

PARENTAL BELIEFS AND EXPECTATIONS CONCERNING THE ACADEMIC
COMPETENCE OF LEARNING DISABLED AND NONDISABLED CHILDREN

by

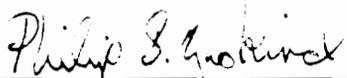
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(ABSTRACT)

The present study investigated the relation between parental beliefs, estimations and expectations and children's competencies with low-SES parents of learning disabled and nondisabled children. Forty-eight mothers who had boys in the third- through the fifth-grade were interviewed in their home: twenty-four mothers of learning disabled children and twenty-four mothers of nondisabled children. The following measures were used to assess parental beliefs, estimations, and expectations: 1) parental ratings of a series of statements that past research has shown negatively affect children's cognitive competence, 2) parental estimates of their children's performance on a series of cognitive tasks that range from Piagetian-type thru more school-related items, and 3) parental reports of the educational and occupational aspirations for their children. The mothers of learning disabled children did not report more traditional, nondemocratic beliefs regarding child rearing and academic

development than parents of nondisabled children. However, they did more strongly believe that their child's school problems are caused by the child's own ability and school successes are caused more by effort. Also, mothers of LD children reported less success estimations for school-related tasks, specifically spelling and reading tasks than mothers of NLD children. The two groups did not differ on their success estimations for the Piagetian- and intelligence-type tasks. The children were shown these same tasks. The LD children were able to complete less of the school-related tasks than the NLD children. However, the two groups did not differ for the other two types of tasks. Generally, the mean number of success estimations was higher in both groups for children in higher grades. Finally, the two groups did not differ overall in their educational and occupational aspirations. The results are discussed in terms of the affect that children's competencies have on parental beliefs, estimations, and expectations.

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INTRODUCTION

Human development does not occur within a contextual vacuum; instead development is embedded within a variety of social contexts (Bronfennbrenner, 1977). These contexts can include home, school or workplace, just to name a few. To better understand the relationships that contribute to development, the participants that interact within these contexts must be examined more closely. One of the most important relationships that contributes to development involves the interactions that occur between parents and their children (Maccoby & Martin, 1983).

Parents provide social direction for their children, and subsequently children provide social feedback to their parents (Maccoby & Martin, 1983). Social direction refers to the parents' role as an educator. For example, this role includes fostering the acquisition of prosocial behaviors such as helpfulness and thoughtfulness towards others, or supporting the acquisition of skills that will foster future adult functioning (Maccoby & Martin, 1983). However, parents do not operate in a contextual vacuum; they are affected by the responses and characteristics of their children. The present study focused on the social direction provided by parents, but the influential force of children was not forgotten or ignored. Both the children's specific characteristics and social milieu were considered.

Specifically, the relation between having a child labeled as learning disabled (LD) and the social direction of parents was more closely examined.

The amount and type of social direction that parents provide can be affected by their beliefs (Sameroff & Feil, 1985), attributions (Dix & Grusec, 1985) and expectations (Marjoribanks, 1979) regarding child development. Considerable diversity exists among researchers regarding the definition of the terms listed above (Sigel, 1985). However, some researchers have attempted to equate these terms. For example, Dix and Grusec (1985) refer to parental attributions as the "beliefs about what children are like and why children act as they do (p. 201)." Also, both beliefs and attributions share the function of influencing or directing **how** individuals in social contexts interpret what happens around them (Sigel, 1985). Therefore, the present study will also equate beliefs and attributions.

I defined beliefs as the conceptions held by parents regarding the factors that influence children and their development. Parents espouse these conceptions as though they were based on knowledge, although they really may not be based on truth or evidence (Sigel, 1985). Therefore, parents may base their actions on beliefs instead of the actual abilities that their children possess (Phillips, 1984). Subsequently, beliefs based on parents' perceptions of their children's development must be differentiated from

beliefs based upon the actual course of children's development.

The research presented in this dissertation will focus on parents' perceptions about their own children's development and abilities and about children's development in general. Specifically, the effect of perceiving a child as learning disabled on parental beliefs and expectations was investigated to determine if parents of learning disabled children evaluate children differently than parents of nondisabled children. In chapter 1, the literature concerning the influence of parental beliefs on child development, and factors that can influence parental beliefs will be briefly reviewed. Chapter 2 presents methods, and Chapter 3 presents results. Finally, Chapter 4 considers the general implications for the results found in the present study.

CHAPTER 1

LITERATURE REVIEW

This chapter is a review of the literature concerning the influence that parental beliefs can have on child development, and the subsequent influence of a child's social context on parental beliefs and expectations. First, the general influence of parental beliefs on children's development will be discussed. Then the more specific influence of parental beliefs on children's academic competence will follow. Parental beliefs do not develop within a idependently, but rather are affected by factors that surround a child. Therefore, to elucidate some of these effects, the relationship of beliefs within families will be discussed. Also, the effects of environmental factors surrounding children that are pertinent to both academic competence and parental beliefs will be discussed.

INFLUENCE OF PARENTAL BELIEFS ON CHILD DEVELOPMENT

Past research has shown that parental beliefs can have both a direct and indirect influence (see Kenny, 1979) on child development (McGillicuddy-DeLisi, 1985). This relationship is illustrated in Fig. 1, which was adapted from the work of McGillicuddy-DeLisi (1985).

Insert Figure 1 about here.

Parental beliefs can influence child development indirectly by influencing parental behaviors. For example, parental beliefs can influence the amount of parental help and guidance given during parent-child interactions in both physical (e.g., paper-folding) and social (e.g., storytelling) activities (McGillicuddy-DeLisi, 1985). Also, parental beliefs can affect the organization of the home environment (Johnson & Martin, 1985). For example, when parents believe that children do not take an active participatory role in their own learning situations, the parents are more likely to provide a home environment in which the children are provided with direct instruction (Johnson & Martin, 1985).

The effect of parental beliefs is not limited solely to the indirect influence manifested in the organization of the child's environment; beliefs may also more directly influence the course of children's cognitive development (Miller, 1988). For example, significant positive correlations exist between parental value for progressive, democratic beliefs regarding child-rearing (encouraging the child's own ideas and self-direction, encouraging verbalization, etc.) and the children's performance on mental test scores (Schaefer & Edgerton, 1985). Accordingly, the effects of parental

beliefs on children's cognitive functioning may go beyond the effects of parental beliefs on parental behaviors (McGillicuddy-DeLisi, 1985).

Thus far, examples of the direct and indirect influences of parental beliefs have been offered. However, some beliefs cannot be easily categorized into either direct or indirect influences. These beliefs cannot be tied to any one statement or action, but rather influence the entire course of a child's life. For example, by providing a childproof home, encouraging children to investigate things through trial-and-error, and allowing children to explore, parents communicate to children that they encourage experimentation and exploration. Therefore, important knowledge can be gained from assessing parental beliefs, above and beyond the information gained from observing parent-child interactions and parental behaviors. Additionally, measures are needed to assess parental beliefs regarding a variety of tasks and settings that may not be articulated overtly by any one statement.

As stated earlier, parental beliefs are not formed in a contextual vacuum; instead, they are formed within a social context that includes children. Consequently, children's competencies may affect the formation of parental beliefs and expectations regarding specific children (Maccoby & Martin, 1983). For example, parental perceptions of children's

competencies can affect the amount of maternal accommodation (help and direction) that is offered with regard to developmental tasks (Mervis, 1984).

Mervis (1984) observed mothers of both normal and Down-syndrome children who were just beginning to talk. The amount of guidance that mothers provided when their children were learning how to label items around the house was a direct function of the maternal perception of the child's competence. When mothers of Down-syndrome children perceived that their children had cognitive deficits, they supplied the children with the adult-basic labels for items. Mothers of normal children, however, tended to follow the child's initiative when labeling items (child-basic labels). However, when this deficit seemed to be corrected (i.e., the Down-syndrome child started to talk), the mothers no longer provided their children with adult-basic labels but instead used child-basic labels. This study demonstrates how parents may compensate for any perceived disability their child may possess until this disability appears to be corrected.

Mervis' (1984) work illustrates the bidirectional accommodation between mothers and their children. The children in this study had obvious disabilities and the mothers were able to more accurately assess their child's abilities. However, if the child's disabilities are more subtle, the mother may misperceive their child's abilities and appropriate accommodations will not be provided. The

challenge for parents is not only to provide more stimulation; they must provide the appropriate stimulation (Serbin, et al, 1983).

One example of a group of children with more subtle disabilities are those labelled as displaying specific learning disabilities (LD). These children are often not referred for diagnostic evaluation until school entry or even years later (Satz & Fletcher, 1988; Lerner, 1985). Therefore, LD children may have experienced years of academic failure without their parents understanding the cause of their problems. This in turn can affect parental beliefs and expectations regarding the children's future achievements. Parents may not only misunderstand the cause of children's problems, but they may not understand or even recognize that their child needs extra help. These misunderstandings are more likely to occur when children's disabilities are not as obvious as, for example, those of a child with Down-syndrome. Therefore, we can investigate parents of LD children to better understand the complex interplay between parental beliefs and children's competencies.

One common criteria for the identification of learning disabilities is a discrepancy between predicted and actual academic performance (Coplin & Morgan, 1988; Lerner, 1985). Although many facets of learning disabled children's development can be studied, a focus on academic competence is

essential to most definitions of learning disabilities. Unfortunately, information regarding parental beliefs about academic competence in LD children is scarce. However, past research has provided some information regarding the translation of parental beliefs into specific expectations about academic achievement in "normal", nondisabled (NLD) children.

Influence of Parental Beliefs on Academic Competence

Generally, children tend to start school with unformed or unrealistic scholastic expectations (Entwisle & Hayduk, 1981). The formation of a child's attitudes and expectations toward school is influenced more by parental expectations than by the child's own past performance in school (Phillips, 1987; Parsons, Adler, & Kaczala, 1982; Entwisle & Hayduk, 1981). However, parents do not necessarily base their expectations on the actual course of children's development. In fact, parents tend to be inaccurate in assessing their young child's abilities. For example, mothers of first grade children tended to overestimate their child's abilities on Piagetian type tasks (Miller, 1986). However, individual differences exist in parents' estimation of abilities, and Miller (1986) found that the more accurate mothers had children with higher developmental levels. Therefore, it appears that children, who are poor judges of their own abilities, may consequently rely on their parents attitudes

and expectations to form some of their own scholastic expectations. Miller's (1986) work provides preliminary support for the claim that the more accurate parents are in estimating their child's abilities, the higher the child's cognitive competence.

As children develop, parents become more accurate in their assessments. For example, by the time children reach the fifth-grade, parents made more accurate assessments regarding the difficulty of cognitive tasks and their child's actual abilities (Ladd & Price, 1986). Not only did parents become more accurate in their estimation of abilities, but parental beliefs exerted more influence over children's academic performance (e.g. reading achievement) with increases in children's age (Marjoribanks, 1979). However, individual differences exist in parents' ability to assess children's development and academic competence, and in the influence that these beliefs have over children's development. Not only do individual differences exist, but parental beliefs can change as children develop. These changes may be uncovered by analyzing the patterns of beliefs within different families.

Relationship of Beliefs Within Families

Members of the same family typically hold similar beliefs (Allesandri & Wozniak, 1987). An exception to this

finding is attributions made for academic success: Parents are more likely to attribute their child's school success to talent; children are more likely to attribute their school success to effort (Goodnow, 1984, 1985). The only exceptions are for art and music, which both children and parents attributed to talent (Goodnow, 1985).

