greater self-centeredness, less imagination and increased developmental delay were characteristic of the learning

disabled. It was interesting to note that Soenksen et al. (1981) needed to add an additional ambiguous category to Halliday's (1973) functions, in order to classify all responses. This added support to Tough's (1977) observation that Halliday's framework was not sufficiently refined for the study of older children's use of language.

Bryan et al. (1981) designed preliminary studies to determine whether learning disabled children have pragmatic deficits and if their academic achievement and social relationships might be affected by identified deficits. Previous research on language deficits in the learning disabled had focused only on the relationship between linguistic structure and reading retardation. The present findings supported the conclusions of earlier work on grammatical structure (Bartel, Grill, & Bartel, 1973). There appeared to be no difference in competence when tasks were kept simple and required little attention, memory, or sequencing. The learning disabled subjects participated as much as the normal subjects; that is, they took as many conversational turns, and they were as likely to make choices when adequate clues were given. However, many differences emerged when the situation became ambiguous or socially complex. The learning disabled subjects had considerable difficulty in the use of pragmatic skills; asking questions, responding to inadequate messages, disagreeing and supporting an argument,or sustaining a conversation. Likewise, they elicited different communication from their peers. Simple questions were asked of them and

simple responses to their questions were given. Adapting their speech to the needs of the listener and being cooperative conversational partners were difficult for the learning disabled. These conversational weaknesses appear to be characteristic of the learning disabled from grades one through eight, and there was no evidence that conversational skills improved over time. The problems experienced by the learning disabled appeared to distinguish them from the normal children at an early age and persisted at least through eighth grade.

In one study, the learning disabled addressed more competitive utterances to peers and produced fewer whose purpose seemed to convey positive feelings (Bryan, Wheeler, Felcan & Henek, 1976). It could not be determined if deficient conversational skills were attributed to deficient language skills, to social knowledge, or to lower status. In another study, Bryan and Pflaum (1978) found that learning disabled boys did not alter their conversations to meet the needs of the listener, but that learning disabled girls and nondisabled boys did. Learning disabled girls and boys showed less sensitivity to age differences, were more likely to give ambiguous or inappropriate information, and were less able to take into consideration the listener's perspective. Bryan and Pflaum (1978) suggested that syntactic deficits in learning disabled boys limited their repertoire of speech styles appropriate for different listeners. When an investigation of the learning disabled children's comprehension of nonexplicit requests for clarification was conducted, it was found

that even the youngest children responded to implicit feedback, as well as they did to explicit feedback (Bryan et al., 1981).

The learning disabled children's ability to work actively at establishing a shared topic when the message was unclear was examined by measuring question-asking behavior and decision-making ability. When the messages were partially informative or uninformative, younger children and learning disabled children asked fewer questions and made significantly fewer correct picture responses. Furthermore, learning disabled students were not observed to respond impulsively (Bryan et al., 1981).

In the two previous studies, the researchers suggested that under structured conditions, only first and second grade girls have difficulty interpreting messages from an adult with respect to interpreting subtle feedback and judging the adequacy of the task. Bryan et al. (1981) stressed that the question remained as to why learning disabled children in general failed to ask questions and thus made more incorrect choices. Three possible explanations were offered: (a) linguistic deficits, (b) a general lack of assertiveness, suggestive of passivity which has been generalized to conversational skills, or (c) inadequacies which the learning disabled felt concerning their ability.

Two additional studies examined learning disabled children's communicative strategies when interacting with peers in a situation that required them to be persuasive. The learning disabled were more agreeable, that is less likely to disagree or argue their case

during a group gift-selection activity (Bryan et al., 1981). Also, they were less likely to monitor the group's progress or hold the floor during discourse. The learning disabled participated as much as the nondisabled but maintained a passive role. In another study (Bryan et al., 1981) the learning disabled were television-talk-show hosts and the nondisabled counterparts were guests. The learning disabled, while cooperative, asked fewer, as well as less open-ended questions. Guests of the learning disabled hosts responded with fewer elaborative answers to questions and asked more yes-no questions. Also, there were more instances of role-switching where guests assumed the questioning role. This review of the studies conducted by Bryan and her colleagues (1981) indicate subtle pragmatic deficits in the learning disabled. Even the type and frequency of question asking may influence the response children elicit from peers suggesting that the relationship between social status and the development of communicative competence is neither simple nor direct.

The Literature in Retrospect

Society in general has shown increased interest in children with reading and other learning disabilities, creating greater interest in oral langugage deficits which may underlie such disabilities (Meyen, 1980). This interest comes at a time when the professions involved in the study of language are also searching for new insights into the nature of language disablilities. Many varied disciplines are developing a strong commitment to investigate the

total communicative process in the context of social and cognitive language use. Such interest is indicative of a need to define with greater precision the nature of language disabilities and to determine how resulting deficits may contribute to the cycle of academic, as well as social failure experienced by learning disabled children.

CHAPTER III

Methodology

Subjects

The 60 subjects in the study consisted of an equal number of normal and learning disabled students, ages 7-6 to 9-6. They were enrolled in the eight elementary schools in the McDowell County Public School System which is located in the rural foothills of the western North Carolina mountains. All schools in the system qualify for the services of the Title I Reading Program. To qualify for these services, at least 25% of the students from a given school must meet the criteria for receiving free and reduced meals. The school population, in general, was representative of high-low to middle socio-economic status. The normal and learning disabled subjects were matched by age ($\pm$ 2 months) and by sex to their disabled counterparts. The mean age of the 60 subjects overall was 8 years, 9 months and an equal number of learning disabled and normal students were selected from each of eight elementary schools (see Appendix B). The two groups consisted of 50 males and 10 females; 58 Caucasians, and two Afro-Americans. Letters of notice that the study was being conducted were sent home to parents of children being considered for participation in the study (see Appendix C).

Learning disabled group. The learning disabled subjects were participating in the Program for Students with Specific Learning Disabilities in the McDowell County Schools and had been diagnosed as having a moderate deficiency in at least one area of language arts, according to the guidelines for specific learning disabilities programs (Division for Exceptional Children, North Carolina State Department of Public Instruction, 1980). At the first grade level, a moderate deficiency is defined as an 8-15 months discrepancy between expectancy and actual performance on individual achievement tests. The discrepancy in grades two and three is 10-20 months. The researcher reviewed the placement file of each learning disabled subject to confirm eligibility according to the above procedure. Furthermore, to exclude students who were deficient in math areas alone, only children who had at least one annual goal in an area of language arts were included. The 30 learning disabled subjects had been in school the same number of years as the normal; however, 23 repeated a previous grade or were repeating a grade at the time of the study (see Appendix D).

Normal group. The 30 normal subjects were in the appropriate grade for their age. All students from one second- and one third-grade classroom in each of the eight elementary schools in McDowell County were potential candidates for selection as normal subjects. In Grade 2, the 1982 scores from a group assessment tool, The Prescriptive Reading Inventory were used to select children who were performing within the average achievement range. Each

learning disabled student was then matched with one of the normal students using sex and age (± 2 months) as the two determiners. The scores of the nine normal subjects who were selected fell between the 44th and the 65th percentile. The mean score for second graders countywide was the 56th percentile. While no standard deviations have been reported on this instrument, the scores are close enough to the mean to be considered average.

The 21 third-graders in the normal subject group were selected on the basis of their 1982 scores from the reading and language arts subtests of California Achievement Test, Form C. The scores were between the 27th and the 68th percentile in reading, and the 29th and the 74th percentiles in language arts. The publisher stated that scores between the 23rd and 68th percentiles were within the normal range. One Afro-American student presented an exception in the selection process; his scores were at the 19th and 16th percentiles, respectively. This subject was included in the study because it was not possible to find another student of the same race to match with the learning disabled subject who met the achievement criteria. His teacher reported that he was achieving in the average range in the classroom. The mean score for third graders countywide was at the 51st percentile in reading and at the 62nd percentile in language arts. In every instance, when selecting the normal subjects, the researcher sought the classroom teacher's judgement to confirm that the student was performing at an average level in classroom assignments and was a cooperative, well-adjusted student. (Appendix E lists the characteristics of the normal group.)

