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LEARNED HELPLESSNESS IN GIFTED, GIFTED UNDERACHIEVING, AND UNSELECTED CHILDREN

Cheryl Lisa Corber-Wiltzer
Department of Educational and Counselling Psychology
McGill University
Montreal

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Arts in Educational Psychology

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SHORT THESIS TITLE

LEARNED HELPLESSNESS IN GIFTED CHILDREN

ABSTRACT

Simulated learned helpless behavior was examined among gifted, gifted underachievers, and unselected children. Using the Intellectual Achievement Responsibility (IAR) Scale (Crandall, Katkovsky, & Crandall, 1965), after the children read a brief story and cast themselves in a failing role, the three groups of children were compared before and after the intervention (a week or two after the initial testing) on their positive and negative IAR scores. Learned helplessness theory would predict that helpless children would have high negative scores (attributing failure to themselves) and low positive scores (attributing success to external factors). Negative IAR scores did not differ or change across trials. Positive IAR scores for both gifted groups declined considerably over trials. The unselected group's positive IAR scores differed from those of both groups of gifted children in that they declined but not as drastically at posttest. All three groups' positive scores decreased to varying degrees across trials, indicating that nobody took personal responsibility for success after imagining themselves as a failure. In this respect, one aspect of learned helpless behavior was elicited. The results suggest that gifted children are capable of showing behavior which might indicate learned helplessness.

RÉSUMÉ

Comportment d'impuissance acquérise a été simulée entre des enfants doués, doués sous-performeurs, et réguliers. Ces élèves ont été soumis au questionnaire d'attitudes, Intellectual Achievement Responsibility (IAR) Scale (Crandall, Katkovsky, & Crandall, 1965). Ensuite, les élèves ont lu une histoire brève et ont imaginé eux-mêmes dans un rôle d'échec. Avant et après l'intervention (une ou deux semaines après la première rencontre) les réponses positives et négatives sur l'IAR des trois groupes d'enfants ont été comparées. La théorie d'impuissance acquérise prédirait que les enfants impuissants auraient des cotes négatives élevées (ils attribuent l'échec à eux-mêmes) et des bas cotes positives (ils attribuent le succès aux agents extérieurs). Les cotes négatives d'IAR n'étaient pas différentes parmi les trois groupes et n'ont pas changées d'un essai à l'autre. Les cotes positives d'IAR pour les deux groupes d'enfants doués ont beaucoup diminuées d'un essai à l'autre. Les points positives d'IAR des élèves réguliers étaient différents de ceux des deux autres groupes d'enfants doués, parceque les cotes sont baissées mais pas autant qu'au deuxième essai. Les cotes positives des trois groupes sont baissées différamment d'un essai à l'autre, suggérant que personne n'acceptait de responsibilité pour le succès après d'avoir s'envisager dans un rôle d'échec. Dans ce contexte, un aspect de comportement d'impuissance

acquérise etait montré. Les résultats suggèrent que l'impuissance acquérise pourrait être visible dans le comportement des enfants doués.

DEDICATION

I would like to dedicate this thesis to three very special people. Without them I would have never made it this far.

To my husband Howie, thank you for your constant praise, encouragement and support, and most of all, for being my best friend.

To my parents who have fostered my education and watched it grow since the day I was born and never stopped believing in me. Thank you.

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CHAPTER 1

Review of the Literature

The theory of learned helplessness is useful in explaining the behavior of children who commonly give up in the face of failure (Abramson, Seligman, & Teasdale, 1978; Maier & Seligman, 1976; Seligman, 1975, 1992). After repeated failure or negative feedback, some children learn to believe that failure is insurmountable (Dweck & Goetz, 1978, cited in Cullen, 1985). These children, referred to as "helpless children," generalize failure experiences to other situations because they attribute failure to uncontrollable factors (Dweck, 1975; Dweck, Goetz, & Strauss, 1980; Fowler & Peterson, 1981; Seligman, 1975, 1992; Thomas, 1979). This perception of failure, associated with uncontrollable factors, arises from their belief that they have no control over their actions and especially over the consequences of their actions (Diener & Dweck, 1978).