The overall consistency in beliefs between parents and children develops with time. Children's ability to predict their parents' beliefs increased with the children's age, and was not significantly predicted until children reached adolescence (Allesandri & Wozniak, 1987). Furthermore, upon entry into high-school, the best predictor of children's perception of the important qualities for development and occupational aspirations was their perception of their parents' position on these matters (Cashmore & Goodnow, 1985). Because children's own attitudes and expectations towards school are greatly influenced by parental beliefs and expectations (Parsons, et al., 1982; Entwisle & Hayduk, 1981), the younger children's poor prediction of parental beliefs could possibly lead to early confusion regarding reasons for their own academic competence and failure.

As children develop, parents tend increasingly to believe that children have the necessary knowledge, ability and motivation to control their own behavior (Dix, Ruble, Grusec, & Nixon, 1986). Parents beliefs about how children control their behavior are often attributed to personality

dispositions that are present within the child. Yet, in the same study, parents appeared to ignore constraints on children's control from external pressures (Dix, et. al, 1986). Also, parents believe that self-control is an internal, controllable variable similar to effort (Dix & Grusec, 1985; Dix et al, 1986). Therefore, parents believe that children's behavior is controlled by dispositions within the child; consequently, behavior is attributed to internal, stable, general, controllable, and intentional causes (Dix & Grusec, 1985).

Although, many parents fail to consider the role of environmental factors and believe that children control their own behavior, Gottfried and Gottfried (1989) found that environmental factors may help contribute to a child's own sense of intrinsic academic motivation. Specifically, a significant positive correlation exists between children's tendency to report high intrinsic motivation and the parents' tendency to provide the following environmental factors: 1) a greater variety of experiences, 2) encouragement of competence and curiosity, and 3) a home emphasis on academically related behaviors. Moreover, the provision of a variety of stimulation, and, specifically, stimulation of academic behavior are two pervasive and potent home environmental variables that are related to early cognitive performance overall (Gottfried & Gottfried, 1984). For

example, reading to children or teaching children how to write the alphabet are two ways parents can stimulate academic behavior at home.

In summary, parents may attribute children's behavior to factors within the child, whereas children tend to base their own attributions on external, environmental variables. This difference in attributions may create a situation which hinders rather than helps a child's development and academic competence. As stated earlier, learning disabled children are already experiencing academic problems. These school-related problems may, in turn, serve to influence the formation of their parents' beliefs.

Influence of Learning Disabilities on Parental Beliefs

The information about parental beliefs and expectations of learning disabled children is scarce. However, past research has uncovered information about the beliefs and expectations held by learning disabled children. Rather than discussing beliefs per se, researchers interested in learning disabilities refer to the attributional style of LD children and their parents.

Learning disabled children report an internal locus of control (ability) for academic failures and an external locus of control (chance) for academic successes, but the opposite is true for nondisabled (NLD) children (Lewis & Lawrence-Patterson, 1989; Cooley & Ayers, 1988). Also, learning

disabled children reported that lack of effort played less of a role in their academic failures than did nondisabled children (Pearl, Bryan, & Donahue, 1980). These maladaptive attributional styles have been offered as one reason why LD children maintain a poor academic performance record.

In contrast, some researchers have offered another explanation for LD children's academic problems. Rather than describing LD children as individuals with maladaptive attributional styles, learning disabled boys are described as individuals with low achievement motivation (Friedman & Medway, 1987; Cooley & Ayers, 1988). Although LD boys reported a lower self-perception of ability and attributed outcomes to external forces, neither their initial performance expectations (Friedman & Medway, 1987) nor their global self-concepts (Cooley & Ayers, 1988) differed from nondisabled boys. From these studies, learning disabled children do not necessarily approach school-related tasks differently from nondisabled children. Instead, they are more likely to avoid difficult tasks or just quit trying.

Unfortunately, parents of learning disabled children hold similar perceptions to their children concerning children's academic performance (Lewis & Lawrence-Patterson, 1989). Parents are not only aware that their children attribute academic failures to their own behavior and successes to chance or the action of others, but they believe

these attributions apply to their child. Additionally, Bryan and Pearl (1979) reported that parents and teachers held more negative expectations for LD children than they did for nondisabled (NLD) children. These expectations included academic achievements, but they also included other aspects of social acceptance (Dudley-Marling & Edmiaston, 1985). For example, LD children are more likely to be assigned negative traits by parents and teachers than NLD children.

Bryan (1978) offered some possible explanations for LD children's low social status. She concluded that LD children are at a greater risk for exhibiting interpersonal problems in their comprehension of non-verbal communication, in their affective involvements with others, and in their expressive language ability. Subsequently, negative parental expectations may be caused by the LD children's poor interactional skills (Dudley-Marling & Edmiaston, 1985). However, parents can also perceive their children in ways that tend to maximize low social status. For example, mothers of developmentally delayed boys were more likely than a control group to view their child in a way that seemed to maximize their dissatisfaction with the child's performance (Serbin, Steer, & Lyons, 1983). Specifically, the mothers of the developmentally delayed boys saw their children as lacking in cooperation and motivation rather than cognitive ability, although an independent observer rated all of the children as cooperating equally well (Serbin, et. al, 1983).

This example illustrates how parental perceptions and children's actual behaviors are not always congruent. Therefore, parental attributions and perceptions that LD children will do more poorly in academically related endeavors may also be serving to maintain LD children's poor academic performance. These perceptions may be maintained without parents adequately considering the child's actual behaviors or abilities.

Finally, factors that are related, but not solely caused by the child's disability, can contribute to the maladaptive functioning of a learning disabled child. One potential danger exists when parental beliefs and expectations fail to coincide with the child's actual competencies. For example, when parents hold negative expectations for their child, these parental misattributions can promote negative self-inferences (self-fulfilling prophecy) in the child (Dix & Grusec, 1985). However, unrealistically high expectations may frustrate the child who cannot possibly meet the high parental demands (Meyer, 1983). Therefore, parents need to judge accurately their child's abilities to provide the appropriate accommodations needed for optimal development (Miller, 1986).

Being identified as learning disabled is one factor that can potentially mediate the relation between parental beliefs and child development. Another factor that has been

demonstrated in past research to mediate the formation of parental beliefs and expectations is differences between SES groups.

Influence of SES on Parental Beliefs

Children who belong to a low-SES, as compared to middle- or high-SES groups, tend to show discrepancies between predicted and actual academic performance (Kavale, 1980) with their actual performance being lower than their predicted performance. Moreover, the risk factor most commonly identified with school failure is lower SES (Bradley, Caldwell, Rock, Hamrick, & Harris, 1988). Low-SES children and LD children share the same discrepancy between predicted and actual academic performance and the incidence of school failure. Therefore, the differences found between SES groups will be discussed to illustrate the potent mediating influence of a known risk factor on the formation of parental beliefs and expectations and on the relation between parental beliefs and child competencies.

In an interview with middle- and working-class mothers, Saxe, Guberman, and Gearhart (1987) found that both groups expressed high aspirations for their children with regard to educational achievements; however, the middle-class mothers had significantly higher occupational aspirations than the working-class mothers. This finding is consistent with an earlier study in which parental values were consistent with

the parent's work and subsequently, these values were passed on to their children (Wright & Wright, 1976). Specifically, the tendency to value self-direction (Wright & Wright, 1976) or striving for independence (Johnson & Martin, 1985) increases with social class. Likewise, lower SES groups report greater control over interactions with their children than do middle SES groups (Strom, Griswold, & Slaughter, 1981, Zeigob & Forehand, 1975).

In contrast, an early study comparing SES levels reported that working class mothers believed they had little influence over the development of their infants (Tulkin & Cohler, 1973); middle-class mothers reported just the opposite. A more recent study reported that middle-class parents foster intellectuality and achievement more than do lower SES groups (Johnson & Martin, 1985). These middle-class mothers also reported viewing their child as being passive in learning situations, and this passivity is positively correlated with the child's performance on knowledge tasks (Johnson & Martin, 1985). At first glance this finding seems counterintuitive. However, the acceptance of a passive model of the child in learning situations also correlated with a more internal locus of control with regard to academic successes (Johnson & Martin, 1985). Therefore, it appears that a relation exists between parents' tendency to foster intellectuality and achievement and children's

performance in academic situations and attributions for success to ability.

Maternal involvement was also significantly correlated with both middle SES level and cognitive performance at 24-months-old (Gottfried & Gottfried, 1984). During early elementary school years, reading achievement was affected primarily by literacy in the home, which in turn, was positively correlated with increases in family social background (Marjoribanks, 1979). Therefore, with increases in social class, parents may report more control over child development. This control may affect the messages they convey to their children, the interactions they have with their children, and the academic performance that their children display.

In summary, parental beliefs have been shown to affect child development. Likewise, contextual factors that involve children's competencies and social milieu have been shown to affect parental beliefs. Therefore, the present study attempted to further analyze the complex interaction between parental beliefs and children's competencies within a specific social milieu, namely being included within a low-SES group and perceiving children as learning disabled.

Chapter 2

THE PRESENT STUDY

Chapter 2 first provides a rationale and a set of specific hypotheses. Then, the methods will be detailed.

Rationale and Hypotheses

Past research has found that inclusion within a low-SES group can affect the formation of parental beliefs and expectations (Saxe, et al, 1987; Strom, Griswold & Slaughter, 1981; Majoribanks, 1979; Wright & Wright, 1976). Therefore, the present research was limited to low-SES parents to eliminate the effects of SES differences. Another factor that potentially can affect parental beliefs and expectations is having a learning disabled child. Investigating the parental beliefs of learning disabled children compared to nondisabled children should help elucidate the complex interaction between parental beliefs and children's competencies. Therefore, the present study investigated the parental beliefs and expectations of low-SES parents regarding the academic competence of their learning disabled children. A control group of low-SES parents with nondisabled children was also included.

Past research with "normal", nondisabled children has shown that beliefs may have a more direct influence over the course of children's cognitive development. More

specifically, a significant negative correlation exists between parental value for traditional, nondemocratic beliefs regarding child-rearing and the children's performance on mental test scores (Schaefer & Edgerton, 1985). For example, these beliefs can include stressing obedience and authority, or not allowing children to question decisions. Additionally, many LD children may have experienced years of academic failure (Satz & Fletcher, 1989). Therefore, the children's academic competence may be negatively affecting the parental beliefs. Because children can affect parental beliefs which in turn can affect children's academic competence, it is hypothesized that the parents of learning disabled children will report beliefs that are negatively related to optimal child development and academic achievement.

Hypothesis 1: The parents of learning disabled children will report more traditional, nondemocratic beliefs regarding child rearing and academic development.

Parents in general are more likely to attribute their child's academic success to talent or natural ability (Goodnow, 1984, 1985). However, parents of learning disabled children are more likely to attribute school success to external causes such as chance or the actions of others (Lewis & Lawrence-Patterson, 1989). Subsequently, the two groups included in the present study should differ in their beliefs and expectations regarding school success and

failure.

Hypothesis 2: The parents of LD children should more strongly believe that their child's school successes are caused by chance or the actions of others than parents of nondisabled children.

Hypothesis 3: The parents of LD children should more strongly believe that their child's school problems are caused by the child's own behavior than parents of nondisabled children.

Because the influence of parental beliefs is often subtle and hard to detect (McGillicuddy-DeLisi, 1985), the proposed research investigated parental beliefs and expectations regarding child development and academic competence on a variety of tasks and measures. The tasks ranged from Piagetian-type tasks (conservation, transitivity, etc.) through more academic tasks (picture memory, memory for sentences, spelling words, etc.). The lack of previous research concerning the parental beliefs and expectations of learning disabled children make drawing hypotheses about parental perceptions of childrens' performance difficult to delineate specifically.