Apparatus

The Assessment of Communication in Everyday Situations, (ACES) developed by Lieberman and Hutchinson (1980) was used to generate the data on functional communication. ACES, available in three forms, is designed to measure communicative competence, especially as it relates to the use of language in familiar interactions with peers and adults. Form II, "The First Day of School", was used in this study. Several materials were required to enhance the role-playing episodes. These materials are listed in the procedural script of the ACES (see Appendix F). The assessment procedure is based on Tough's (1977) functional classification framework of language use and includes 36 communication strategies which reflect competence in the social and representational functions and seven subordinate areas of language use (operational definitions of the seven uses and the accompanying strategies are in Appendix A).

Two studies investigated the validity and reliability of ACES with children ages 4, 6, and 8. These studies supported its use in sampling communicative competence as it relates to children's ability to use language. Content validity for the three forms of ACES (Peebles, 1980) was determined by asking 63 speech pathology specialists whether or not specific test items would elicit correct responses. An agreement of 85% was reached, on Form 2, "The First Day of School." It was found that of the 34 communication strategies assessed on the original version of ACES, 31 achieved percentages of agreement equal to or higher than .75, establishing good content

validity. Likewise, a level of 74% agreement was established between the strategies used on ACES and those used in everyday situations, resulting in high concurrent validity. Further it was observed that more high level responses were elicited in the logical reasoning, predicting, and projecting uses within the structure of ACES than in normal conversation. The investigators concluded that children may not use these strategies naturally in their conversation without adult intervention (Peebles, 1980). The results of the alternate-form study revealed correlation coefficients among the scores for the three forms of ACES that were high positive at the $p < .0005$ level. The correlation coefficients between scores in a test-retest situation were found significant at the $p < .005$ level. Intra-rater reliability was at the $p < .001$ level and inter-rater reliability, ranged from $p < .009$ to $p < .001$ (Hill, 1980).

Procedure

Training. The researcher was trained by one of the developers of the role-playing episode to conduct the interactions with ACES. The training included two supervised demonstrations of the role-playing procedure. The researcher then scored the responses from episodes administered by other examiners until an average interrater reliability rate when compared with the trainer's scoring was established at 92%. Finally, two practice administrations with a kindergartner and a third-grader were conducted. Scoring accuracy was 92% and 98%, respectively.

Data collection. The researcher acted as examiner during the role-playing interactions with all 60 subjects involved in the study. The subjects were tested during the school day in a quiet area of the school building. The sessions, which were thirty to fifty-five minutes in length, were recorded on a 60-minute audio cassette tape, using a Panasonic portable cassette recorder.

The testing protocol of ACES required the interaction of the subject child, a friend of his/her choice, and the examiner. The examiner assumed various roles such as, mommy, little sister, classmates, teacher, farmer's wife, and starship commander, during the role-playing episodes. The items from ACES, designed to elicit the 36 strategies, were presented to the target child and his/her friend using hand puppets, school supplies, and toys. The materials and the setting were designed to create a realistic, naturalistic communicative context.

A brief conversational period was provided before the actual role-playing episode. During this time, the subject, his/her friend, and the examiner became acquainted. The children explored the materials and became accustomed to the microphone and recorder. An additional four or five minutes of free play were provided during the session for the purpose of eliciting the imagination strategies of language use. When no initial response was given by the subject child or when the response was unacceptable, the examiner rephrased the cues to elicit a response.

Scoring. No scoring was attempted during the sessions with the subjects. The researcher later replayed the recordings and scored them according to the scoring guide which was developed for acceptable productions (see Appendix G). Two points were given for initially correct responses, one point for correct responses which resulted from prompting, and no points for an inadequate response or no response. The researcher re-analyzed six randomly selected samples, three from each subject group, in order to establish intrarater reliability. A 92% level was attained.

Data analysis. Means and standard deviations were computed on the normal and learning disabled subjects for the social and representational functions and the seven uses of language: reporting, reasoning, predicting, projecting, imagining, self-maintaining and directing. The social and representational functions, with respective uses under each, became the variables that were used to compare the normal and learning disabled subject groups. To determine if the social and representational functions of language, as well as the seven areas of language uses were discriminating between the normal and learning disabled group, a discriminant analysis was performed. The variables were weighted and linearly combined using a stepwise procedure to select the most discriminating variable(s). Wilk's lambda and a canonical correlation indicated the degree of separation.

CHAPTER IV

Results and Analysis of the Data

Results

The means, standard deviations, and ranges were computed for the nine variables: the social and representational functions and the self-maintaining, directing, reporting, logical reasoning, predicting, projecting and imagining uses of language. (These data are presented in Appendix H for the normal group and in Appendix I for the learning disabled group.)

For the normal group, scores on the social function ranged from 9 to 22, with a standard deviation of 3.30 and a mean of 17.70. Scores for the learning disabled group on the social function ranged from 7 to 23, with a standard deviation of 4.25 and a mean of 15.38.

For the normal group, scores on the representational function ranged from 47 to 63, with a standard deviation of 3.33 and a mean of 59.43. Scores for the learning disabled group in the representational function ranged from 46 to 64, with a standard deviation of 5.51 and a mean of 56.23.

For the normal group, scores in the self-maintaining use ranged from 6 to 13, with a standard deviation of 1.92 and a mean of 10.73. Scores for the learning disabled group in the self-maintaining use ranged from 4 to 13, with a standard deviation of 2.25 and a mean of 9.27.

For the normal group, scores in the directing use ranged from 2 to 10, with a standard deviation of 2.20 and a mean of 6.97. Scores for the learning disabled group in the directing use ranged from 1 to 10, with a standard deviation of 2.45 and a mean of 6.12.

For the normal group, scores in the reporting use ranged from 10 to 17, with a standard deviation of 1.70 and a mean of 15.37. Scores for the learning disabled group in the reporting ranged from 10 to 17, with a standard deviation of 2.26 and a mean of 14.50.

For the normal group, scores in the logical reasoning use ranged from 9 to 15, with a standard deviation of 1.30 and a mean of 13.60. Scores for the learning disabled group in the logical reasoning use ranged from 6 to 16, with a standard deviation of 2.33 and a mean of 12.46.

For the normal group, scores in the predicting use ranged from 13 to 16, with a standard deviation of .97 and a mean of 15.23. Scores for the learning disabled group in the predicting use ranged from 12 to 16, with a standard deviation of 1.12 and a mean of 14.69.

For the normal group, scores in the projecting use ranged from 8 to 10, with a standard deviation of .48 and a mean of 9.80. Scores for the learning disabled group in the projecting use ranged from 7 to 10, with a standard deviation of .85 and a mean of 9.46.

For the normal group, scores in the imagining use ranged from 1 to 6, with a standard deviation of 1.16 and a mean of 5.43. Scores for the learning disabled group in the imagining use ranged from 0 to 6, with a standard deviation of 1.21 and a mean of 5.12.

Analysis

To determine whether significant differences existed between the normal and learning disabled groups for the two functions and seven uses of language, these data were submitted to a discriminant analysis The resulting F ratios were converted to t ratios by computing square roots in order to determine levels of significance. The results of these anaylses are included in Table 1. Because four of the learning disabled cases had at least one piece of missing data, only 56 cases were analyzed. According to these analyses, statistically significant differences were observed between the two groups for the two overall functions of language: the social function t (1, 54) = 2.375, p = .0211 and the representational function t (1, 54) = 2.670, p = .01 . Within the social functions of language, the self-maintaining use achieved a statistically significant difference between the groups t (1, 54) = 2.619, p = .0259. Within the representational function, the logical reasoning use of language achieved a level of statistical significance difference between the groups of t (1, 54) = 2.29, p = .0259. Two additional uses within the representational function approached levels of significance, including: the predicting use t (1, 54) = 1.933, p = .0585 and the projecting use t (1, 54) = 1.846, p = .0703.