Seligman's (1975, 1992) theory of learned helplessness involves three basic components. First, people receive information from the environment about a relationship or a contingency between their actions and the consequences of those actions. Second, the information about the contingency gets processed and transformed into a cognitive representation of that contingency. The representation involves the perception or expectation that the action and

consequences are independent. Third, one's behavior is categorized as lacking motivation due to this perceived lack of impact over outcomes. Lack of motivation is evident in a person who ceases to respond or becomes passive. The incentive to initiate voluntary action to control any outcome comes from the expectation that acting or responding will produce that outcome. When one learns that the outcome is independent of one's actions, the expectation that responding will produce the outcome subsides; therefore, response initiation diminishes. Learned helplessness occurs when these three components arise.

Seligman began his interest in the phenomenon of learned helplessness unexpectedly while conducting experiments with his colleagues on instrumental learning with animals. When dogs were faced with inescapable shock, they ceased to respond even when the shocks could be avoided, suggesting that perception of uncontrollability promotes motivational deficits (Maier & Seligman, 1969; Overmier & Seligman, 1967). Further studies on learned helplessness were conducted on human beings to determine if such a phenomenon was not limited to animals. Results suggested that the psychological state of learned helplessness could exist in people. Seligman and his colleagues further proposed that laboratory-induced learned helplessness was essentially similar to characteristics of depression (Abramson et al., 1978; Miller & Seligman, 1975).

Abramson, Alloy, & Metalsky (1989) further reformulated the theory of helplessness and depression and called it the hopelessness theory of depression. In their view, hopelessness, not helplessness, is the cause of the symptoms of depression. In the hopelessness theory of depression, helplessness forms only one component of hopelessness. This theory is somewhat new, therefore, its validity is still in question.

Characteristics of Learned Helpless People

People who develop learned helplessness usually view the world around them in what are called stable, global (universal helplessness), and internal (personal helplessness) terms (Abramson et al., 1978; Nolen-Hoeksema, Seligman, & Girgus, 1986). Stability refers to a persistent negative view of one's situation. One tends to see things in a static, unchanging fashion. A view is global (or universal) when it does not acknowledge that failure can be particular to one part of one's life; one tends to overgeneralize. Finally, people with learned helplessness tend to blame themselves for their problems. They attribute their inability to control the outcomes of events to internal rather than external causes. Abramson and his colleagues (1989) refer to such ways of viewing the world as a hypothesized depressogenic attributional style.

Learned helplessness in children. Children who are constantly faced with failure or persistent negative

feedback are particularly susceptible to developing learned helplessness (Licht & Kistner, 1986; Thomas, 1979). Weisz (1979, 1981) suggested two reasons why learned helplessness develops. First, after repeated failure one perceives a lack of control over the outcomes of one's behavior. In the face of lack of control over outcomes, response initiation diminishes (Abramson et al., 1978; Seligman, 1975, 1992). Second, learned helplessness may result from negative feedback that suggests to the person that the reason for failure is uncontrollable and stable. This suggestion arose rrom research on mentally retarded children.

Weisz's results imply that the mechanisms of learned helplessness may differ depending on which population of children one is studying. Cullen (1985) suggested that the private speech of mentally retarded or delayed children might not be developmentally advanced enough to effectively regulate behavior. An individual's feeling of self-efficacy (or sense of control) in threatening situations is dependent on the acquisition of skills for coping with a given task (Bandura, 1977). This social-learning perspective may indicate one way in which mentally delayed or learning-disabled children may differ from average or gifted children; they may lack some fundamental coping skills, thereby rendering them incapable of dealing with certain situations, such as coping with failure (Cullen, 1985).

Cognitive differences related to learned helplessness. Cullen (1981) suggested a relationship between metacognitive skills and the ability to cope with failure experiences. Ninety eight-year-old children were interviewed about a variety of hypothetical failure situations and observed regarding how many times a given child withdrew from a problem-solving task. The interview data were coded as either coping responses or neutral responses. Coping responses were active and constructive because they attempted to deal with failure. In contrast, the neutral responses were passive reactions to the failure.

The majority of coping responses and negative responses were further subdivided into four qualitatively different categories. Differences in coping responses distinguished strategy-oriented children from action-oriented children. Strategy-oriented children used high level coping responses and scored high on the coping measure. Action-oriented children also scored high on the coping measure but used lower level coping responses than did the strategy-oriented children. Strategy-oriented children demonstrated a greater level of metacognitive knowledge which was associated with cognitive monitoring on problem-solving tasks as well as with successful school achievement.