For the academic tasks, parents of LD children could rate their own child's performance lower than parents of nondisabled children, because of their child's history of poor academic performance. Alternately, the parents of LD children may not hold realistic beliefs concerning their child's performance performance on academic tasks. So, the

beliefs for the parents of LD children may not differ from the nondisabled parents beliefs for academic tasks.

For the Piagetian-type tasks, the beliefs for the two groups could be very similar, because these tasks are not specifically related to academic performance. However, Derr (1985) found that learning disabled children who ranged in age from 9 to 12 years old performed more poorly on Piagetian conservation tasks than a group of their nondisabled peers. Therefore, parents may predict that their learning disabled children will do more poorly on Piagetian-type tasks than parents of nondisabled children.

The present study also included measures to assess parental expectations regarding the educational and occupational aspirations for their children. Cashmore and Goodnow (1985) found that the best predictor of children's perception of the important qualities for occupational aspirations was their perception of their parents' position. Therefore, parental beliefs may be guiding the course of children's future achievements. Unfortunately, parents of learning disabled children tend to hold negative expectations for their children (Bryan & Pearl, 1979). Further, the learning disabled children's poor academic performance could negatively affect the parents' expectations for both educational and occupational achievements.

Hypothesis 4: The parents of learning disabled children should report lower educational aspirations than the parents of nondisabled children.

Hypothesis 5: The parents of learning disabled children should report lower occupational aspirations than the parents of nondisabled children.

Thus far, all of the hypotheses have predicted group differences between parents of LD children and parents of NLD children. However, parents who are able to judge their child's abilities accurately are more likely to create an environment that is optimally discrepant and challenging for their child (Miller, 1986). Also, parents who realistically evaluate their children's strengths and weaknesses should subsequently provide the appropriate help to compensate for their child's specific academic deficits. Consequently, parental beliefs, parental estimations of abilities, and parental expectations should be positively affected by having a child who performs better on academic tasks. This relation should be present in both parents of LD children and parents of NLD children.

Hypothesis 6: Within groups, a significant positive relation should emerge between the children's better performance on cognitive tasks and the parents' (1) more positive beliefs, (2) more accurate predictions with regard to their children's performance, and (3) higher educational and occupational aspirations.

Method

Subjects

A total of 48 mothers participated in the present study: 24 mothers of children labelled as learning disabled and 24

mothers of nondisabled children. The mothers had sons in the third- through the fifth-grade who attended five different elementary schools in Roanoke, Virginia. Appendix A is a copy of the letter that was sent to the principals at each school. Only mothers of boys were included because the majority of children labeled LD are male, and this eliminated having to include sex differences as a factor in the analyses. Seventy-five percent of the mothers of both LD and nondisabled children were Caucasian; the remaining twenty-five percent were Black. Thirty-eight percent of the mothers of LD children were single, while twenty-five percent of the mothers of nondisabled children were single.

A total of 42 children also participated: 20 children labelled as learning disabled and 22 nondisabled children. One nondisabled child was ill on the day his mother was interviewed, two of the learning disabled children's parents did not consent for their child's participation, and the remaining three children (two LD and one NLD) were absent from the home on the day of the interview. The participation of the mother was not contingent upon the participation of the son.

Initially, the mothers were contacted through letters sent from the school that their child attended. A total of 365 letters were sent: 105 letters to mothers of learning disabled children and 260 letters to mothers of nondisabled

children. Because of the smaller number of learning disabled children to choose from at each school, follow-up letters were sent to the parents of LD children. Twenty-three percent of the mothers of LD children and nine percent of the mothers of NLD returned the letters. Because no incentive was offered for the mothers participation, mothers who responded could be more involved or interested in their children's school performance than the mothers who did not respond to the letters. Further, the difference in the percentages between the two groups could indicate that, as a group, the mothers of LD children were more interested in their children's school involvement than the mothers of NLD children. The letters included the purpose of the study, an explanation of the home interview process, and a general description of the cognitive tasks that their sons were asked to complete. The letter stated that the parents could participate, regardless of whether they allowed their son to participate. Appendix B is a copy of the letter that was sent to each parent. A stamped envelope was included for the parent to return if he or she was interested in participating in the study.

Because this study focused on the parents' perceptions of having a child labeled as LD, and the effects of being identified as learning disabled on parental beliefs and expectations, the parents of all children identified as LD were contacted at each school that participated. The LD

children were in both resource and self-contained classes. The Roanoke City School Administration uses the following criteria for identifying specific learning disabilities: (1) school performance not at a level equal to the student's potential when provided with an appropriate learning environment, (2) achievement scores below intellectual ability in one or more areas including speaking ability, listening comprehension, written language, basic reading skills, reading comprehension, math calculations and math reasoning, and (3) learning difficulties not primarily the result of vision, hearing or motor handicaps, mental retardation, emotional disturbances, or environmental, economic, or cultural disadvantages. Eligibility for LD services is determined by a multidisciplinary team and includes testing by a school psychologist, educational evaluations by the child's teacher, a socio-cultural assessment by a home-school counselor, and a medical examination. The parents can be present during the eligibility meeting, and they must approve any diagnoses made by the team.

No special screening procedures were conducted to determine the accuracy of the school's identification process. The nondisabled children were recruited from an average academic level class from the same school. This procedure alleviated the inclusion of nondisabled students

who perform above grade level. These classes were picked by the principal at each school.

Determination of SES level

The schools that participated were chosen because the majority of children who attended can be classified as low-SES. After the interview, the parents socioeconomic status level was verified through a procedure designed by Mueller and Parcel (1981). This procedure required the following information about the parents: occupation, industry and class of worker (self-employed versus wages). This information was collected by asking the four questions listed in Appendix C. Once this information was acquired, a three-digit score was assigned which was then converted into Duncan's (1961) 99 point scale index score. Because Duncan's original classifications are dated, the Featherman and Hauser (1977) manual was used to obtain the Duncan scores. This manual provides an updated classification of occupations based on Duncan scores.

Duncan (1961) defined middle-SES status as a score greater than or equal to 45. All of the parents in this study had to be classified as low-SES. Therefore, the first 48 parents who responded to the letter and could be classified with a Duncan score less than 45 were included in the final analyses. Two mothers that interviewed were not included in the final analyses because they could not be

classified as low-SES. Information about the mothers occupation, and when available, the fathers occupation was collected during the interview procedure. The Duncan classification system does not include a category for "housewife", so, for the purposes of this study, these mothers were given a Duncan score of 0.

The parents of learning disabled children and the parents of nondisabled children did not significantly differ on either their Duncan scores, ages, or level of education. The means, standard deviations, and p-values for the parental demographic information are provided in Table 1.

Insert Table 1 about here

Materials

Measures for parental beliefs and expectations came from two sources: previous research and new instruments developed specifically for this research. The measures will be grouped and described according to their purpose.

Parental Beliefs

Parental Modernity Scale

The first measure of parental beliefs was the Parental Modernity (PM) Scale (Schaefer & Edgerton, 1985). This scale provides a validated measure of parental beliefs and values that have shown substantial correlations with children's academic competence (See Appendix D for more validity information). Parents rate 30 statements on a 5 point scale about rearing and educating children. Appendix E is a list of the statements. The parents obtain either a "progressive" or "traditional" score.

Beliefs Relevant to Learning Disabled Children

Twenty new statements were added to the above scale to measure parental beliefs that relate specifically to issues relevant to learning disabled children. The statements were designed for the present research and were written in the same style as the Parental Modernity scale. The parents used the same 5 point scale to respond to them.

A nondisabled attributions score can be obtained by summing questions 31-34, 37, and 39. Higher ratings for these six statements indicated that parents more strongly believe that (1) school problems are caused by chance or the actions of others, (2) school success depends upon a child's own ability or behavior rather than by chance or the actions

of others, and (3) school related problems can be corrected.

A learning disabled attributions score can be obtained by summing questions 35, 43, and 44. A higher score for the three questions that assess learning disabled attributions suggests that parents more strongly believe that (1) children's problems in school are often caused by problems with which the children are born, (2) success in school depends more upon children's effort than ability, and (3) these problems cannot be corrected.

The remaining questions assessed parental beliefs concerning the effects of developmental factors on learning disabilities, and the effect of being identified as learning disabled on other areas of development such as social development.

Videotape Tasks

The next measure of parental beliefs was designed for the present study. Parental beliefs regarding children's performance on fourteen different cognitive tasks were measured. Eleven of these tasks were presented via a videotape and three tasks were presented by the experimenter during the home visit. The videotape insured that the tasks that required special materials or manipulations were demonstrated in a standardized manner. Copies of the videotape are available upon request¹. The tasks ranged

from Piagetian-type tasks (spatial order, conservation, transitivity, etc.) through more academic tasks (picture memory, memory for sentences, spelling words, etc.). Specifically, six of the tasks assessed Piagetian-type abilities, five of the tasks assessed general intelligence functioning (similar to IQ test items) and three of the tasks assessed academic-related abilities. The three academic-related tasks included five math problems, fourteen spelling words, and three reading passages that ranged in difficulty from first- through seventh-grade. The first nine tasks were taken from a study by Miller (1986), and the others were taken from school textbooks that corresponded to the respective grade levels. The specific tasks from Miller (1986) were chosen because they were the easiest to understand and replicate from his descriptions. Appendix F is a list and brief description of all of the tasks that were presented.

Five measures were collected from the mother's responses to the videotape tasks. The questions used to assess the five different measures were adapted from Miller (1986). The exact questions are included in the procedure section. First, the mothers were asked to assess whether their child could complete a given task. This provides a measure of the mothers' beliefs about their child's ability to complete specific types of cognitive tasks. Second, they were asked on a 5 point scale to provide a confidence rating of their

prediction. Third, they were asked to rate the amount of help that their child would need to complete the task on a 5 point scale. Fourth, they were asked to report the age that their own child and the average American child could complete the task. This measure indicates how the mothers estimate their own child's abilities in relation to other children. Finally, they were asked to choose the most important type of experience that children needed to learn a given task from four choices.

Parental Expectations

The parents were interviewed concerning their expectations for both their child's educational and occupational aspirations. This interview was a revised version of the questions asked by Saxe, Guberman, and Gearhart (1987). Saxe et al. (1987) interviewed parents of preschoolers; their questions were updated for parents of elementary school-age children. The interview questions are listed in Appendix G.

Child's Academic Competence

Two measures of the children's performance were collected when possible. First, the children's performance on standardized achievement tests was obtained from the children's school records. The parent's permission to review

the child's school records was obtained during the home visit. When available, the Science Research Associates (SRA) Survey of Basic Skills Level scores were recorded for the sections that measure reading and math achievement. These scores have been converted to a national percentage score that compares each child to children who are the same age. Ten of the learning disabled children were not administered the SRA tests. Therefore, for these ten children the Woodcock Johnson Psycho-Educational Battery test scores for reading and mathematics were recorded. These scores have also been converted to a national age percentage.

Second, the child's performance on the cognitive tasks that are included on the videotape and presented by the experimenter to the mother were assessed during the home visit. Only those children whose parents gave their consent were included. The tasks were presented to the children in the same order in which they appeared on the videotape by a trained undergraduate assistant using a standard protocol.

Procedure

The subjects were recruited by sending letters (see Appendix B) that explained the study and asked for parental participation through the child's school. The experimenter contacted those parents who expressed an interest and set up an interview that was conducted in the parents' home. The entire procedure, including the Parental Modernity scale, the

videotape tasks, and the expectations interview took 60-90 minutes to complete. The experimenter was always accompanied by a trained undergraduate assistant on each home visit.

Before any of the measures were obtained, the experimenter briefly explained the purpose of the study and had the parents sign a consent form for themselves and their child. Furthermore, the research assistant witnessed a general explanation to the child of the tasks the child was asked to complete.