Table I

COMPARISON OF GROUP MEANS, STANDARD DEVIATIONS, AND LEVELS OF SIGNIFICANCE OF THE NORMAL (N) AND LEARNING DISABLED (LD) GROUPS

Functions	Group	$\bar{X}$	SD	t ratio	p-value
Social	N	17.70	3.30	2.375	.0211*
	LD	15.38	4.25		
Self-maintaining	N	10.73	1.92	2.619	.0114**
	LD	9.26	2.25		
Directing	N	6.96	2.20	1.367	.1772
	LD	6.11	2.45		
Representational	N	59.43	3.33	2.670	.0100**
	LD	56.23	5.51		
Reporting	N	15.37	1.80	1.589	.1177
	LD	14.50	2.26		
Logical reasoning	N	13.60	1.30	2.29	.0259*
	LD	12.46	2.33		
Predicting	N	15.23	.97	1.933	.0585
	LD	14.69	1.12		
Projecting	N	9.80	.48	1.846	.0703
	LD	9.46	.85		
Imagining	N	5.43	1.16	1.000	.3217
	LD	5.11	1.21		

* $p < .05$ level
** $p < .01$ level

To establish the "best" set of discriminating variables between the normal and learning disabled groups, the data were analyzed further by means of discriminant function analysis. Using a stepwise linear procedure it was determined that three distinguished between the groups. In order of their contributing power, these variables were--self-maintaining, logical reasoning, and projecting. The results of this analysis are included in Table 2.

Table 2

Variables Contributing to Classification of Sample as Learning Disabled or Normal

	Order stepped into equation	p-value	Discriminant function coefficients
Maintaining	1	.0114*	.63192
Logical Reasoning	2	.0098*	.47789
Projecting	3	.0128*	.41308

*$p < .01$ level

A linear combination of the three discriminating variables formed a single discriminant function. Although this function provided a statistically significant amount of discriminating information $X^2 = 10.807$, $\underline{df}$ (1, 54), $\underline{p} = 0.013$, it did not produce a high degree of separation between the two groups, normal and learning disabled, as indicated by the final Wilk's lambda (0.8139) and a canonical correlation of 0.4313 for the discriminant function and the groups. By squaring the canonical correlation it can be seen that 18.57% of the variance in the discriminant function is explained by the groups. Since the three uses--self-maintaining, logical reasoning and projecting--account for a statistically significant amount of the variance, classification equation was evolved to determine how successfully they classified normal and learning disabled subjects. Using the $\underline{z}$ scores for the three discriminating variables reported in Table 2, the equation was developed as follows:

Y = .47789 X Logical Reasoning + .41308 X Projecting

+ .63192 X Self-maintaining.

This analysis revealed that the logical reasoning, projecting, and self-maintaining uses as measured by ACES were the variables which correctly classified subject cases 69% of the time; normal subject cases 73% of the time; and learning disabled subject cases 64% of the time.

CHAPTER V

Discussion

The purpose of this study was to compare the language use of 30 learning disabled students and 30 normal students matched on the basis of chronological age and sex. Subjects ranged in chronological age from 7-6 to 9-6. Language use was measured by the Assessment of Communication in Everyday Situations, an instrument which elicits language strategies during a role-playing episode. These strategies were grouped under seven language uses, including the self-maintaining and directing uses reflective of the social function of language. Reporting, logical reasoning, predicting, projecting, and imagining uses comprise the representational function. Differences between the groups were measured in terms of these two functions and seven uses designed to reflect strategies of language use which are necessary for academic success. The hypotheses were tested at $p < .05$ level of significance. The following hypotheses were tested at the .05 level of significance and were accepted.

Hypothesis 3: There will be no significant difference between the reporting use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 5: There will be no significant difference between the predicting use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 6: There will be no significant difference between the projecting use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 7: There will be no significant difference between the imagining use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 9: There will be no significant difference between the directing use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

The following hypotheses were tested at the .05 level of significance and were rejected.

Hypothesis 1: There will be no significant difference between the use of the representational functions of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 2: There will be no significant difference between the use of the social functions of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 4: There will be no significant difference between the logical reasoning use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Hypothesis 8: There will be no significant difference between the self-maintaining use of language in normal and learning disabled subjects as measured by the Assessment of Communication in Everyday Situations.

Differences between the learning disabled and normal groups on the predicting and projecting uses approached the .05 level of significance, at $p = .0585$ and $p = .0703$, respectively. In the stepwise analysis, the projecting use entered into the equation of the three variables contributing to the distinction between the subject groups.

Conclusions

The results of this investigation revealed significant differences between the normal and learning disabled subjects in their use of the social and representational functions of language as classified by Tough (1977). Four of the nine hypotheses were rejected at the $p < .05$ level of significance. Two other hypotheses approached the .05 level. Further the representational function and the self-maintaining area were significant at the .01 level. The results of this study support the assumption made by Bryan et al. (1981) that learning disabled children demonstrate deficits in language use.

One of the significant differences observed in the study was the limited ability of learning disabled subjects to use self-maintaining strategies. As a part of the social function of language these strategies reflect ability to monitor and mediate one's position in relation to others. Evidence from this investigation agrees with previous data which document poor social skills in the learning disabled. Bryan et al. (1981) questioned the relationship between the learning disabled children's poor social status and inadequate communicative competence. The present results support the argument that the deficits in the social functions of language use may be an underlying cause of low social status.

The differences that were demonstrated in the strategies designed to elicit logical reasoning skills with the representational function, reflected deficits in the learning disabled subjects' ability to use language which employs rational thought and argument to interpret experiences. These representational skills denote a second area where deficits have been previously observed and documented, especially in relationship to academic failure. These significant differences in the overall social and representational functions reflect an inability of learning disabled children to use language appropriately. These inadequacies suggest that in learning disabled children a strong relationship exists between language use and academic, as well as social failure.

When the variables were submitted to a stepwise linear regression process, the uses which contributed to the discrimination of the normal and learning disabled groups were self-maintaining, logical reasoning, and projecting. Because these three of the seven uses were the only ones contributing to the 19% difference between the normal and learning disabled subjects, ACES may not be useful as an instrument for classification of learning disabled childern. However, the three uses--self-maintaining, logical reasoning, and projecting--which were successful in correctly classifying the subjects into two groups are worthy of future study. It is possible that they could be employed in assessment procedures used with learning disabled children. ACES can provide a description of individual children's ability to incorporate the functions and uses of language into their communication skills. Because it offers a structured sample of communicative competence, based on a comprehensive classification system, this instrument can be useful in planning instructional strategies for remediating delayed or disordered language skills, especially as they affect the ability to learn (Halliday, 1973). Such an approach, using an educationally oriented classification system, would be reflective of the growing "pragmatic" approach to remediation (Bloom, 1978).

Recommendations

The results and conclusions of this investigation have the following implications for curriculum planning:

1. The development of objectives and instructional strategies in the use of language should be incorporated into programs for preschool handicapped children. Teaching language use strategies which equip the child with skills to learn effectively should become a priority at the preschool level. By the time a student enters formal schooling a very critical period for language learning may have already passed.
2. An inservice program for regular and special education teachers at the elementary level that would focus on language use should be designed. The development of strategies within the seven uses of language should rely heavily on real experiences, so that children may learn language use by doing. These experiences should include appropriate models so as to further ensure that children attain a match between their competence and the demands that the school makes on them.