The negative responses were subdivided to distinguish among anxiety-oriented and anger-oriented children. Both were low scorers on the coping measure but anxiety-oriented

children exhibited more negative responses such as anxiety and embarrassment over failure. In contrast, the anger-oriented children more often withdrew and made more aggressive and angry statements. The anger-oriented children demonstrated poor coping responses when failure occurred. They revealed helpless reactions to failure on the problem-solving task. The passivity of these children suggested the presence of metacognitive impairment.

Cullen's (1981) findings supported those of Diener and Dweck (1978). Diener and Dweck also studied strategies used under conditions of failure. They found that mastery-oriented children's performance often improved in the face of failure, because they did not give up. These children were called mastery-oriented because their efforts persisted even when they were faced with a challenge. They tried new and different strategies and thereby made success a possibility. The mastery-oriented children made surprisingly few attributions but instead engaged in self-monitoring and self-instruction which may be a sign of the operation of metacognitive knowledge and skills. In contrast, helpless children focused on the cause of failure. As expected, they attributed failure to lack of ability which they saw as an uncontrollable factor. Thus, they became passive just like the anger-oriented children in Cullen's (1981) study. Diener and Dweck's results were further supported: Clark and Tollefson (1991) compared

gifted children who were mastery-oriented or helpless (as classified by their teachers) on how they viewed their ability to improve writing skills, motivation to write, confidence in writing, and general attitude toward writing. The mastery-oriented students consistently scored higher than the helpless children on all of the measures.

Metacognition is only one example of an important cognitive tool that may be a buffering factor against helpless behavior. Certain children and certain populations lack metacognitive knowledge (Cullen, 1981; Licht & Kistner, 1986; Weisz, 1979, 1981). There are populations, however, that are said to use metacognitive skills as well as other skills that form part of their being characterized as very competent learners. One such population is the gifted. It has been suggested that bright and successful students think differently than others. Six examples of ways in which capable students think differently from other children have been outlined (Shore, 1991). First, they organize prior knowledge more elaborately and use it more effectively. Second, gifted students use metacognitive processes to guide their thinking to a greater extent than others (Cheng, in press; Shore, 1986; Shore, 1991; Shore & Dover, 1987). Third, they gather information relatively more slowly, but execute the steps toward a solution more quickly. Fourth, they represent problems with more sophistication (e.g., they go beyond the context of what is given to them in a problem

in order to reach a solution). Fifth, they tend to work with a plan. Finally, they exhibit flexibility in using valid solution strategies (instead of guessing). Some of these intellectual skills are similar to those used by children who were labelled mastery-oriented by Diener and Dweck's (1978) study and strategy-oriented children by Cullen (1981). For example, the mastery-oriented children (Diener & Dweck, 1978) used self-instruction and self-monitoring skills which are metacognitive skills, when they were asked to solve a problem. They also resorted to a strategy change following failure, rather than trying to solve the problem by trial and error.

Developmental differences in children's vulnerability to learned helplessness. The specific population and the presence of metacognitive skills are important in understanding response to failure. There are also developmental differences in terms of how failure affects children's perceptions of their own abilities or intelligence (Licht & Kistner, 1986; Thomas, 1989). Children in the very early school years (kindergarten and grade one) tend to view intellectual ability as a function of effort. The harder one tries, the smarter one becomes (Licht & Kistner, 1986; Thomas, 1989). Over the school years, children change their views on intelligence. As early as second grade, a child may understand that high effort can also signal low ability (Thomas, 1989). Social

comparison plays a key role in the perception of one's intelligence as one climbs the developmental ladder. Judgment of ability begins to be based on task completion and success becomes defined in terms of how one ranks with others. It is not until the age of approximately ten that the majority of children begin to view intelligence as a capacity that limits the utility of their efforts (Nicholls, 1978, cited in Licht & Kistner, 1986). Around that age, children begin to assume that intelligence is a stable capacity, and, as a child gets older, he or she becomes more vulnerable to the debilitating effects of failure (Licht & Kistner, 1986; Thomas, 1989).

Attribution Theory in Relation to Learned Helplessness

An important influence on one's performance may be beliefs about the causes of personal success or failure (Frieze & Snyder, 1980). People constantly seek explanations for why things happen to them (Weiner, 1985). Attribution theory is really a collection of theories or ideas about how people make sense of the world around them (Fiske & Taylor, 1984). Heider (1958) proposed that all of the many causes of behavior can be reduced to two basic perceptions of causality: internal and external attributions. Internal attributions refer to the causes that come from within a person. External attributions refer to those that are rooted in the external environment. Suppose a person received a failing grade on an examination.