The Parental Modernity scale was administered first to one-half of the parents of LD children and one-half of the parents of nondisabled children; the other half viewed the videotape tasks first. All parents received the Parental Expectations interview last. The interview was conducted last to allow sufficient time for the experimenter to obtain a comfortable rapport with the parent. Also, this was intended to prevent the parent's answers to the interview from biasing their responses to the Parental Modernity scale and videotape tasks. After the final interview, the parents were asked the questions concerning their SES level, the purpose of the study was described, and any final questions they had were answered.

The directions for the Parental Modernity scale and the twenty statements that are relevant to learning disabled children were taken from Schaefer and Edgerton (1985). The

experimenter read the following instructions:

I would like to ask you a few questions. After I read each statement, please rate whether you agree or disagree with the statement by using the 5 point rating scale that you have here. (Gave parents a sheet that had the scale with a description of each number of the scale-- 1) strongly disagree, 2) mildly disagree, 3) not sure, 4) mildly agree, and 5) strongly agree.) You can keep this scale and refer to it as I read through each statement. There are no right or wrong answers; we are only interested in your opinion. Do you have any questions about the scale?

The experimenter then marked down the rating to each statement as the parent reported them.

The directions for the videotape tasks were adapted from Miller (1986). The experimenter read the following instructions:

Now I will show you a videotape that includes tasks that measure how your child thinks about things and tasks related to things your child has to do in school. I would like you to make judgements about how well children -- both your own child and children in general-- would do if someone asked them to complete the task. There are no right or wrong answers; we are only interested in your opinions about how children think. Some tasks are more difficult than others, and not all children can complete them. Do you have any questions?

After each task on the videotape, the tape was stopped, and the parents were asked the following series of questions:

- 1) "Would your child succeed or fail at this task?"
- 2) "How sure are you about your answer?"

A 5-point rating scale was used from "very unsure" through "moderately sure" to "very sure". As before, the parents were given a sheet on which the levels of the rating scale

were labelled.

- 3) [If the parent answered succeed to question 1, then the experimenter asked] "How much help would your child need to do this task?"

A 5-point rating scale was used from "no help" through "moderate help" to "a lot of help". The parents were given a copy of this scale.

- 4) [If the parent answered succeed to question 1]
"Please estimate the age that your child was first able to do that task."

[If the parent answered fail to question 1]

"Please estimate the age that your child will be able to do that task."

The last two questions concerned "children in general" defined as "the average American child."

- 1). "At what age would the average American child be able to do this task?"
2). "What kinds of experiences would children need in order to master this task?"

The parents were given pictures that illustrated the following four categories of experience: 1) parental teaching-- a picture of a parent teaching the child a task at home; 2) school teaching-- a picture of a classroom with a teacher helping a child do a task; 3) interaction with peers-- a picture of a same-age peer helping a child do a task; 4)

self-discovery-- a picture of a child in a room by themselves surrounded by a variety of tasks and working on one of them.

After each question, the parent's answers were recorded by the interviewer. The parents were allowed to ask questions at any point during this procedure. To familiarize the parents with the procedure and the questions, one practice task was shown before the test items began. The test consisted of fourteen tasks, including the practice item.

While the experimenter was showing the parents the videotape, the undergraduate assistant demonstrated the tasks to those children whose parents consented for them to participate. The undergraduate assistant accompanied the child to another room in the house that had a table. The assistant showed the child the tasks in the same order in which they were presented on the videotape. After each task, the assistant first recorded whether the child was able to successfully complete the task. If the child did not complete the task, the assistant recorded the degree of help that was offered during the task, using the same 5 point scale given to the parents. This scale ranges from "no help" through "moderate help" to "a lot of help". The assistants were trained to administer the tasks and rate the amount of help given in a standardized fashion. The responses to the children were read from a standard protocol so that no differences were present in the degree of help given. If a

child was unable to complete a task, the assistant would go on to the next one.

Finally, the parents were interviewed concerning their expectations regarding their child's academic and occupational achievements. The interview procedure and questions are detailed in Appendix G. Also, the experimenter asked the four questions needed to assess the parent's SES level (Appendix C) at this time. Finally, the purpose of the study was described to the parents and any final questions that the parents had were answered.

CHAPTER 3

RESULTS

This chapter is organized in terms of the questions that were delineated in the rationale and hypotheses section. First, I investigated whether parents of learning disabled children reported beliefs that were negatively related to optimal child development and academic achievement. These analyses will address whether parents of learning disabled children report more traditional, nondemocratic beliefs than parents of nondisabled children (Hypothesis 1). Also, they will address whether parents of LD children report more learning disabled attributions than parents of NLD children (Hypothesis 2 and 3).

Second, I investigated whether parental beliefs and parental estimations of success for children's performance on specific cognitive tasks were affected by having a learning disabled child. Because of the lack of prior research, no specific hypotheses could be made about the influence of having a child labelled with learning disabilities on parental beliefs and estimations for success on specific abilities.

Third, I investigated whether parents with learning disabled children reported lower educational and occupational aspirations for their child. These analyses will address whether perceiving your child as learning disabled causes

parents to aspire for lower educational and occupational achievements (Hypothesis 4 and 5). Finally, I investigated whether a relation existed between children's performance on cognitive measures and parental beliefs, estimations, and expectations (Hypothesis 6).

Although, no effect of grade was initially proposed, analyses that compared different grade levels were employed when appropriate. The children in this study were in the third through the fifth grade. Subsequent analyses revealed that main effects and interactions with grade level were present for some of the measures.

Parental Beliefs Associated with Non-Optimal Child Development and Low Academic Achievement

Past research has shown a relation between certain parental beliefs and poor academic achievement in children. Did parents of LD children report more nonoptimal beliefs than parents of NLD children? To address this question, three different measures were included in the analyses. The first measure was the Parental Modernity traditional scale score (Schaefer & Edgerton, 1985) that was found in previous research to be negatively correlated with child cognitive competence. The second measure was the sum of the three questions that assessed learning disabled attributions. A higher score for this measure would suggest that parents more strongly believed school problems were caused by ability,

school successes depended more upon effort, and these problems cannot be corrected. The third measure was the sum of the six questions that assessed nondisabled attributions. A lower score for this measure would suggest that parents less strongly believed that school problems were caused by chance, school successes depended upon ability, and school problems can be corrected.

A multivariate analyses of variance (MANOVA) was conducted in which learning disability status was the independent variable with (1) the traditional PM scale score, (2) the learning disabled attribution score, and (3) the nondisabled attribution score as the univariate dependent variables. Table 2 shows the means, standard deviations, and p values for these measures.

To determine the overall MANOVA effect, Pillai's Trace (1960) test criteria was used. An overall significant main effect of group was found $F(3,40) = 2.73$, $p < .05$ with mothers of learning disabled children showing more nonoptimal beliefs than mothers of nondisabled children. Univariate tests found no effect of group for the traditional scale score, $F(1,42) = .11$, or for the six questions assessing nondisabled attributions, $F(1,42) = .08$. However, a significant effect for group was found for the three questions assessing learning disabled attributions, $F(1,42) = 5.65$, with parents of LD children agreeing more

strongly with learning disabled attributions than did parents of nondisabled children.

Insert Table 2 about here

As stated earlier, three statements comprised the LD attributions score. To determine which statements were significantly different between groups, t-tests were conducted on each of the individual statement scores. Parents of LD children ($M = 3.75$, $SD = 1.62$) more strongly believed that children's problems are caused by problems the children are born with (ability) than parents of NLD children ($M = 2.41$, $SD = 1.73$), $t(23) = 45.8$, $p < .02$ (correcting for multiple comparisons using Bonferoni's method (Stephens, 1986)). Also, a marginal effect was found for the LD attribution statement about children's school successes, $t(23) = 46.0$, $p < .09$. Mothers of LD children ($M = 3.13$, $SD = 1.36$) more strongly believed that children's school successes depend more upon effort than parents of NLD children ($M = 2.38$, $SD = 2.38$). However, no significant group effect was found for the statement that school problems cannot be corrected.

Also, the three statements that comprised the LD attribution score were all significantly related to the total

score. The correlation coefficients were .72, .60, and .63, respectively, all p 's $< .001$. Further, all of the statements that comprised the NLD attribution score with the exception of statement 33 were also significantly related with the total score ($M = .46$, range from .36 to .52, all p 's $< .01$).

In summary, parents of learning disabled children do not report more traditional, nondemocratic beliefs regarding child rearing and academic development than parents of nondisabled children. Therefore, having a learning disabled child does not seem to affect traditional beliefs, over and above the effects of being included in a low-SES level group. However, the results show some support for the finding that parents of LD children do report more learning disabled attributions than parents of NLD children. Specifically, parents of LD children more strongly believed that their child's school problems were caused by the child's own ability and school successes were caused more by effort.

Parental Beliefs and Estimations About Children's Specific Abilities

The next question investigated parental beliefs about children's performance on specific tasks that range from Piagetian-type items to more academically-related items. Also parents' comparison of their own children's accomplishments in relation to other children was

investigated. Two measures were employed. First, the overall number of success estimations for the videotape tasks given to parents of LD and NLD children were compared. The second measure compared the mean age difference between when parents estimated that their own child and the average American child would be able to successfully complete a given task. A 2 (Group) by 3 (Child's grade) multivariate analyses of variance (MANOVA) was conducted with (1) overall number of success estimations and (2) the mean age difference as univariates. The means, standard deviations, and p values for these variables are given in Table 3.

Overall main effects for group, $F(2,41) = 9.03$, $p < .001$, and grade, $F(4,82) = 3.86$, $p < .006$ were found. The interaction was not significant, $F(4,82) = 1.22$, n.s. Tests on the univariates show that mothers of LD children believed that their child could successfully complete less of the tasks overall than did mothers of NLD children, $F(1,42) = 10.95$. Also, mothers of LD children stated that their child was significantly older than the average American child when he could successfully complete these tasks than did mothers of NLD children, $F(1,42) = 10.47$.

In addition to the number of success estimations and mean age differences, the mothers were asked to rate the confidence of their success estimations on a scale of 1 ("not very sure") to 5 ("very sure"). Both mothers of LD children

(\underline{M} = 4.45, \underline{SD} = .35) and mothers of NLD children (\underline{M} = 4.39, \underline{SD} = .42) were confident of their ratings, and these ratings did not significantly differ, $\underline{t}(23) = 44.8$, n.s.

There was also an univariate effect of grade for the overall number of success estimations reported by mothers, $\underline{F}(2,42) = 5.78$. Post-hoc comparisons were conducted using Student Newman Keuls with the harmonic mean of N to control for unequal cell sizes (see Appendix H). Results of these analyses showed that mothers of fifth graders and fourth graders estimated more overall successes than did mothers of third graders. The univariate tests found no significant effect of grade for the question in which mothers compared the age that their own child compared to the average American child could successfully complete the task, $\underline{F}(2,42) = 1.94$.

Insert Table 3 about here

In summary, mothers of LD children reported that their children would complete less of the videotape tasks than mothers of NLD children. Both of these groups were confident of these estimations. Also, as the children's grade increased, mothers reported that their children would complete more of the videotape tasks. Not only did mothers of LD children make less success estimations, but these

mothers also reported that their children would be significantly older than the average American child before they would be able to master these tasks.

The MANOVA reported above compared the two groups of mothers by looking at all of the videotape tasks together. However, the tasks can be grouped into three different categories: Piagetian-type tasks ($N = 6$), intelligence-type tasks ($N = 5$) and school-related tasks ($N = 22$). To determine whether the groups differed on the different categories of tasks, a 2 (Group) by 3 (Grade) univariate analysis of variance (ANOVA) was conducted on the mean number of success estimations for each task. The means, standard deviations, and p values for these variables are included in Table 4.