Finally, it is recommended that research related to the various aspects of communicative competence in normal and learning disabled children continue. Further research should include:

1. studies conducted with additional subjects in an effort to further define and describe similarities and differences between the use of language in the learning disabled and normal children;

2. experimental studies that establish the influence of communication experiences on the pragmatic language development of normal and learning disabled children;
3. additional attempts to factor out the multiple variables which contribute to the failure cycle experienced by the learning disabled.

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APPENDIXES

APPENDIX A

Tough's (1977) Framework for the Classification of the Uses of Language

Operational Definitions and Examples from ACES

Tough's (1977) Framework for

the Classification of the Uses of Language

Operational Definitions and Examples from ACES

I. SELF-MAINTAINING - the use of language to create an awareness of the speakers' identity and to promote their position in relation to others.

a. Referring to physical and psychological needs - includes utterances which seek to satisfy desires.

1. I want the big one.
2. I want the one with the stars on it.
3. I want the yellow one.

b. Protecting the self and self interests - includes utterances spoken in defense of oneself and one's rights and property.

1. I was using that. Give it back.
2. Give me that back, I'm using it.
3. Give it to me, I'm using it.

c. Justifying behavior and claims - includes utterances which give a psychological (appealing to internal states or motivations) or social (appealing to rules, conventions, what is expected of simply fact) reason for actions or demands.

1. I'm gonna tear your house up cause it's ugly.
2. I'm gonna mess your picture all up because I don't like it.
3. Yours isn't pretty so I'm gonna mess it up.

d. Criticizing others - includes utterances which find fault with the listeners, often by belittling their status or abusing him by name calling.

1. Yours is ugly, like you.
2. Your house is too fat.
3. I don't like your house, it's yukky.

e. Threatening others - includes utterances which promise to bring about a state considered to be unpleasant to the listener. A threat is usually accompanied by a statement of the external conditions under which the event will take place.

1. You better let me have a turn or I'll tell the teacher.
2. Your house is ugly. I'm gonna mess it all up.
3. If you don't let me swing, I'll tell the teacher.

II. DIRECTING - the use of language to control or regulate the physical actions and operation performed by oneself and others.

a. Monitoring own actions - includes the running commentary or monologue which accompanies and reflects upon the speaker's own ongoing activity.

1. I'm gonna put the chimney here.
2. I'll put the doors here and the window here.
3. The windows are going right here.

b. Directing the actions of the self - includes the running commentary or monologue which guides and controls the speaker's own ongoing activity. It implies a measure of high concentration on precise, sustained or intricate activity which commonly occurs in the face of some difficulty or obstacle.

1. I have to slide this thing off and put this through the paper.
2. I have to stack all the paper.
3. This is hard to get through. I have to push, there it goes.

c. Directing the actions of others - includes utterances which are designed to guide a listener through an immediate action or series of actions.

1. Pick out a square. Put the door in the middle and the chimney on top.
2. Put the triangle on top of the square.
3. Use the little squares for windows on the big square.

d. Collaborating in action with others - includes utterances made in a context of cooperation which propose or plan a course of action for the speaker and one or more listeners.

1. I'll find the wheels and you find the doors.
2. You put on the lights and I'll find the windows.
3. When you finish putting on the wheels, I'll put on the windows.

III. REPORTING - the use of language to provide information about past and present experiences.

a. Labeling - includes utterances which serve the simple purpose of identifying observed phenomena.

1. I see a pencil, kleenex, and an eraser.
2. There's a ruler, pen, and eraser.
3. A pen, pencil and marker.

b. Referring to detail - includes utterances which serve to describe the attributes of objects, actions and/or events.

1. The gun is blue and has a trigger and handle.
2. The nurse's kit has some tiny bandaids and a thermometer in it.
3. The helicopter has a round thing on top that goes round and round.

c. Referring to incidents - includes utterances which describe the occurrence of an action or event.

1. We played with the farm set and the star patrol set.
2. We played with the shapes and I got to clean the blackboard.
3. Outside we played duck duck goose, climbed on the monkey bars, and swung.

d. Referring to the sequence of events - includes utterances which accurately reflect the serial nature of several related actions or incidents.

1. We had show and tell, then played with the shapes, then went outside.
2. First we had show and tell, then we played, then I cleaned the blackboard, and then we went outside.
3. The dog stole a pork chop, ran to the river and then dropped his chop when he saw another dog.

e. Making comparisons - includes utterances which link objects, actions or experiences through examination of similarities and differences.

1. This one is from Wendy's and this one is from Burger King.
2. This lunch box is little and this one is big.
3. This one has writing on the bottom and this one doesn't.

f. Recognizing the related aspects - includes utterances which show an association between two or more actions or events.

1. He was on top of the monkey bars and fell and hurt his arm.
2. He was walking on top of the monkey bars in his new shoes and he slipped and fell.
3. He was walking on the monkey bars and fell and got his breath knocked out.

g. Extracting or recognizing central meaning - includes utterances which impose a primary structure or coherence upon a situation or event and serve to unify the contributing parts into a composite whole.

1. He had one pork chop but wanted two, and lost both pork chops.
2. The dog wasn't happy with just one pork chop and he tried to get another one and lost them both.
3. A dog stole a pork chop and tried to get another one but in the end he lost both pork chops.

h. Reflecting on the meaning of experiences - includes utterances which express the speaker's attitudes or feelings about a situation.

1. Sad.
2. I feel sad about my best friend being in a different class.
3. I feel lonely.

IV. TOWARDS LOGICAL REASONING - the use of language which employs rational thought and argument to interpret experiences.

a. Explaining a process - includes utterances which describe a particular method of doing something, generally involving several steps of operations.

1. Everybody gets in a line and one person runs over and tries to break the line. If they do, they get to take somebody back to their side.

2. Everybody gets in a circle and one person walks around the circle and taps everyone on the head, when he says goose, you got to run and try to catch him.
3. You sit in a circle and if someone taps you on the head and says goose, you chase them back to your place. If they get your place, you have to go in the mushpot.

b. Recognizing casual and dependent relationships - includes utterances which acknowledge a logical and relevant connection between two situations and which express this most commonly in terms of "how" and "why."

1. I can't use this. It doesn't have any lead.
2. I can't write with this pencil cause it doesn't have a point.
3. I can't use this pencil. It's broken.

c. Recognizing problems and their solutions - includes utterances which acknowledge obstacles to a course of action and suggest ways to surmount them.

1. I want to wear the white one; the red one is dirty.
2. The red blouse is missing a button. I'll wear the white one.
3. I can wear the white one cause the red one has paint on it.

d. Justifying judgements and actions - includes utterances which offer a reason or explanation for decisions and behaviors which apply only to a particular situation.

1. I'll be out later. I have to clean the blackboard.
2. I can't go with you now. I have to clean the blackboards first.
3. Mrs. Green wants me to clean the blackboards. I can't go now.

e. Reflecting on events and drawing conclusions - includes utterances which evaluate the implications of an action or event and result in judgements.

1. If you're greedy, you might lose everything.
2. It's not nice to be greedy.
3. You shouldn't be greedy.

f. Recognizing principles - includes utterances which provide an elemental rule or rules to explain observed phenomena.

1. We should share.
2. No, it's not right cause we should take turns.
3. You have to share things.

V. PREDICTING - the use of language to extend communication beyond immediate, present or past experiences to events that have not yet occured and which may never take place.

a. Anticipating/forecasting - includes utterances which contemplate future happenings.

1. I'll turn cartwheels.
2. I'm gonna play on the swing.
3. I'm gonna play kickball.

b. Anticipating the detail of actions and events - includes utterances which delineate or describe future happenings or remote concerns.

1. I'd want some chocolate pudding.
2. I'd like some sugar cookies and some chocolate milk.
3. I would like some chocolate ice cream.

c. Anticipating the sequence of events - includes utterances which propose an ordered series of related actions or events.