One who would say that he or she failed because he or she is unintelligent would be making an internal attribution to ability. One who would say that he or she failed because he or she did not try would be making an internal attribution to effort. In contrast, one who would have accused the professor who graded the test of being unfair, would have made an external attribution.

Rotter (1966) also used these notions of internal-external attributions of causality to form his "locus of control" theory, a part of general attribution theory (Weiner, 1985). Individuals are classified as either "internal" or "external." Rotter claims that people differ consistently in the expectations they hold about the sources of reinforcement (positive or negative) for their behavior. Some people habitually credit themselves with the ability to control the occurrence of reinforcing events. Such people are internals. In contrast, externals perceive reinforcing events as under the control of factors outside of themselves. According to Rotter's criteria, learned helpless people would tend to be internals because they blame themselves for their own misfortunes, even if incorrectly so. This raises an interesting anomaly because Rotter is thought to view internal orientation as more favourable.

Weiner's (1985) paper summarized years of theorizing about how people attribute causality. According to Weiner

(1985), attributions have locus of control as one element but are integrated with two other factors: stability and controllability. According to this theory, internal and external attributions can be broken down into stable or unstable characteristics. Some internal causes fluctuate ("unstable") while others remain relatively constant ("stable"). Ability is commonly thought of as a stable, internal attribution. The common perception is that ability is limited and a person can only accomplish what their ability allows. Weiner (1985) pointed out that this conceptualization is not completely true because ability is subject to change when one is put in new learning situations. Mood and effort, in contrast, are internal and unstable because either one can fluctuate from time to time and situation to situation. External attributions follow the same patterns with regard to stability. Task difficulty, for example, can be seen as external and stable but luck is external and unstable (Weiner, 1985). People who consistently attribute their mishaps to external causes would therefore not be prone to developing learned helplessness because they tend to see their misfortunes as being attributed to someone or something else in their environment. They do not take the blame for their own failures and aversive conditions. It is people who regularly take the blame for negative events who are most susceptible to developing learned helplessness (Abramson et

al., 1978; Crandall, Katkovsky, & Crandall; 1965; Diener & Dweck, 1978; Seligman, 1975, 1992).

The final piece of the attribution theory puzzle is controllability: People make causal attributions to gain a sense of control over future events. Attributions have implications for the future in terms of expectations. If one feels in control over a situation then perhaps one's behavior would persist, but if one does not attribute control then one may give up. This pattern is consistent with the theory of learned helplessness (Abramson et al., 1978; Seligman, 1975, 1992). In Diener and Dweck's (1980) study, compared to mastery-oriented children, helpless children underestimated their number of successes and overestimated their number of failures on a discrimination task. Helpless children did not view successes as indicative of ability and did not expect success to continue. In attribution theory terms, learned helpless children did not attribute control to themselves. Clark and Tollefson's (1991) findings were also consistent with Diener and Dweck's (1978, 1980) results in that learned helpless people made internal attributions after failure more frequently than the non-learned helpless people.

Sex differences in attribution patterns. There appear to be gender-related different attribution patterns in both success and failure situations (Deaux, 1984; Deaux & Emswiller, 1974; Dweck & Reppucci, 1973; Lewis, 1989).

Deaux and Emswiller (1974) examined males and females viewing a man and a woman participating in a perception task in which the goal was to identify hidden objects in pictures. For half of each group, the objects to identify were "female-typed" (e.g., household utensils), and the other half were "male-typed" (e.g., mechanical tools). A trend was clear in the data: Both males and females attributed male success to internal factors and female success to an external factor, namely, luck. Furthermore, the female success was attributed to luck most saliently for the male task. It is suggested that females' success is attributable to external and unstable causes, whereas males' success is attributable to internal and stable causes. In another study (Lewis, 1989), females' personal attributions to luck were stronger for successful outcomes than for unsuccessful outcomes. A corresponding difference was not found for males. Attributions in failure situations are different than in success, and sex differences are again apparent. Dweck and Reppucci (1973) tested 20 fifth-graders on an experimental task. The task consisted of a series of individually administered block designs. The child was shown a card with a four-block design on it and was asked to replicate the pattern with the four blocks that he or she was given. Before beginning, each child's expectancy for success or failure was recorded. During the problem-solving task, the child was either rewarded by a "reward