The ANOVAs revealed no significant effect of group for either the Piagetian tasks $F(1,42) = .67$, or the intelligence tasks, $F(1,42) = 2.23$. However, a significant effect for group was found for the school-related tasks, $F(1,42) = 9.45$, with the parents of LD children making less success estimations than the parents of NLD children.

There was no significant effect of grade for the Piagetian tasks, $F(2,42) = .42$. However, there was a significant effect of grade for both the intelligence tasks, $F(2,42) = 3.17$, and the school-related tasks, $F(2,42) = 4.63$. Post-hoc comparisons for the intelligence tasks revealed that parents of fifth graders and fourth graders reported more

success estimations than parents of third graders. Also, for the school-related tasks, parents of fifth and fourth graders reported more success estimations than parents of third graders.

Insert Table 4 about here

In summary, with increases in children's grade, both groups of mothers showed subsequent increases in their success estimations for both the intelligence-type and school-related tasks. The only category of tasks that differed between groups was success estimations for the school-related tasks.

The school-related tasks can be further divided into math ($N = 5$), spelling ($N = 14$) and reading ($N = 3$) tasks. To determine which school related tasks were significantly different, a 2 (Group) by 3 (Grade) univariate analysis of variance (ANOVA) was conducted on the mean number of success estimations for each of the three types of school-related tasks. The means, standard deviations, and p values for these variables are included in Table 5.

No significant group difference was found for the math tasks, $F(1,42) = .91$. However, significant group differences were found for the spelling, $F(1,42) = 10.93$, and reading tasks, $F(1,42) = 5.34$, with the mothers of LD children making

less success estimations for the spelling and reading tasks than did mothers of NLD children.

Also, a significant main effect of grade was found for all three types of school tasks: math, spelling, and reading tasks (all $F_s < 4.05$). Post-hoc analyses found that for the math tasks, mothers of fourth and fifth graders reported more success estimations than mothers of third graders. For the spelling tasks, mothers of fifth graders made more success estimations than mothers of third graders, although neither of these groups significantly differed from mothers of fourth graders. Finally for the reading tasks, mothers of fourth and fifth graders reported more success estimations than mothers of third graders.

Finally, a significant interaction was found between group and grade for the reading tasks, $F(2,42) = 3.18$, $p < .05$, but not for the math tasks, $F(2,42) = .31$, n.s, or spelling tasks, $F(2,42) = 1.20$, n.s. The mothers of NLD children estimated that their child could successfully complete all three reading tasks across all three age groups ($M = 3$, $SD = 0$). The mothers of third-grade LD children ($M = 2.2$, $SD = .64$) estimated successes on significantly less of the reading tasks than mothers of fifth- ($M = 2.8$, $SD = .4$) and fourth-grade LD children ($M = 3.0$, $SD = 0$).

Insert Table 5 about here

In summary, mothers of LD children reported significantly less success estimations across all of the videotape tasks than mothers of NLD children. Upon closer examination, these group differences were only found for the school-related tasks. The two groups of mothers did not differ in their success estimations for the Piagetian- and intelligence-type tasks. Therefore, perceiving a child as learning disabled did not affect the mothers estimations for success on all categories of tasks. Instead, differences in estimations were limited to the types of tasks that the children are showing problems with in school. Closer examination of the school-related tasks, showed that the two groups of mothers differed in their success estimations for spelling and reading tasks, but not for math tasks. Once again, this finding is congruent with LD children's performance in school, since more children have disabilities in reading, which is closely tied to spelling, than in math (Lewis, 1983). Also, differences in success estimations for different grades were found. Generally, mothers of third graders reported less success estimations than mothers of either fourth or fifth graders.

Parental Expectations for Educational and Occupational Aspirations

The next question was whether parents of LD children have lower educational and occupational aspirations for their children than do parents of NLD children. Educational aspiration was rated on a 7 point scale with 1 representing "finishing elementary school" to 4 representing "finishing regular high school" to 7 representing "finishing graduate or professional school". Occupational aspirations were determined through two different measures. First, the parents were asked to give an example of a job that they desired for their child in the future. These occupations were converted to a Duncan 99 point scale score using the procedure designed by Mueller and Parcell (1981). A higher Duncan scale score indicates a more prestigious or lucrative job. Then the parents were given 22 different occupations that cover the entire range of the Duncan scale. The parents were asked to rate these jobs by saying whether they would be disappointed or not disappointed if it was their child's permanent job. All parents rated the last 12 jobs on this list as being jobs they would "not be disappointed" for their child's permanent occupation. Therefore, for purposes of this analysis, only the first 10 jobs on the list were analyzed. These 10 jobs have Duncan scores that range from 12.7 thru 44.9. These are also the jobs from the complete

list that can be classified as low-SES. To explore the differences between parental expectations, a multivariate analysis of variance (MANOVA) was conducted between the two groups of mothers with (1) expected education, (2) expected occupation, and (3) mean number of future jobs that the parent would rate as disappointing for their child to permanently hold as the univariates. The means, standard deviations, and p values for these variables are reported in Table 6.

There was no significant group differences for parental aspirations, $F(3,38) = 2.01$, n.s. However, upon closer examination of the univariate tests, there was a significant group difference for expected occupation as measured on the Duncan 99 point scale between the mothers of LD children and mothers of NLD children, $F(1,42) = 6.05$. Although this finding was not significant in the overall MANOVA, it provides some preliminary support that parents of LD children report more negative occupational aspirations than parents of NLD children.

Insert Table 6 about here

In summary, parents of learning disabled children do not appear to hold lower educational aspirations for their children. However, when asked to report an example of a job

that parents would like their child to have in the future, the parents of LD children reported lower occupational aspirations. Although, we can not significantly conclude that parents of LD children hold lower occupational aspirations, this finding provides some preliminary support.

Relation Between Parental Beliefs and the Children's Performance on Cognitive Tasks

Two different measures were used to determine the children's performance on cognitive tasks. First, the children's standardized achievement tests scores for reading and math were obtained from the child's school records. Second, the mean number of videotape tasks the children were able to successfully complete was recorded. Successful completion was defined as being able to complete the task the first time it was presented with no help from the research assistant. The tasks were divided into the three categories of Piagetian-type, intelligence-type, and school-related tasks. The school-related tasks only included the math and spelling items. The reading tasks were not included because a different criteria was used to determine success. For the reading tasks, the number of words that the research assistant helped the child read were counted for each reading passage. Three reading passages were presented in an increasingly more difficult order. If the child needed help

with more than 50% of the words in a passage, then the research assistant did not present the next one.

I first investigated whether a relation existed between children's better performance on standardized achievement test scores and the parents' tendency to report more positive beliefs, higher educational aspirations, and higher occupational aspirations. To determine these relations, Pearson's product-moment correlations were conducted on these variables. Some of the learning disabled children were not administered the Standardized Research Associates Survey of Basic Skills Level achievement test; instead, the Woodcock Johnson Psycho-Educational Battery test scores were recorded for these children (see Chapter 2). The correlation coefficients for both types of tests are included in Table 7. Although some of the correlations were significant, no reliable pattern emerged in the relation between parental beliefs and expectations and the children's performance on standardized achievement test scores.

Insert Table 7 about here

In summary, no reliable conclusions can be made regarding the relation between children's performance on standardized achievement tests scores and the measures included in the present study.

The test scores were not the only measure of children's cognitive competence; they were also presented the same cognitive tasks that were presented on the videotape to the parents. To determine if any differences existed in the children's performance on the videotape tasks, a series of 2 (Group) by 3 (Grade) ANOVAs were employed on the mean number of tasks completed for each of the three groups of tasks (Piagetian, intelligence, and school-related). The means, standard deviations, and p values for these variables are included in Table 8.

The tests revealed a significant main effect of group for the school-related tasks, $F(1,36) = 5.71$, LD children completed less of the tasks than NLD children. No significant effect was found for either the Piagetian- or the intelligence-type tasks. Also, a significant effect of grade was found for both the Piagetian-type tasks, $F(2,36) = 10.90$, and the school-related tasks, $F(2,36) = 10.30$, and a marginally significant effect was found for the intelligence-type tasks, $F(2,36) = 2.73$. Post-hoc analyses revealed that third graders were able to successfully complete less of the tasks for both the Piagetian and school-related tasks than fourth and fifth graders.

Insert Table 8 about here

The children were asked to read the same reading passages that the parents were asked to evaluate. A series of 2 (Group) by 3 (Grade) ANOVAs were employed on the mean number of words with which the experimenter helped the child for each reading passage. For the first reading passage, no significant group difference was found, $F(1,34) = .67$, n.s. For the second reading passage a marginally significant effect of group was found, $F(1,28) = 2.40$, $p < .06$, with LD children ($M = 3.57$, $SD = 1.48$) needing help with more words than NLD children ($M = 1.25$, $SD = .55$). The third reading passage was not analyzed because only nine of the learning disabled children were even asked to attempt it. No significant effect of grade or group by grade interactions were found.

In summary, LD children were able to complete less of the school-related tasks than NLD children, but the two groups did not differ for the number of Piagetian- and intelligence-type tasks that were completed. This finding is congruent with the parents' estimations of their children's abilities. Also, the third graders were able to complete less of the tasks than the fourth and fifth graders.

The parents' estimations of their children abilities followed the same pattern as the children's actual performance. To determine if a relation exists between parents' estimations and children's performance, Pearsons

product-moment correlations were conducted on these two variables. The estimations for success for the mothers of LD children, $r = .53$, $p < .01$, and the mothers of NLD children, $r = .42$, $p < .05$, showed a significant positive relation with their children's performance for all of the cognitive tasks.

Upon closer examination of the three groups of tasks (Piagetian, intelligence and school-related), a significant positive relation only existed between parents' estimations and children's performance for the school-related tasks for mothers of LD children ($r = .61$, $p < .005$) and not mothers of NLD children.

Parental Involvement

One possible explanation for the poorer estimations made by the mothers of LD children and the relation between the parents estimations and the children's actual performance, is that the mothers of LD children are more involved in their children's school work than mothers of NLD children. This finding would also be congruent with the higher percentage of returned letters found with the LD than the NLD group. A series of t-tests were conducted on the following parental involvement variables: (1) the number of parent-teacher conferences attended in the past year, (2) the number of months since the last conference, and (3) the rating on a scale of 1 (not very helpful) through 5 (very helpful) of "how helpful" mothers thought conferences were.

The means, standard deviations, and p values for these three variables are included in Table 9. The two groups did not statistically differ for any of the parental involvement variables.

Insert Table 9 about here

In summary, parents estimations and children's performance on the cognitive tasks showed the same pattern of results: both the LD children's performance and their mothers estimations for their performance were lower on the school-related tasks than the NLD group. Furthermore, a significant positive relation exists between LD parents' estimations and children's performance for the school-related tasks and not for the Piagetian- and intelligence-type tasks. Although a higher percentage of the parents of LD children agreed to participate than the parents of NLD children, the two groups of parents did not differ in the number of parent-teacher conferences or in their perception of how helpful these conferences were. Therefore, these findings together provide preliminary support for the claim that children's competencies may affect the formation of parental beliefs about their children's performance on specific cognitive tasks.

CHAPTER 4

DISCUSSION

This chapter will focus on the implications of the results. First, I will briefly review the general findings. Then, I will discuss the application of these findings to better understand the relation between parental beliefs and learning disabled children's academic competence, in particular, and children's competencies, in general.

Summary of Results

The parents of LD children did not report more traditional, nondemocratic beliefs than parents of nondisabled children as measured on the Parental Modernity "traditional" scale score (Schaefer & Edgerton, 1985). All of the participants in this study were classified as low-SES, and Schaefer and Edgerton (1985) concluded that traditional beliefs are positively correlated with low-SES level. Therefore, perceiving a child as learning disabled does not appear to affect beliefs about traditional means of rearing and educating children (e.g. stressing obedience, discipline, etc.), over and above the effect of being included within a low-SES group. However, because the present study did not include a high-SES control group, no conclusions can be made regarding parental beliefs being associated with low-SES parents.