1. I get up and brush my teeth and then brush my hair.
2. First I get dressed and then I eat breakfast.
3. I get up, then get dressed, then get my school stuff ready.

d. Anticipating problems and possible solutions - includes utterances which acknowledge possible obstacles to a planned course of action and suggest ways to surmount them.

1. If I couldn't get in, I'd go to my Grandmother's house.
2. If the door was locked, I'd go over to Jeff's house and wait til Mom got home.
3. I'd go to my friend's house and wait on Mom.

e. Anticipating and recognizing alternative courses of action -

1. I'd use a crayon or marker.
2. I could use a pen or a crayon.
3. I could use another pencil or a crayon.

f. Predicting consequences of actions or events - includes utterances which suggest a possible outcome of some immediate or future action or event.

1. I might fall if I'm not careful.
2. If I'm not careful, I might fall and hurt myself.
3. I could fall if I'm not careful.

VI. PROJECTING - the use of language within an unfamiliar or external context.

a. Projecting into the experiences of others - includes utterances which contemplate everyday occurrences from another's perspective.

1. She will have to work hard.
2. She will make new friends.
3. She will learn new things.

b. Projecting into feelings of others - includes utterances which reflect what it feels like to be another individual. Emotions and attitudes which are representative of another's point of view are expressed.

1. Sad.
2. She's sad, too.
3. She feels bad.

c. Projecting into reaction of others - includes utterances which consider how another individual would respond to a particular situation or experience.

1. "Be quiet or we'll stay in."
2. "Alright quiet down or we won't go outside."
3. "Get quiet or we'll have to stay inside."

d. Projecting into situations never experienced - includes utterances in which the speaker conjectures about his own feelings and reactions to unfamiliar activities or events.

1. I would paddle anybody that was mean.
2. I'd let everybody go home at noon.
3. I'd walk around and talk to all the teachers.

VII. IMAGINING - the use of language by individuals to create their own world.

a. Developing an imaginary situation based on real life - includes utterances used to assume a make-believe role in a situation which is possible in everyday life.

1. I'm going to feed the pig. It looks hungry.
2. Look ! The horse is chewing on the fence.
3. I'm going to plow the fields today.

b. Developing an imaginary situation based on fantasy - includes utterances used to assume a make-believe role in a situation which has never happened or could never happen.

1. I'm gonna radio to base ship. There's a falling star in our path.
2. We better kill all the aliens.
3. Watch out somebody's sneaking up behind you!

c. Developing an original story - includes a fictional account of incidents or events, generally consisting of an introduction, development and conclusion.

1. The detective chased the thief and caught him. Then he put the handcuffs on him and took him to jail.
2. One day a little doggie got sick. Nurse Nellie gave his some medicine and made him all better.
3. One day I got sick. The doctor came to my house and used all this stuff to make me better, and I was better the next day.

APPENDIX B

Distribution of Subjects by School

Distribution of Subjects by School

	N	%
Eastfield	6	10
Glenwood	2	3
Marion Elementary	8	13.3
Nebo	12	20
North Cove	8	13.3
Old Fort	8	13.3
Pleasant Gardens	6	10
West Marion	10	16.7
Total	60	99.6 *

*Percentages were rounded off, resulting in a total of less than 100% .

APPENDIX C

Letter to Parents

Letter to Parents

Dear Parents,

I am a teacher on leave from the school system this year and am currently in college studying more about how children learn. I am in the process of conducting a study of how children use oral language and would appreciate being able to involve your child in this project. A certain number of children will be randomly selected from classes to take part in a thirty minute conversation with one other child. I will use puppets and toys to get the children to pretend that it is the first day of school. I will record the conversations so that I can listen to them later and count the different ways the children use language. More knowledge and understanding of oral language will help us to be able to better teach all children, especially those who might be experiencing difficulties.

Your child's name will be kept confidential and the results will not become a part of any school record. Dr. Seifred and _____ know about the project and are allowing me to send this letter. You will probably want to tell your child that he or she might get to go out of the classroom and play with some puppets and toys. We want the children to be as relaxed and natural about this activity as possible.

Please sign below and return this letter to school only if you do <u>not</u> want your child to be selected to take part in the study. If you do not return this letter by May _____ I will assume that it is alright to place your child's name on the list for consideration.

Thank you,

Alma Davis, Graduate Student
Appalachian State University

I do NOT want my child _____ to participate.

_____
signed by parent

APPENDIX D

Characteristics of the Learning Disabled Subject

Characteristics of the Learning Disabled Subjects

I. D. #	Age	Sex	Grade
26	9- 6	M	3
41	9- 6	M	2
5	9- 5	M	2
43	9- 5	M	2
11	9- 4	F	2
55	9- 4	M	3
4	9- 3	M	2
22	9- 3	M	2
20	9- 3	M	3
39	9- 2	M	2
3	9- 1	M	2
18	9- 1	F	3
9	9- 0	M	2
50	9- 0	M	2
13	8-10	M	2
59	8-10	M	2
14	8- 9	M	2
57	8- 9	M	2
24	8- 8	F	2
6	8- 7	M	2
12	8- 7	F	2
23	8- 5	F	2
44	8- 4	M	2
2	8- 3	M	1
60	8- 3	M	1
21	8- 1	M	1
51	7-11	M	1
1	7- 8	M	1
8[a]	7- 8	M	1
10	7- 6	M	2
Mean	8- 9		

[a]Afro-American

APPENDIX E

Characteristics of Normal Subjects

Characteristics of Normal Subjects

I.D.#	Age	Sex	Grade	Achievement Scores		
				Rding	Lang	Total
7	9- 6	M	3	43	36	40
53	9- 6	M	3	32	59	35
45	9- 6	M	3	68	59	73
35	9- 6	M	3	50	63	54
40	9- 5	M	3	27	59	49
32	9- 5	M	3	34	29	32
52	9- 4	M	3	32	29	41
54	9- 4	M	3	29	63	49
46	9- 3	F	3	68	54	65
49	9- 2	F	3	32	42	50
29[a]	9- 2	M	3	19	16	23
34	9- 2	M	3	50	69	54
25	9- 1	M	3	65	46	42
47	8-11	M	3	37	69	67
36	8-10	M	3	58	63	55
28	8- 9	M	3	62	42	77
31	8- 9	F	3	46	59	59
58	8- 9	M	3	31	54	30
17	8- 8	M	3	56	74	55
30	8- 8	M	3	62	63	70
48	8- 6	M	3	39	32	55
56	8- 6	M	2	50		
42	8- 5	F	2	60		
15	8- 3	M	2	65		
38	8- 1	M	2	46		
33	8- 0	M	2	44		
37	8- 0	M	2	48		
19	7- 9	M	2	55		
16	7- 9	M	2	48		
27	7- 7	M	2	56		
Mean	8- 9					

[a]Afro-American

APPENDIX F

Assessment of Communications in Everyday Situations

Form II: The First Day of School

INSTRUCTIONS

We're going to talk to some puppets and play with some toys today. While we're playing, I'll be asking both of you many questions. Some of the questions will be hard to answer and some of them will be easy, but I want you to answer all of them as completely and as well as you can.

Sometimes, I'll be talking to _____ a little
subject's name

bit more than _____ but I want _____
friend's name friend's name

to listen very carefully so he/she can be the helper. Are you ready? Let's meet my puppet friends, now.