experimenter" or given negative feedback by a "failure experimenter." Following the testing procedure, the Intellectual Achievement Responsibility (IAR) Scale (Crandall et al., 1965) was administered in written form to all the children. This scale is made up of 34 forced-choice items. Each item refers to either a positive or negative achievement experience that routinely occurs in a child's life. It is followed by two alternatives, one attributing causality to the behavior of the child (internal responsibility) and one attributing causality to the behavior of another person in the child's environment (external responsibility). A child's responsibility for success is determined by summing all the positive events for which he or she takes credit. Responsibility for failure is determined by summing all the negative events for which the child accepts the blame. Results disclosed that children who persisted in the face of prolonged failure placed more emphasis on the role of effort (internal-unstable) in determining the outcome of their behavior. Boys displayed this characteristic to a greater degree than did girls. Girls tended to attribute failure to lack of ability. Therefore, males persisted more than females when faced with failure. Dweck and Reppucci's (1973) findings were consistent with earlier results obtained by Crandall et al. (1965), in which girls increased in internality for negative achievement scores, from third to fifth grade. As the girls

got older, their internal attributions in negative situations became more evident. These results are highly consistent with the developmental analysis previously outlined (Licht & Kistner, 1986; Thomas, 1989).

Teacher feedback and sex differences. Teachers have been found to respond differently to boys and girls in success or failure situations (Dweck, Davidson, Nelson, & Enna, 1978). When boys underachieved, their teachers told them that they did not try hard enough. Effort was therefore linked with success and failure. Effort acts as a motivational factor because the boys will eventually learn that if they just try, they can succeed. Boys learn that they have control over the results of their endeavors. Girls, in contrast, did not learn from their teachers to associate their exertions with failure or success. Feedback for girls leads them to view success and failure as indicative of their ability. Girls did not receive the same feedback as the boys from their teachers, which demonstrated how teachers respond differently to each gender. Linking effort with success or failure is crucial to the learned helplessness theory (Seligman, 1975, 1992). By training a child to link effort with outcome, such an attribution replaces the belief of a helpless child that he or she failed because there is nothing he or she could have done.

Attribution training. A series of studies indicated that helplessness elicited by failure in the classroom could

be reversed (Dweck, 1973, cited in Seligman, 1975, 1992; Dweck, 1975; Fowler & Peterson, 1981). Dweck (1973) selected a group of ten- to thirteen-year-old helpless children from a variety of public schools. These children were "helpless" because they were notorious for the ease with which they gave up when they failed on arithmetic problems. The children were divided into two groups, the "success only" (SO) group, and the "attribution retraining" (AR) group. The SO group received only mathematical problems that they could always successfully complete. The AR group received the same easy problems but they also got some problems that they could not successfully complete. When they failed they were told that they should have tried harder. They were trained to attribute failure to their own lack of effort. After they were trained, both groups were tested on their response to failing at new arithmetic problems. The SO group showed more helpless responses but the AR group showed no impairment following failure. The AR group even improved. Dweck (1975) replicated these results. In this study, she compared 12 helpless children to 12 persistent children on several measures. The purpose of the study was to verify that if the helpless children were taught to take responsibility for their failure and attribute it to lack of effort, they would improve after failure situations more than if a procedure were implemented for them to succeed only. The results were consistent with

the 1973 findings, in that the AR group improved more than the SO group. Fowler and Peterson (1981) further demonstrated that attribution retraining in itself was not the crucial element for improvement following failure. Rather, direct retraining is fundamental. Direct attribution retraining involved covert rehearsal of self-instruction type statements. The findings were consistent with Dweck's (1973, 1975) results: Direct attribution retraining was significantly more effective than no attribution retraining in increasing children's attributions to effort as measured on the Intellectual Achievement Responsibility scale. Schunk (1982) found that linking past achievement with effort promoted task involvement and skill development, whereas stressing future effort did not promote achievement behavior. Schunk further suggested that, for maximum benefit, effort attributions need to be associated with either past successes or with specific strategies for coping with a present task.