Mothers of learning disabled children were more likely to agree that school problems are caused by problems with which children are born and school successes depend more upon effort. However, parents of NLD children were not more likely to agree with nondisabled attributions (i.e. school problems are caused by chance or the action of others, and school successes are caused by children's abilities). Therefore, children's competencies may be causing parents to hold the same maladaptive attributional styles that children themselves report (Lewis & Lawrence-Patterson, 1989).

Furthermore, parents of LD children believed that their children would complete less of the cognitive tasks overall and they believed that their children would be older than the average American child when these tasks were mastered than parents of NLD children. However, parents only differed in their success estimations for school-related tasks. For the Piagetian and intelligence-type tasks, parents of LD children did not estimate less successes than parents of NLD children. Further, the success estimations only significantly differed between groups for spelling and reading tasks and not for math tasks.

In summary, parents of LD children do not globally make less success estimations for their children than parents of NLD children. Any negative effects of perceiving children as learning disabled does not seem to affect parents' estimations across all types of tasks. Friedman & Medway

(1987) argued that learning disabled boys did not differ in their initial performance expectations towards tasks, in general; rather they reported a lower achievement motivation towards difficult academic tasks, in particular. The results from the present study showed that parents may hold similar beliefs to children for performance expectations.

Specifically, parents of LD boys did not differ from parents of nondisabled boys in overall performance expectations towards tasks, but rather differences are limited to academic tasks. These differences are specifically related to spelling and reading tasks.

No reliable relation was found between parental beliefs and children's reading and math achievement test scores. The overall reading and math achievement scores were calculated by averaging across specific subtests. For example, the math achievement subtests include number concepts, problem solving, geometry and measurement, etc. The present study did not include any of these areas. Therefore, the inclusion of these additional subtests could explain why no relation was found between the measures in the present study and the child's achievement test scores.

However, the children's performance on the specific cognitive tasks was congruent with the parents' estimations. Specifically, the learning disabled children were able to successfully complete less of the school-related tasks than

the nondisabled children, and the two groups did not differ in their performance on the Piagetian- and intelligence-type tasks. Also, a significant positive correlation was found between the parents' estimations and the children's performance on the school-related tasks, but not on the Piagetian or intelligence tasks.

In summary, parents estimations about specific cognitive abilities seem to follow the same pattern as children's performance on these same tasks. Although no causal relationship can be established (i.e. are parents's estimations affecting children's performance, or vice versa), this study does provide additional support for the existence of a relation between parental beliefs and children's academic competence. The LD children's competencies are not globally affecting parental success estimations; rather they are only affecting the success estimations for the tasks on which LD children's performance was poorest. However, a higher percentage of mothers of LD children returned the letters than the mothers of NLD children. Therefore, rather than the LD children's competencies affecting parental beliefs, it may be that the mothers of LD children were more involved with their children's school career, and were able to make more accurate predictions.

Finally, in the present study, children's competencies showed no relation with the parents' educational aspirations for their children. The mean educational aspiration score

for both groups of mothers corresponded with achieving education after high school (either a two-year or four-year college). Also, the parents did not differ in the number of "working-class" tasks that they would rate as "disappointing" for their children's permanent occupation. This finding is not surprising since both groups of mothers were included within a low-SES group, and parental values are consistent with the parents' work (Wright & Wright, 1976). However, a significant group difference was found for the parents report of the type of occupation they desire for their child. Parents of LD children gave examples of occupational aspirations that were lower on Duncan's (1961) 99 point scale than parents of NLD children. Therefore, I cannot conclude that perceiving children as learning disabled does not affect future occupational aspirations. Some preliminary support was found for a relation between this perception and parental expectations.

Implications of Results

The children's competencies do not appear to show a relation with parental beliefs about development and child-rearing in general. Also, LD children's competencies do not affect parents' success estimations across all types of cognitive tasks. Instead, the mothers of LD and NLD boys only differed in their estimations and the two groups of

children only differed significantly in their performance on the school-related tasks. In addition, a significant positive relation existed between the LD mothers's estimations and their children's performance on the school-related tasks. Therefore, once again, children's competencies appear to be affecting parental estimations about their children's abilities. However, both groups of parents were sensitive to increases in their children's performance ability. The mean number of success estimations was higher in both groups for children in higher grades. Also, a significant positive relation existed between the parents' estimations and the children's performance on all of the cognitive tasks.

In summary, children's competencies appear to affect some aspects of parental beliefs, estimations, and expectations. These effects are not global, but rather are related more specifically to the learning disabled children's academic performance. These results could be interpreted in one of two ways.

First, past research has shown that children's perceptions about their own academic performance are affected more by their parents' appraisals than by the children's actual academic achievements (Phillips, 1987). Therefore, a vicious cycle may be developing between parental beliefs and children's academic competence (Dix & Grusec, 1985). The learning disabled children's poor academic performance may be leading parents to believe that their children will fail in

school. These beliefs could subsequently affect the children's performance in school in a negative manner.

However, another interpretation could be offered. The parents of LD children may be appropriately lowering their estimations for their children's performance, thus serving to support rather than frustrate their children's academic endeavors. However, because of the low response rate these conclusions must be tempered. It may be that the seventy-seven percent of mothers of LD children that did not respond to the initial participation letter were not as involved in their children's school careers. This same group may not have been able to make accurate estimations.

The introduction stated that child development occurs within a variety of social contexts (Bronfenbrenner, 1977). The results from this study can serve to support this claim, whether the results are interpreted negatively or positively. Bronfenbrenner (1977) refers to a hierarchical structure of social contexts. The "exosystem" is a system that exerts a more overarching, global effect on development. An example of this system is inclusion within a given culture or SES level, because both of these influences globally affect children's development. Consequently, we could identify "exosystem" risk factors that can contribute to poor academic achievement. For example, as a group, low-SES minority groups do worse in school than white, middle-SES children. However,

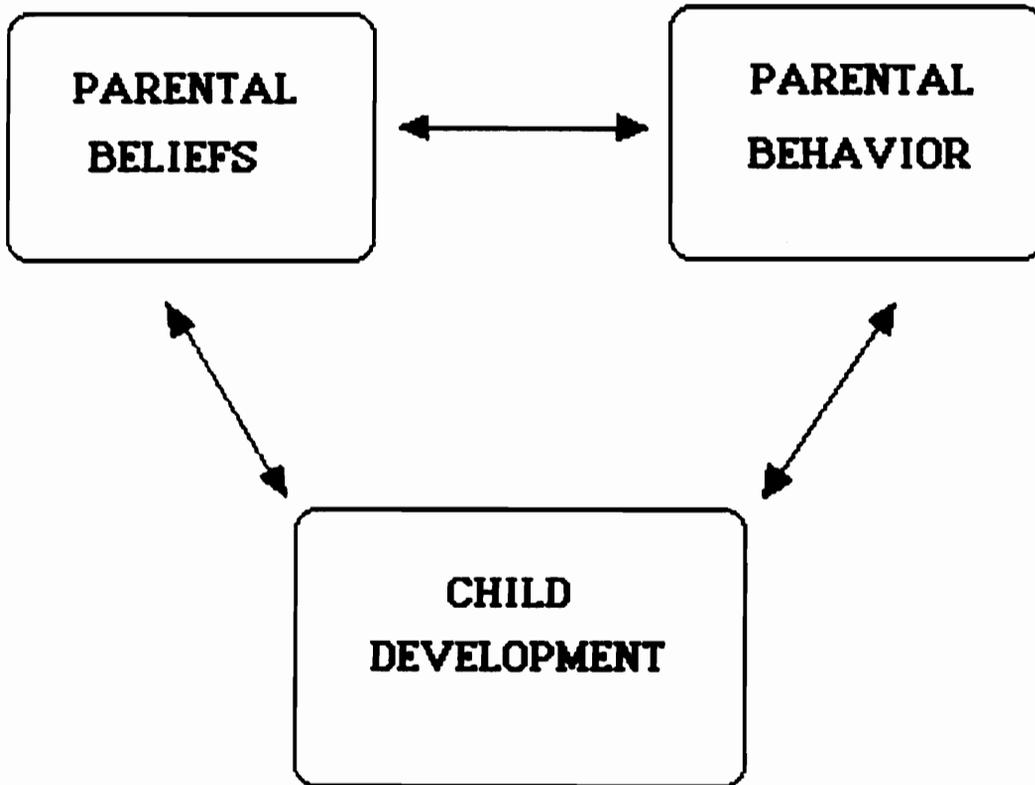
not all children who are categorized as minorities fail; some of them succeed in school (Clark, 1983). Therefore, inclusion within a low-SES or minority group may predispose a child to fail in school; however, other risk factors must be present that contribute to or cause eventual school failure.

These other risk factors could be categorized into Bronfenbrenner's (1977) "microsystem". These are local influences that more directly involve the child. An example of this would be the relationship between a parent and child. For example, a child's competencies may affect parental beliefs which in turn may affect children's school performance. Differences in children's competencies could be the factor that explains why some children who are involved within a global risk factor (i.e. inclusion within a low-SES, minority group) succeed in school and others fail.

The present research only addressed the effect of children's competencies on parental beliefs. In order to investigate the influence of particular parental beliefs on children's competencies, a prospective, longitudinal study would need to be conducted. Specifically, children who are at a high risk for exhibiting learning disabilities would have to be identified. These children could include premature infants (Cohen, 1986) or children who have been exposed to lead (Needleman, 1986). These children would have to be monitored on a longitudinal basis, along with assessments of their parents' beliefs and expectations. The

children who then eventually manifested learning disabilities could be compared to the children who did not for the different variables collected. In this way, researchers can better understand the complex system which develops between parental beliefs and children's competencies in creating a particular trajectory of child development.

Figure 1: The Direct and Indirect Influence of Parental Beliefs



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Footnotes

¹Requests for copies of the videotape can be directed towards: Dr. Donna Vaught, The Kennedy Institute, Department of Behavioral Psychology, 707 N. Broadway, Baltimore, MD. 21205.