ITEM	ACTION	INSTRUCTION	INTRODUCTION - THE FIRST DAY OF SCHOOL
1.	**Hold up Danny Puppet**	_____ and subject's name _____, I have some friend's name friend's I'd like you to meet. This is Danny, a new boy in your class this year. Hi _____ and subject's name _____. friend's name --- _____, *say hello to* *subject's name* *Danny.* _____, *say hello to* *friend's name* *Danny.*	
2.	**Hold up Mrs. Greene Puppet**	This is your new teacher, Mrs. Greene. Hi _____. subject's name Hi _____. friend's name --- _____, *say hello to* *subject's name* *Mrs. Greene.* _____, *say hello to* *friend's name* *Mrs. Greene.*	
3.	**Hold up Danny Puppet**	Mrs. Green and Danny would like to get to know you better. They want to talk with you for a few minutes. Will you talk to Mrs. Greene and Danny, _____? subject's name Will you _____? friend's name	

ITEM	ACTION	INSTRUCTION
3.		*Will you talk to Mom and Bobby, _____?* *subject's name* *Will you _____?* *friend's name*
4.	Hold up Danny Puppet	Today's my first day of school. I'm going to be in Mrs. Greene's class. Do you like school _____? subject's name How about you _____? friend's name --- *_____ and* *subject's name* *_____, I want you to* *friend's name* *come with me to school. Will you come to school with me _____? How about you* *subject's name* *_____?* *friend's name*
5.	Hold up Danny Puppet	My mom packed some pudding in my lunchbox for school. _____, do you like subject's name chocolate or vanilla pudding? _____? friend's name --- *I like chocolate pudding. Mom also packed some juice. _____, do you like* *subject's name* *apple or orange juice? _____?* *friend's name*

ITEM	ACTION	INSTRUCTION
6.	**Hold up Danny Puppet**	We're going to play outside during recess, too. What kinds of things do you like to do during recess _____? How about subject's name you _____? friend's name --- *I like to swing and climb on the monkey bars. What other kinds of things do you like to do* _____? *subject's name* _____? *friend's name*
7.	**Hold up Danny Puppet**	Tell me how you play _____, use activity child mentioned _____. _____ subject's name friend's name how do you play _____ use activity _____ child mentioned. --- *When I play on the monkey bars, I like to climb way up to the top and hang upside down from my knees. Tell* _____ *how to friend's name play.* _____ *use activity child mentioned.*

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
1.	clock	Brrrring! It's seven o'clock and time to get up and get ready for the first day of school. You want to roll over and go back to sleep. What might happen if you sleep longer? --- *What might happen if you go back to sleep?*	If I sleep longer, I'll be late for school.	Pd-f	5.6			
*2.	Hold up Mother Puppet	Mom comes to your bed and says, "Time to get up!" She wants to make sure that you have plenty of time to get ready. Tell her <u>every-thing</u> you need to do to get ready for school from the time you get up til the time you leave. --- *From the time you get up til the time you leave what do you need to do to get ready for school?*	First I get dressed and then I eat breakfast.	Pd-c	5.3			
3.		You don't know what to wear this morning. What would you say to your mom? --- *Ask your mom what you should wear to school?*	What should I wear, Mom?	Dr-e	2.5			
4.	Show red shirt and white shirt	Mom wants you to look very nice on your first day of school. She takes out two shirts/blouses, a red one and a white one. She says "wear the red one." What would you say to her? ---		LR-c	4.3			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
4. (cont.)		*Do you want to wear the red shirt/blouse? Why do/don't you want to wear it?*						
5.	Hold up Two pencil boxes Hold up Mom Puppet	Finally you get dressed, eat your breakfast and are ready to go. Mom bought two pencil boxes, one for you and one for your big brother. Tell mom which pencil box you want. --- *Which pencil box do you want?*	**I want the blue one with the blackboard on it.**	SM-a	1.1			
* 6.	**Give Pencil Box to child**	You are very excited about your new pencil box. Mom put several things inside that you will need for school. Open up your pencil box and tell me what you find inside. --- *Name the things in your pencil box.*	**pencils, scissors, and an eraser**	Rp-a	3.1			
7.	Hold up Mother Puppet and **give broken pencil to child**	Mom doesn't want you to lose your pencil box. She says, "Here's a pencil. Write your name on your box." --- *"Here's a pencil. Write your name on your box."*	**I can't write with this pencil cause it doesn't have a point.**	LR-b	4.2			
8.	**Mother Puppet**	"Oh, I'm sorry. I didn't notice that the pencil was broken and I don't have another one," says mom. **"What else could you use to put your name on your box?" "Anything else?"** ---	**I could use a pen or a crayon.**	Pd-e	5.5			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
8. (cont.)		*Besides a pencil, what else could you use to put your name on your box? Anything else?*						
*9.	**Sister Puppet**	As you are putting your name on your pencil box with the crayon/pen etc., your little sister comes by. She wants the crayon/pencil/etc. so she walks up & grabs it. What would you say to her? --- *What would you say to your little sister if she grabbed your crayon/pen/etc. away from you while you were using it?*	**Give it back. I'm using it.**	SM-b	1.2			
10.	Give notebook and paper to child. Point to notebook clip.	Mom also bought you a notebook and some paper. Put the paper in the notebook. --- *Put the paper in your notebook.*	**I have to slide this off and put the thing through the paper.**	DR-b	2.2			
*11.	Mother Puppet-Hand lunchbox to child	You gather up all of your new school supplies and are about ready to leave. Mom hands you your lunchbox and says, "Have a nice day!" Do you have a lunchbox at home? Tell me about <u>your</u> lunchbox. How is it different from this one? --- ***Tell me about these lunchboxes. How are they different from each other?***	**My lunchbox has Snoopy on it and this one has Star Trek on it.**	Rp-e	3.5			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
12.	Sister Puppet Mother Puppet	As you are walking out the door, your two-year old sister says, "I want to go to school, too." Mom says she will have to wait a couple of years. Why? --- *Why can't your little sister go to school with you?*	She can't go to school cause she's too little.	LR-b	4.2			
13.	Set up school blackboard and flag	When you get to school, you find out that one of your best friends won't be in your classroom this year. He/ She has to go to another room. How do you feel? --- *How do you feel when you find out that your best friend will not be in the same class with you?*	I feel sad.	Rp-h	3.8			
14.		How do you think your best friend feels about being moved to another room? --- *Repeat*	He/ She's sad, too.	PJ-b	6.2			
*15.		What do you think will happen to your friend in his/her new classroom? --- *What will your friend do in his/her new classroom?*	He/ She will make new friends.	PJ-a	6.1			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
16.	Boy Puppet	After you sit down, you notice that there is a new boy seated next to you. Find out his name. --- *Ask the new boy what his name is.*	What's your name?	Rp-i	3.9			
17	Boy Puppet	You like the new boy. You want him to sit with you and _____ at lunch. (friend's name) What would you say to him? --- *Ask the new boy to sit with you at lunch.*	Will you sit with us at lunch?	Sm-f	1.6			
*18.	Set out toys	Now, it's time for school to begin. The teacher says, "pick out a toy and describe it to the rest of the class." --- *Describe a toy to the rest of the class.*	The nurse's kit has some teeny weeny bandaids in it and a thing to take your blood pressure.	Rp-b	3.2			
19.		Now make up your own story about the toy. --- *Tell me a story about the toy.*	One day a little doggie got sick. Nurse Nellie gave him some medicine and made him all better.	Im-c	7.3			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
20.	**Set out paper shapes**	After show and tell, your teacher gives you and your friend _____ some friend's name freetime to do whatever you would like. You and _____ decide to friend's name play with the shapes. You decide to make a house with the shapes. Go ahead and make it. --- *Make the house.*	**I'll put the door here and the windows here.**	**DR-a**	**2.1**			
21.	**Shapes**	Now it's _____ turn friend's name to make something with the shapes. He/she decides to make a house, too. Tell him/her what to do. --- *Tell _____ how to friend's name make his house.*	**Pick out a square. Put the door in the middle and the chimney on top.**	**DR-c**	**2.3**			
***22.-23.**		As _____ finishes friend's name his house, you both get into an argument about whose house is the best. What do you say to each other? --- *Have an argument with _____ about whose friend's name house is the best.*	**I'm gonna mess your house all up cause it's yukky. I don't like your house.**	**SM-c/d**	**1.3 1.4**			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
*24.	Shapes	You are about ready to clean up when you and _____ friend's name decide to make a car together. Talk it over and decide how you will do it. --- *Repeat*	I'll put the wheels on and you put the windows on.	DR-d	2.4			
25.		You have been working hard and are ready to go out to play. What will you do on the playground? --- *What will you do on the playground?*	I'm gonna play on the swing.	Pd-a	5.1			
26.		Find out from your teacher when you will be going out to play. --- *Ask your teacher when you will be going out to play.*	When are we going out to play?	Pd-g	5.7			
*27.	Teacher Puppet	Your teacher says, "We'll be going out to play in a few minutes. But first, I have to take something down to the principal's office." When your teacher returns, the class is very noisy. What do you think your teacher will say? --- ***Repeat***	Alright quiet down or we're not going outside.	PJ-c	6.3			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
28.	Boy Puppet	Your teacher was very angry because the class was making so much noise. One of your classmates, the new boy even started to cry. What would you say to the new boy to find out why he was crying? --- *Ask the new boy why he is crying.*	**Why are you crying?**	PJ-e	6.5			
29.	Teacher Puppet Playground Set	It's almost time to play. Your teacher says, "Please stay a few minutes and clean the blackboard before you go outside." _____ friend's name wants to be the first on the playground. He/She asks you to go to the front of the line with him/her. What would you say to _____? friend's name --- _____ *wants you to* *friend's name* *go out on the playground with him/her but your teacher has asked you to stay and clean the blackboards. What would you say to your friend?*	**I can't go with you, now. I have to clean the blackboards first.**	LR-d	4.4			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
30.		You finally finish cleaning the blackboards and join the other children on the playground. Everyone is playing duck, duck goose. You don't remember how to play. What would you say to the teacher? --- *Ask your teacher how to play Duck, Duck Goose.*	How do you play duck, duck, goose?	LR-g	4.7			
31.		_____ would like to play also, but he doesn't know the rules. Tell _____ how to play the game. (If child does not know how to play Duck, Duck Goose, find out what games he/she does know how to play and have him/her tell friend how to play.) --- *Repeat*	Everybody gets in a circle and one person is it. He walks around the circle and taps everyone on the head. When he says goose, that person tries to catch him.	LR-a	4.1			
*32.		After you've finished playing Duck, Duck Goose, you decide to swing on the monkey bars. What will happen if you're not careful? --- *What will happen if you're not careful while playing on the monkey bars?*	If I'm not careful, I might fall down and hurt myself.	Pd-f	5.6			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
33.	Teacher Puppet	_____ was not very careful. He was walking on top of the monkey bars in his new shoes and he slipped and fell. Tell the teacher what happened. friend's name --- *While walking on top of the monkey bars, _____ slipped and fell. Tell the teacher what happened.* *friend's name*	_____ was walking on the monkey bars and he slipped and fell. friend's name	Rp-f	3.6			
34.	Boy Puppet	Now you decide to take a turn on the swing. The new boy has been swinging for a long time. You would like to swing now. What would you say to the new boy? --- *Ask the new boy if you can take a turn on the swing.*	May I swing now?	SM-f	1.6			
35.	Boy Puppet	The new boy says "no". You ask him again but he still won't give you a turn. You have tried to ask him nicely. Now, what would you say to him? --- *The new boy doesn't want to let you take a turn on the swing. You have asked him nicely to let you swing several times--now what would you say to him?*	You better let me swing or I'll tell the teacher.	SM-e	1.5			
36.		Do you think it's right for the new boy to refuse to let	No, it's not right cause we should take turns.					