Consistency of attributions. The learned helplessness theory postulates that when one has developed learned helplessness, one attributes failure or aversive events to stable and global causes. The theory would then predict that if one has learned helplessness, one's attributional patterns should be consistent from situation to situation because one sees failure as stable. A person with learned helplessness sees things in a global manner because

attributions tend to generalize. Bar-Tal, Raviv, Raviv, & Bar-Tal (1982) assessed consistency of pupils' attributions regarding success and failure. Consistency was measured between attributional patterns obtained from two tests in the same subject matter and two tests in different subject matter. The results implied consistent attributional patterns when an individual received the same outcome for the two tests (e.g., success-success, or failure-failure) more than when different outcomes were received (e.g., success-failure, or failure-success). This study confirmed that attributional patterns concerning achievement outcomes are consistent across time and situation.

Giftedness and Learned Helplessness

According to Whitmore (1980), "the gifted individual is different from the 'average' or 'low functioning' person only in degree; the same basic ingredients of human nature are present in all children" (p. 141). Learned helplessness has not been studied explicitly (for an exception, see Clark & Tollefson, 1991) in children who might be described as gifted, yet it may be very relevant. There is no *a priori* reason why it should not occur in this population if Whitmore's (1980) assertion is true, that the gifted are only different from others in terms of degree. This reference to general personality and motivational influences is only partially supported in the cognitive domain. It must be noted that the affective and cognitive domains may

be different in this regard.

Definitions of giftedness. Giftedness has many meanings. Rowlands (1974) conceptualized the gifted person as one who is more "able" than the rest and who is either quick to learn and make use of relevant information or possesses high intelligence and performs well on standardized intelligence tests. In contrast, Terman (1924) assumed there is an innate or "genetic" component to giftedness and that a gifted child is probably gifted from birth.

The following are some more recent examples of definitions of giftedness (Sternberg & Davidson, 1986). High IQ or high performance, overall or in a specific area, are common criteria for labelling a child as gifted. Children are often called gifted due to special talents they may possess. High creativity is another way of defining a child as gifted. Finally, a child is often labelled gifted due to parent or teacher nominations. Renzulli (1978) explained that giftedness is not a unitary concept because intelligence itself is not a unitary concept. People who have achieved recognition because of their excellent or creative accomplishments or potential, possess a well-defined set of three interlocking clusters of traits: Gifted behavior is a result of an interaction between above average ability (general or in a specific area), creativity, and high levels of task commitment.

What all these definitions have in common is a history of potential for high achievement in one or more socially valued domains.

Gifted underachievers in relation to learned helplessness. Most gifted children possess a relatively large amount of metacognitive knowledge which may act as a buffer for learned helplessness, just as it may have with the mastery-oriented children in Diener and Dweck's (1978, 1980) research, and the strategy-oriented children in Cullen's (1981) study. A possible neurophysiological basis for such a buffer was suggested by Wooding and Bingham (1988) who studied gifted and average children's responses to a cognitive stressor. The cognitive stressor was a series of slides. Each slide contained a colored word, printed in a different color than the word signified. They measured the impact of this stressor by drops in skin temperature. The authors found that the gifted children had a significantly lower drop in skin temperature than their nongifted counterparts. The gifted children also recovered faster than the nongifted children after induction of the stressor. This study may be an indication that gifted children may be less susceptible to debilitating effects of psychologically induced stress that, in turn, may lead to learned helplessness. This is inconsistent with Whitmore's (1980) view that all people are alike and only differ in terms of degree. It is also apparent that gifted children

differ from others in the ways they process information and in the steps they take to execute problems.

A special population of gifted children, in this context, may be gifted underachievers (Davis & Rimm, 1989; Whitmore, 1980; Whitmore, 1986). Whitmore (1980, 1986) and Supplee (1990) defined the gifted underachiever as an individual performing below the level at which he or she seems capable of achieving success. In operational terms, the gifted underachiever's performance, judged either by grades or achievement test scores (or both), is significantly below the student's measured or demonstrated potential for academic achievement. Whitmore's definition is the most commonly referred to when speaking of a gifted underachiever.