Table 1

Means, Standard Deviations, and p-values for Parental Demographic Information by Group (Learning Disabled versus Nondisabled)

Demographic Information	Group				p Value
	LD	N	NLD	N	
Maternal age (months)	447 (90.14)	24	429 (49.33)	24	.41
Maternal education (years)	11.83 (2.06)	24	12.46 (1.74)	24	.26
Maternal Duncan score	19.95 (17.77)	24	24.02 (19.99)	24	.46
Paternal age (months)	493 (63.34)	14	455 (94.33)	18	.19
Paternal education (years)	10.64 (2.53)	14	12.0 (1.91)	18	.11
Paternal Duncan score	22.9 (13.75)	14	22.08 (10.91)	18	.86

note: Data in parentheses denote standard deviations

Table 2

Means, Standard Deviations, and p-values for Parental Beliefs Associated with Non-optimal Child Development and Low Academic Achievement

Parental Beliefs	Group		p-Value
	LD (N = 24)	NLD (N = 24)	
Traditional scale score (highest score = 150)	72.04 (15.61)	66.92 (13.09)	.74
Learning Disabled Attribution score (highest score = 15)	8.88 (2.72)	6.38 (2.39)	.02
Nondisabled Attribution score (highest score = 30)	22.58 (3.06)	22.42 (2.95)	.78

note: Data in parentheses denote standard deviations

Table 3

Means, Standard Deviations, and p-values by Group for Success Estimations for All Videotape Tasks and Age Differences

Success Estimations	Group		p-Value
	LD (N = 24)	NLD (N = 24)	
Videotape tasks (total = 33)	26.79 (2.71)	30.71 (5.20)	.002
Age Differences (years)	.70 (.62)	.05 (.39)	.002

Means, Standard Deviations, and p-values by Grade for Success Estimations for All Videotape Tasks and Age Differences

Success Estimations	Grade			p-Value
	Third (N = 15)	Fourth (N = 8)	Fifth (N = 25)	
Videotape Tasks (total = 33)	25.66 (4.99)	29.62 (4.78)	30.32 (3.26)	.006
Age Differences	.42 (.51)	.02 (.64)	.47 (.62)	.16

note: Data in parentheses denote standard deviations

Table 4

Means, Standard Deviations, and p-values by Group for Three Categories of Videotape Tasks

Videotape Tasks	Group		p-Value
	LD (N = 24)	NLD (N = 24)	
Piagetian-type Tasks (total = 6)	5.75 (.28)	5.92 (.68)	.42
Intelligence-type Tasks (total = 5)	3.95 (1.12)	4.42 (1.06)	.14
School-related Tasks (total = 22)	17.08 (4.79)	20.38 (1.97)	.003

Means, Standard Deviations, and p-values by Grade for Three Categories of Videotape Tasks

Videotape Tasks	Grade			p-Value
	Third (N = 15)	Fourth (N = 8)	Fifth (N = 25)	
Piagetian-type Tasks	5.80 (.41)	6.00 (.00)	5.80 (.65)	.66
Intelligence-type Tasks	3.60 (1.35)	4.50 (.76)	4.44 (.92)	.05
School-related Tasks	16.27 (4.25)	19.13 (4.19)	20.08 (3.12)	.02

note: Data in parentheses denote standard deviations

Table 5

Means, Standard Deviations, and p-values for the Three Types of School-related Tasks

School-Related Tasks	Group		p-Value
	LD (N = 24)	NLD (N = 24)	
Math Tasks (total = 5)	4.08 (1.25)	4.58 (.65)	.35
Spelling Tasks (total = 14)	10.38 (3.54)	12.79 (1.74)	.001
Reading tasks (total = 3)	2.62 (.64)	3.00 (0.00)	.03

Means, Standard Deviations, and p-values by Grade for Three Types of School-related Tasks

School-Related Tasks	Grade			p-Value
	Third (N = 15)	Fourth (N = 8)	Fifth (N = 25)	
Math tasks (total = 5)	3.73 (1.16)	4.75 (.46)	4.56 (.92)	.03
Spelling tasks (total = 14)	10.00 (3.16)	11.37 (3.89)	12.60 (2.24)	.02
Reading tasks (total = 3)	2.53 (.64)	3.00 (.00)	2.92 (.40)	.05

note: Data in parentheses denote standard deviations

Table 6

Means, Standard Deviations and p-values for Parental Expectations for Educational and Occupational Aspirations

Expectations	Group		p-Value
	LD (N = 24)	NLD (N = 24)	
Educational Aspiration score (highest score = 7)	5.37 (1.13)	5.83 (1.13)	.18
Occupations rated as "Disappointing" (highest score = 10)	4.00 (3.12)	5.17 (3.61)	.31
	(N = 23)	(N = 23)	
Duncan score for Occupational Aspiration (highest score = 99)	61.96 (24.19)	72.70 (10.28)	.02

note: Data in parentheses denote standard deviations

Table 7

Correlation Coefficients for Parental Beliefs and
Childrens Achievement Test Scores

Parental Belief Variables	Children's Achievement Test Scores			
	SRA Reading Math (N = 36)		Woodcock-Johnson Reading Math (N = 10)	
Traditional Scale Score	-.203 (.24)	-.122 (.48)	.558 (.09)	-.226 (.53)
Nondisabled Attribution Score	.019 (.92)	-.095 (.58)	.685 (.03)*	.215 (.55)
Learning Disabled Attribution Score	-.113 (.51)	-.210 (.22)	.193 (.59)	-.241 (.50)
Success Estimations on Videotape Tasks	.045 (.80)	.015 (.93)	.591 (.07)	.213 (.56)
Success Estimations on School Tasks	.104 (.55)	.023 (.89)	.621 (.06)	-.27 (.45)
Educational Aspirations	.264 (.12)	.355 (.03)*	-.229 (.52)	.636 (.05)*
Occupational Aspirations	-.159 (.36)	.062 (.72)	-.115 (.77)	.522 (.15)

note: Data in parentheses denote p Values
()* denotes significant p Values

Table 8

Means, Standard Deviations, and p-values for Children's Performance on the Videotape Tasks

Videotape Tasks	Group		p-Value
	LD (N = 20)	NLD (N = 22)	
Piagetian-type Tasks (total = 6)	3.20 (1.40)	3.50 (1.01)	.71
Intelligence-type tasks (total = 5)	2.05 (.76)	2.23 (1.02)	.58
School-related tasks (total = 19)	8.65 (3.34)	11.82 (3.32)	.02

Means, Standard Deviations, and p-values by Grade for Three Categories of Tasks

Videotape Tasks	Grade			p-Value
	Third (N = 14)	Fourth (N = 8)	Fifth (N = 20)	
Piagetian-type tasks	2.36 (1.01)	4.00 (.76)	3.80 (1.06)	.001
Intelligence-type tasks	1.71 (.83)	2.50 (.93)	2.30 (.86)	.08
School-related tasks	7.36 (2.31)	12.13 (3.23)	11.65 (3.42)	.001

note: Data in parentheses denote standard deviations

Table 9

Means, Standard Deviations, and p-values for Parental Involvement with Parent-Teacher Conferences

Parental Involvement Variables	Group		p-Value
	LD (N = 24)	NLD (N = 24)	
Conferences Attended Within the Past Year	2.70 (1.71)	2.38 (1.76)	.51
Months Since the Last Conference Attended	6.61 (18.81)	3.33 (3.07)	.42
Rating of How Helpful Conferences Were	4.21 (1.06)	4.57 (.72)	.19

note: Data in parentheses denote standard deviations

Appendix ALetter Sent to the School Principals

Dear Principal,

I am a graduate student in Developmental Psychology at Virginia Polytechnic Institute and State University. Currently, I am working towards my Doctoral degree. My area of interest is in the different beliefs and expectations that parents may have concerning their child's development and school performance. Specifically, I want to investigate the differences in beliefs and expectations between parents of learning disabled and parents of nondisabled children.

I hope that this study will help teachers and administrators understand how parents feel about the ways in which learning disabled and nondisabled children develop, and the education that their child is receiving through the public school system. I hope that schools will be able to use this information to improve the communication between parents and the schools.

I would like to include parents of third through the fifth grade boys who are both learning disabled and nondisabled. I will need the schools' cooperation in sending letters home to these parents. I will prepare each of the packets to be sent home to the parent and pay for postage. Therefore, the school will only need to address the packets to the appropriate parents. Each packet will include a letter to the parent explaining the study, an information sheet which they can return to me if they are interested in participating, and an envelope addressed to me for their convenience. I will then contact the parents who show an interest and set up a parental interview which will be conducted in their home.

The parental interview will include three parts. First, I will ask the parents to rate a series of statements. Then I will ask them to estimate their child's performance on a variety of tasks. Finally, I will ask them questions concerning their educational and occupational aspirations for their children. The parental letter explains each part of the interview process in detail. Also, for those parents who give permission, I will be testing the children's performance on a series of tasks. These tasks measure how children think about the world (for example, can he describe how two things are similar) and things that the child does in school (for example, spelling words). I will always be accompanied on each home visit by a trained undergraduate assistant.

All information that is collected will be totally confidential. Neither the parent's name nor their child's name will be placed on any of the information that is collected. Furthermore, no individual results will be released to the school. However, I will report the overall results to any school that is interested. At any point during the interview procedure either the parents or the children can stop participating. Neither the children nor the parents will receive any type of special favors or rewards (money or candy) for participating.

I would appreciate your cooperation in helping me to contact the parents from the Roanoke City elementary schools for this study. I would like to send these letters as soon as possible. I have enclosed a copy of the letter that I would like to send to the parents for you to review.

Thank you for your time and effort in considering this matter. I will call you next week to see if you are interested in the project, and whether you can help me contact parents.

Sincerely,

Donna Vaught, M.S.
Virginia Tech

Appendix BLetter Sent to the Parents

Dear Parent or Guardian,

The principal of [name of child's school] has agreed to help me with a research project. I am studying the different beliefs and expectations that parents may have concerning their child's development and school performance. I hope that this study will help teachers and schools understand how parents feel about the education that their child is receiving through the public school system. Also, I hope that schools will be able to use this information to improve the education that children receive. The study has been approved by the Human Subjects Committee at Virginia Polytechnic Institute and State University, and the Roanoke City School Administration.

I would like your permission to include both you and your child in our study. You can be included in the study even if you do not want your child to be included. I would like to interview you in your home at a time that is convenient for you. The entire interview should take less than 2 hours to complete. The interview will include three parts. First, I will ask whether you agree or disagree with 50 statements that concern your beliefs about how children develop and your beliefs about your child's school. Second, I will show you a videotape that includes a series of tasks. These tasks are things that your child does in school (for example, spelling words) and tasks that measure how your child thinks about things in the world (for example, can he describe how two things are similar). Finally, I will ask you some questions about the amount of education and the type of job you would like your child to get.

I would also like to see how well your child can perform the tasks that are included on the videotape. Therefore, at the same time that I am interviewing you, I would like one of my assistants to show your child each of the different tasks included on the videotape. All children will be told they have done a good job, even if they cannot complete all of the tasks.

I assure you that both your answers and your child's performance on the tasks will be totally confidential. Neither your name nor your child's name will be placed on any of the information that is collected. Furthermore, no individual results from this study will be released to the school. Either you or your child can withdraw from participating, and the tasks will stop. Your child will not

be given any rewards (candy, etc.) or receive any special credit in school for either his participation or for your participation in the study.

If you agree to participate, please complete the information on the sheet that is attached and return it to me. I have provided you with a stamped envelope for your convenience. If you agree to participate, I will be in touch with you to set up an interview that is convenient for your schedule. Remember, I would like you to participate, even if you do not want your child to be included. I will also be asking your child for his consent when we come to your house and will give him an opportunity to independently decide if he would like to participate.

If you have any questions about this study please call me at 703-961-0782; or call Dr. Helen Crawford, Chair of Human Subjects Committee (703-231-6581) or Dr. Ernest Stout, Chair of Institutional Review Board (703-231-5433). Once again, I would like to assure you that both your answers and your child's performance will be totally confidential. I hope you will keep this letter for future reference.

Sincerely,

Donna Vaught, M.S.
Virginia Tech

[Principal's Name]
Principal,
[Name of School]

Appendix C**Data Necessary for Determining Parental SES Level**

1. What kind of work do you do?
(For example, grocery clerk, babysitter, waiter/waitress)
2. What are your most important activities or duties?
(For example, rang up groceries, took care of children)
3. What kind of business or industry was this?
(For example, name of grocery store, private restaurant)
4. Are you: (Mark One)

an employee of a PRIVATE company, business, or individual
for wages, salary or commissions?

a GOVERNMENT employee?
(federal, state, county, or local government)

self-employed in OWN business, professional practice, or
farm?

working WITHOUT PAY either taking care of your house and
children or in a family business or farm?

Note: If the parent answers that they are currently unemployed,
they will be asked to report the job that they last worked for
more than 30 hours/week.