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
36. (cont.)		you have a turn on the swing? Why? --- *Repeat*		LR-f	4.6			
*37.	Story-The Dog and His Reflection	Play time is over. You and _____ go back into friend's name the classroom for storytime. Today your teacher will read the story of The Dog and His Reflection. Listen very carefully because when the teacher has finished the story, she will ask you to tell it in your own words. THE DOG AND HIS REFLECTION One day a dog stole a pork chop from his master's table. He rushed out of the house with it before anyone could stop him, and never stopped running until he reached the woods. As he carried the chop over a bridge, the dog looked down into the stream. There he saw his own reflection in the clear water. But he thought he was looking at another dog with another, biggerlooking pork chop. Being greedy, he wanted to have that, too. The dog let out a loud growl and opened his mouth	The dog stole a pork chop and ran away. Then he dropped it in the stream.					

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
37. (cont.)		to grab the other dog's chop. Alas! As soon as he opened his mouth, his own chop dropped into the water and sank out of sight. Instead of having two chops, the greedy dog had nothing at all. Now _____ you subject's name tell the story in your own words. --- *Now _____, you* *subject's name* *tell the story in your own words.*		Rp-d	3.4			
38.		"That was very good." What do you think this story was really about? --- *Repeat*	The story was about a dog who stole a pork chop. But he wasn't happy with just one pork chop and he tried to get another one and ended up losing them both.	Rp-g	3.7			
39.		What do you think we could learn from this story? --- ***What does this story teach us?***	It's not nice to be greedy.	LR-e	4.5			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
*40.	Farm (Examiner assumes role of farmer's wife to encourage initiation of play. Examiner then allows children to play, unassisted, for approximately two minutes.)	Now, it's almost time for lunch. Your teacher gives you and _____ some free time to play in the "Lets Pretend" corner. You decide to play with the farm set, first. friend's name "I'll be the farmer's wife and you be a hired hand and you be a hired hand."	I'm gonna go feed the horses. Here's some hay and water.					
	(pretend to feed lambs)	"These baby lambs sure are hungry."						
	(Move car up to house)	"I hear a car coming. I wonder who it is."		Im-a	7.1			
	(horse goes up to fence and chews on it)	*"Look! The horse is chewing on the fence."*						
	(move cowboy over to coral)	*"Hey, Texl Come help me with this new pony."*						
*41.	Star Patrol (Examiner assumes role of Star Commander to	Next you and _____ decide to play with the Star Patrol. friend's name	I'm gonna radio the base ship. There's a falling star in our path.					

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
*41. (cont.)	encourage initiation of play. Then examiner allows children to play, unassisted for two minutes.)	I'll be the Star Commander and you be a crew member and you be a crew member.						
	(move star ship through air)	The star ship is in space drive.						
	(move crew members to star ship)	Beam the crew members aboard.		Im-b	7.2			
	(move enemy ship towards star ship)	*Enemy ship approaching, secure battle stations.*						
	(move star patrol members)	*Activate your phasors.*						
42.		After lunch, time passes quickly and soon you're ready to go home. What kind of snack would you like when you get home from school?	I'd like some sugar cookies and some chocolate milk.					
		What kind of snack would you like?		Pd-b	5.2			

ITEM	ACTION	INSTRUCTION	COMMUNICATION ACT	TARGET		RESPONSE		SCORE
43.		Suppose your mother is not at home when you get there and the door is locked. What would you do? --- *What would you do if you got home from school and found your mother gone and the door locked?*	If the door was locked, I'd go over to _____ friend's name's house and wait til mom got home.	Pd-d	5.4			
44.	Mother Puppet	Fortunately, your mom is waiting for you when you get home from school. She wants to hear all about your first day of school. What would you tell her? --- *Tell your mom some of the things you did at school today.*	We played duck, duck, goose and Mrs. Greene read us a story.	Rp-c	3.3			
45.		Suppose you were the principal (director) of the school, for a day. What do you think it would be like? --- ***What would you do if you were the principal (director) of school for a day?***	I'd let everybody go home at noon.	Pj-d	6.4			

APPENDIX G

Scoring Guide

First Day of School

Scoring Guide

First Day of School

Item	Use	Strategy
1.	Predicting	Predicting the consequences of actions or events
2.	Predicting	Anticipating a sequence of events
3.	Directing	Questioning
4.	Logical reasoning	Recognizing problems and solutions
5.	Self-Maintaining	Referring to needs
6.	Reporting	Labelling
7.	Logical Reasoning	Recognizing casual and dependent relationships
8.	Predicting	Anticipating and recognizing alternative courses of action
9.	Self-Maintaining	Protecting the self and self-interest
10.	Directing	Directing the actions of the self
11.	Reporting	Making comparisons
12.	Logical Reasoning	Recognizing casual and dependent relationships
13.	Reporting	Reflecting on the meaning of experiences

Item	Use	Strategy
14.	Projecting	Projecting into the feelings of others
15.	Projecting	Projecting into the experiences of others
16.	Reporting	Questioning
17.	Self-Maintaining	Questioning
18.	Reporting	Referring to detail
19.	Imagining	Developing an original story
20.	Directing	Monitoring own actions
21.	Directing	Directing actions of others
22.	Self-Maintaining	Justifying behavior and claims
23.	Self-Maintaining	Critizing others
24.	Directing	Collaborating in action with others
25.	Predicting	Anticipating/Forecasting
26.	Predicting	Questioning
27.	Projecting	Projecting into the reactions of others
28.	Projecting	Questioning
29.	Logical Reasoning	Justifying judgment and actions
30.	Logical Reasoning	Questioning
31.	Logical Reasoning	Explaining a process
32.	Predicting	Predicting the consequences of actions or events
33.	Reporting	Recognizing related aspects

Item	Use	Strategy
34.	Self-Maintaining	Questioning
35.	Self-Maintaining	Threatening others
36.	Logical Reasoning	Recognizing principles
37.	Reporting	Referring to the sequence of events
38.	Reporting	Extracting or recognizing the central meaning
39.	Logical Reasoning	Reflecting on events and drawing conclusions
40.	Imagining	Developing an imaginary situation based on real life
41.	Imagining	Developing an imaginary situation based on fantasy
42.	Predicting	Anticipating the detail of events
43.	Predicting	Anticipating problems and possible solutions
44.	Reporting	Referring to incidents
45.	Projecting	Projecting into situations never experienced

APPENDIX H

Scores of Normal Subjects on ACES

Raw Scores of Normal Subjects on ACES

Ss#[a]	S (24)	SM (14)	D (10)	REP (66)	RP (18)	LR (16)	PD (16)	PJ (10)	IM (6)
7	16	11	5	63	17	14	16	10	6
53	18	11	7	63	17	14	16	10	6
45	13	5	7	54	12	13	16	9	4
35	22	12	10	61	17	13	16	10	5
40	13	9	4	60	16	13	15	10	6
32	19	11	8	61	16	15	15	9	6
52	12	8	4	59	14	13	16	10	6
54	21	11	10	62	16	15	16	9	6
46	18	12	6	65	18	15	16	10	6
49	19	12	7	61	18	12	15	10	6
29	9	6	3	47	10	14	13	8	2
34	22	14	8	60	14	15	16	10	5
25	20	11	9	52	14	9	16	10	3
47	19	9	10	63	17	14	16	10	6
36	15	10	5	61	17	14	16	10	4
28	9	7	2	53	13	10	14	10	6
31	22	13	9	63	16	16	16	10	5
58	19	10	9	53	12	11	14	10	6
17	21	12	9	58	16	12	16	10	4
30	20	12	8	62	16	15	15	10	6
48	21	11	10	59	17	12	15	9	6
56	16	13	3	62	17	13	16	10	6
42	19	9	10	62	17	15	14	10	6
15	12	8	4	55	15	14	15	10	1
38	18	12	6	59	15	15	13	10	6
33	18	11	7	58	15	12	15	10	6
37	17	12	5	58	16	14	14	8	6
19	14	10	4	63	16	15	16	10	6
16	16	6	10	52	13	13	13	10	3
27	19	11	8	57	15	14	14	9	5
Mean	17.70	10.73	6.97	59.43	15.37	13.60	15.23	9.80	5.43
SD	3.30	1.92	2.20	3.33	1.80	1.30	.97	.48	1.16
Range	9-22	6-13	2-10	47-63	10-17	9-15	13-16	8-10	1-6

[a]Subjects are listed from oldest to youngest.

Key

S = Social
SM = Self-maintaining
D = Directing
REP = Representational
RP = Reporting
LR = Logical Reasoning
PD = Predicting
PJ = Projecting
IM = Imagining
( ) = maximum score attainable

APPENDIX I

Scores of Learning Disabled Subjects on ACES

Raw Scores of Learning Disabled Subjects on ACES

Ss#[a]	S (24)	SM (14)	D (10)	REP (66)	RP (18)	LR (16)	PD (16)	PJ (10)	IM (6)
26	15	9	6	56	13	13	14	10	6
41	16	10	6	64	16	16	16	10	6
5	19	9	10	-	-	15	15	10	6
43	22	13	9	57	17	12	16	8	4
11	16	11	5	-	14	-	15	10	4
55	18	12	6	57	12	14	15	10	6
4	18	9	9	58	14	13	16	10	5
22	13	9	4	57	17	12	13	10	5
20	18	13	5	57	12	14	15	10	6
39	19	12	7	61	15	14	16	10	6
3	20	12	6	62	16	15	15	10	6
18	16	10	6	59	14	14	15	10	6
9	12	8	4	56	15	13	14	10	6
50	12	8	4	53	12	11	16	8	6
13	15	12	3	62	17	14	15	10	6
59	14	8	6	61	18	11	16	10	4
14	16	10	6	54	14	11	13	10	6
57	19	10	9	60	16	13	15	10	6
24	17	9	8	62	17	14	15	10	6
6	8	7	1	-	15	6	-	8	0
12	7	4	3	46	10	10	13	10	3
23	23	13	10	58	13	14	15	10	6
44	9	6	3	64	16	16	16	10	6
2	15	9	6	51	13	10	15	9	4
60	19	11	8	46	12	7	12	9	6
21	20	11	9	55	13	11	15	10	6
51	15	8	7	50	15	9	15	7	4
1	16	11	5	-	13	-	15	7	6
8	10	7	3	51	12	12	14	9	4
10	16	10	6	62	17	15	15	9	6
Mean	15.38	9.27	6.12	56.23	14.50	12.46	14.69	9.46	5.12
SD	4.25	2.45	2.20	5.51	2.26	2.33	1.12	.85	1.21
Range	7-23	4-13	1-10	46-64	10-17	6-16	12-16	7-10	0-6

[a]Subjects are listed from oldest to youngest

Key

S = Social
SM = Self-maintaining
D = Directing
REP = Representational
RP = Reporting
LR = Logical Reasoning
PD = Predicting
PJ = Projecting
IM = Imagining
( ) = maximum score attainable

VITA

Alma Watson Davis was born in Asheville, North Carolina on October 31, 1942. She graduated from Charles D. Owen High School in Swannanoa, North Carolina, May 1960. In August 1966, she earned her Bachelor of Arts degree in Early Childhood from Lenoir Rhyne College in Hickory, North Carolina. She completed requirements for her Master's degree and Educational Specialist's degree at Appalachian State University in May 1977 and August 1982, respectively. Concentrations of study were learning disabilities and emotional disturbance. Also, she earned certification as a Curriculum Instructional Specialist and School Administrator.

Beginning in January 1966 and continuing for nine years, Ms. Davis was a classroom teacher with the McDowell County School System. She also served as principal of Sugar Hill Elementary School from 1971 to 1974. She served as cross-categorical special education teacher and Director of Programs for Exceptional Children from 1974 to 1981. In August 1981, Ms. Davis was awarded a graduate assistantship with the Department of Special Education at Appalachian State University and upon graduation, was appointed Practitioner in Residence in the College of Learning and Human Development at Appalachian State University for the academic year, 1982-83.