APPENDIX D

Schaefer & Edgerton (1985) determined the validity of the Parental Modernity scale by testing two independent samples of children. Thirty items were selected from a larger inventory developed by Schaefer and Edgerton (1981) known as the Parent as Educator Interview; thirty items that correlated significantly with child competence were selected independently for both sample A (N = 200) and sample B (N = 88). These items were cross-validated by computing and correlating PM scores on scale A with Sample B and vice versa. The final version (Appendix B) was developed from items that showed good criterion validity in both Samples A and B. This version was validated for another Sample C of 49 fathers and mothers of elementary school children. The PM scores from sample C for mothers correlated .50 and for fathers correlated .51 with teacher ratings of child verbal intelligence. The sum of the scores for mothers and fathers correlated .55 with child intelligence ratings.

Appendix B**Parental Modernity Scale (Schaefer & Edgerton, 1985)**

[Parents rate each of these items on a 5 point scale: strongly disagree, mildly disagree, are not sure, mildly agree, or strongly agree]

1. Since parents lack special training in education, they should not question the teacher's teaching methods?
2. Children should be treated the same regardless of differences among them.
3. Children should always obey the teacher.
4. Preparing for the future is more important for a child than enjoying today.
5. Children will not do the right thing unless they must.
6. Children should be allowed to disagree with their parents if they feel their own ideas are better.
7. Children should be kept busy with work and study at home and at school.
8. The major goal of education is to put basic information in the the minds of the children.
9. In order to be fair, a teacher must treat all children alike.
10. The most important thing to teach is absolute obedience to whoever is in authority.
11. Children learn best by doing things themselves rather than listening to others.
12. Children must be carefully trained early in life or their natural impluses will make them unmanageable.
13. Children have a right to their own point of view and should be allowed to express it.
14. Children's learning results mainly from being presented information again and again.
15. Children like to teach other children.
16. The most important thing to teach children is absolute

obedience to parents.

17. Now that my child is in school, the school has the main responsibility for his education.

18. Children generally do not do what they should unless someone sees to it.

19. I teach my child that he should be doing something useful at all times.

20. It's all right for my child to disagree with me.

21. Children should always obey their parents.

22. Teachers need not be concerned with what goes on in a child's home.

23. I go along with the game when my child is pretending something.

24. Parents should teach their children to have unquestioning loyalty to them.

25. Teachers should discipline all the children the same.

26. Children should not question the authority of their parents.

27. What I teach my child at home is very important to his school success.

28. Children will be bad unless they are taught what is right.

29. A child's ideas should be seriously considered in making family decisions.

30. A teacher has no right to seek information about a child's home background.

Scoring

Progressive Score = Sum of items 6, 11, 13, 15, 20, 23, 27, 29.

Traditional Score = Sum of items 1-5, 7-10, 12, 14, 16-19, 21, 22, 24-26, 28, 30.

Questions added to the Parental Modernity scale.

31. When my child does well in school, it is because of his natural ability.
32. Sometimes when a child does poorly in school, the problem is something they cannot control.
33. When a child does poorly in school, the parent should help him with his schoolwork.
34. Sometimes children do poorly in school because the teacher is not using the best method to correct the children's problems.
35. Children's problems in school often are caused by problems that the children are born with.
36. Children can outgrow their problems.
37. A child's success at school depends on how much his parents taught him at home.
38. An easy baby will grow up to be a good child.
39. When my child does poorly in school, it is often because he does not try hard enough.
40. Children's problems seldom have a single cause.
41. Girls tend to be easier babies to take care of than boys.
42. There is no one right way to rear children.
43. Some children just do not learn much in school. There is not much that can be done about it.
44. Children who study often and keep working even when cannot do something at first will do well in school.
45. The problems that children have in school will affect other areas of their life outside of school.
46. If parents, teachers, and the child work together to help the child's learning problem, the problem will eventually go away.
47. Children with learning problems have trouble making friends.

48. Children with learning disabilities should be put in special classrooms.

49. If the child has a learning problem, a teacher has the right to seek information about a child's home background.

50. Children who do poorly in school, will continue to have problems when they grow up and get a job.

Appendix FItems included on the Videotape

The following items are adapted from Miller (1986).

Item Name	Description	Age Norm
1. Practice Item -- 1 to 1 correspondence	Lay out a row of chips in one-to-one correspondence with an existing row of five chips.	4
2. Perspective taking -- blocks	While viewing a scene with blocks of different shapes and colors, successfully reproduce the perspective of someone viewing the same scene from the opposite side.	7
3. Transitivity of length	From the knowledge that stick A is longer than stick B and stick B is longer than stick C, infer that A is longer than C.	7 1/2
4. Conservation of weight	Indicate that the equality of weight in two balls of clay is unchanged when one ball is flattened.	8
5. Horizontality	Correctly draw in the water line in a picture of a tipped glass.	10
6. Conservation of density	After seeing that a clay ball sinks in water, indicate that a small, flat piece from the ball will also sink.	12
7. Similarities	Indicate the way in which two things are alike. (i.e. pear and apple)	7
8. Repeating 6 digits	Repeat in order a series of six digits.	10
9. Memory for sentences	Repeat correctly a 15 or 16 word sentence after a single hearing.	11

Appendix G

Interview For Parental Expectations Concerning Their Children's Educational and Occupational Achievements

"Today I would like to ask you some questions. These questions will be about your attitudes toward school and learning. Also I would like to ask you about your hopes for [child's name]'s education and choice of a job. If you're unclear about something or want me to repeat something, please feel free to ask. OK?"

Questions Concerning Educational Aspirations

1. What level of schooling do you hope or wish [child's name] will receive? [The interviewer will present the parent with the following alternatives in both verbal and printed form] 1) elementary school, 2) junior high school, 3) vocational high school, 4) regular high school, 5) 2-year college or post-high school vocational training, 6) 4-year college, or 7) graduate or professional school. How many years do you expect this to take?

2. How likely do you really think it is that [child's name] will receive the level of education you hope? Do you think that it's 1) very unlikely, 2) unlikely, 3) not sure, 4) likely, or 5) very likely?

Questions Concerning Occupational Aspirations

3. What kind of job do you hope [child's name] will have when he/she grows up? [Code: Mean of Duncan ratings for elicited occupation(s).]

4. How likely do you think it is that [child's name] will actually have that job or one as good? Do you think it is 1) very unlikely, 2) unlikely, 3) not sure, 4) likely, or 5) unlikely?

5. I'm going to read you a list of occupations, and I'd like you to imagine, for each one, how you would feel if it turned out that it was [child's name]'s permanent job when he grows up. We know that parents want their children to be happy and that it is hard to think so far into the future, but I'd still like you to try to imagine how you would honestly feel if things worked out so that [child's name]'s job were one of the following. Do you think you'd be disappointed or not disappointed?

janitor, bellhop, dishwasher, nurse's aid/orderly,

waiter, barber, tailor, building superintendent, window dresser, telephone operator, bank teller, actor, social worker, computer programmer, high school teacher, author, accountant, reporter, architect, lawyer, or dentist.

[These occupations reflect the full range of the Duncan scale. An index of occupational aspirations will be computed by adding the number of items for which mothers report disappointment. Higher scores thus reflect higher expectations.]

Questions Concerning Children's Achievements during the Elementary School Years

6. How important do you think it is that [child's name] know the following things after finishing elementary school? [The parent will be asked to rate the importance of each item on a seven-point scale from "not at all important" to "extremely important"] 1) how to read at a fifth grade level, 2) how to add and subtract, 3) how to multiply and divide, 4) how to write a story, 5) how to correctly spell words on a fifth grade level, 6) how to write a poem, 7) how to play a musical instrument, 8) how to draw or paint a picture, and 9) how to use a computer.

Questions Concerning Interactions with Child's Teacher and Schoolwork.

7. When was the last parent-teacher conference you attended?

8. How often do you attend these conferences?

[Only the parents of LD children will be asked questions 9 and 10.]

9. When was the last IEP meeting you attended?

10. How often do you attend these meetings?

11. How helpful are parent-teacher conferences?

12. How could they be better?

13. How often do you help your child with his homework?

Appendix H**Procedure to Control for Unequal Group Sizes**

Stevens (1986) supports the use of Newman Keuls post hoc comparisons when group sizes are unequal provided that n is replaced by the harmonic mean for each pair of groups. For groups i and j with sample sizes $n(i)$ and $n(j)$, n was replaced by:

$$\frac{2 \times n(i) \times n(j)}{n(i) + n(j)}$$

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Education:

B.S. Virginia Polytechnic Institute and State University
1986

Major Field of Study: Psychology

M.S. Virginia Polytechnic Institute and State University
1988

Major Field of Study: Developmental Psychology

Title of thesis: The Effects of Explicit
Instructions and Processing Demands on Comprehension
Monitoring of Learning Disabled and Nondisabled
Children

Major Advisor: Constance R. Schmidt, Ph.D.

Ph.D. Virginia Polytechnic Institute and State University,
1990

Major Field of Study: Developmental Psychology

Title of dissertation: Parental Beliefs and
Expectations Concerning Academic Competence of
Learning Disabled and Nondisabled Children

Major Advisor: David H. Uttal, Ph.D.

Research Experience:**Graduate Research Assistant, VPI&SU 1988-1989**

Data collection in a study investigating maternal learned helplessness and the effect of infant temperament, parenting stress, locus of control, and depression.

Supervisor: Phillip S. Zeskind, Ph.D.

Graduate Research Assistant, VPI&SU 1987-1988

Participated in the development and implementation of a study investigating individual differences in the development of rote and gist memory tendencies in young children.

Supervisor: Constance R. Schmidt, Ph.D.

Graduate Research Assistant, VPI&SU 1986-1987

Supervised undergraduate research assistants and participated in the data collection for a study investigating children's use of themes to guide their recall of stories.

Supervisor: Constance R. Schmidt, Ph.D.

Professional Experience

- 1990-1991 Postdoctoral Fellow
The Kennedy Institute
Department of Behavioral Psychology
- 1989-1990 Instructor
Department of Psychology; VPI&SU
Undergraduate courses in Developmental Psychology and Psychology of Learning
- 1989 Dorm Counselor
Oakland School; Boyd Tavern, VA
Supervised learning disabled and emotionally disturbed children in a camp/school residential setting. Responsibilities included designing and supervising camp activities and working as a teacher's aide during school classes.
- 1986-1989 Graduate Teaching Assistant
Department of Psychology, VPI&SU
Research and classroom responsibilities.

- 1988 Staff Assistant
Family Learning Vacation; Gallaudet University
Supervised multiple handicapped, deaf, and
hearing children during the structured program
activities.
- 1987 Internship
Project STEP (Specific Training and Education
of Parents); Radford, VA
Organized and supervised a preschool program for
multiple handicapped infants and their parents.

Professional Affiliations:

Member, Society for Research in Child Development

Presentations:

- Vaught, D. R. & Houck, C. Early identification of learning disabilities from a transactional perspective. Poster presented to the Conference on Human Development, Richmond, VA March, 1990.
- Vaught, D.R. & Houck, C. Early identification of learning disabilities: Incorporating a transactional perspective. Paper presented to the Virginia Developmental Forum, Norfolk, VA November, 1989.
- Vaught, D. R. & Schmidt, C. R. The effects of explicit instructions and processing demands on comprehension monitoring of LD and nondisabled children. Poster presented to the Society for Research in Child Development, Kansas City, MS April, 1989.
- Vaught, D. R. & Schmidt, C. R. Reevaluating learning disabled and nondisabled children's production deficiencies in comprehension monitoring. Paper presented to Virginia Developmental Forum, Ashland, VA November, 1988.
- Vaught, D. R., Schmidt, C. R., & Koch, M. Individual differences in reconstructive memory style in preschoolers. Poster presented to the Conference on Human Development, Charleston, SC March, 1988.

Senna Rae Vaught