Some characteristics and origins of underachievement in gifted children have been identified. The most common underlying characteristic is the underachiever's lack of personal locus of control (Davis & Rimm, 1985; Fine & Pitts, 1980; Whitmore, 1980). In contrast, achievers had significantly higher internal locus of control scores than underachievers on the Intellectual Achievement Responsibility Scale (Crandall et al., 1965) for the IAR total score (i.e., they took responsibility for their success and their failure) and the IAR positive score indicating that they particularly took responsibility for their success (Kanoy, Johnson, & Kanoy, 1980). According to

Rimm (1987), gifted underachievers do not internalize the relationship between actions and outcomes, or process and product. When they succeed, they tend to attribute success to luck, therefore do not take responsibility for their outcomes. Unfortunately, Rimm (1987) did not explain the gifted underachiever's attributional styles when failure occurs, which is needed to draw a full link between underachievement in gifted students to the learned helplessness phenomenon. It may be hypothesized that since gifted underachievers do not internalize the link between action and outcome, that they would also not take responsibility for their failures.

Mufson, Cooper, & Hall (1987) were able to identify additional characteristics of underachievement in gifted children. Twenty-three seventh-grade students who scored high (90-100) on the California Achievement Test were subjects in this study. The students who were "achievers" had attained all A's as final grades for the previous year. Those designated as "underachievers" received grades in the B to C range from the previous year. The two groups were then evaluated by student, parent, and teacher interviews and questionnaires. Each student, parent, and teacher was interviewed about the child's home or school life, and then a questionnaire was given out to everyone. Achievers and underachievers differed in terms of their parents' level of encouragement. The underachievers' parents were greater

prodders than the achievers' parents. Parents of achievers believed that their children were more goal-oriented than did the parents of the underachievers. Both parents and teachers found that achievers were more persistent or hard working, and better able to remain focused on a single subject. Persistence is consistent with Diener and Dweck's (1978, 1980) findings on mastery-oriented children. It appears from this study that regular achieving gifted students are more "mastery-oriented" than the underachieving gifted students, also suggesting that the underachieving gifted may be less metacognitively knowledgeable than their gifted counterparts.

Mufson et al. (1989) noted that underachievers try to cope with their need for social approval by withdrawing effort from school work. Since peers often place little value on intellectual giftedness, many bright children may become withdrawn or embarrassed about their abilities. This withdrawal of effort can perhaps be a way to avoid nonacceptance by peers. It can also be seen as maladaptive and can perhaps be characterized as "helpless" behavior.

Dowdall and Colangelo (1982) compared the characteristics of average underachievers with gifted underachievers. They suggested that the only consistent difference between these two groups of children is the high scores of the underachieving gifted on standardized intelligence and achievement tests. Dowdall and Colangelo

(1982) also identified individual difference characteristics between average underachievers and gifted underachievers: Underachieving gifted children tend to be more hyperactive, more rigid in interests, have a wider range of interests in arts and sciences, and more often set unrealistically high standards which assure failure (Whitmore, 1980, cited in Dowdall & Colangelo, 1982) relative to regular underachievers.

Mooij (1992) hypothesized that personal variables such as identity, cognitive, and emotional factors, in combination with environmental factors (e.g., home and school), determines if one is a gifted underachiever or achiever.

Perfectionism in relation to underachievement in the gifted. Whitmore (1979) suggested that parents of gifted children often make them feel that they are only interested in the extent that the children can achieve academic success. The children thus perceive their worth to be contingent on the ability to achieve in school. A tremendous amount of pressure is placed upon these gifted youngsters. Not only do parents expect a lot from their gifted children, but the children themselves often develop what is called "perfectionism" (Whitmore, 1980; Schetky, 1981). Whitmore (1980) defined perfectionism as a person's strong inner drive to achieve. A child who is gifted may be pressured in all areas of life to succeed. "There is the

ever present danger of living a life of constant failure if the expectations are too high!" (Schetky, 1981). A gifted perfectionist then is only content with the best, so if failure is experienced, withdrawal or refusal to try often occurs. Adderholdt-Elliott (1987) eloquently described how many perfectionists behave: "A perfectionist whose identity is at stake will go to desperate lengths to try to save it. Some students lose sleep and make themselves sick to maintain their straight-A selves. Some cheat. Some tune out and drop out rather than face what they perceive as 'failure'" (p. 17). Giving up is a defense mechanism used to ward off the failure to meet future perfectionism (Whitmore, 1986). "When you're unsure or afraid of where you're going, the safest bet is to go nowhere. When you don't want to risk being wrong, the surest thing to do is nothing" (Adderholdt-Elliott, 1987, p. 27). Such withdrawal is also a characteristic of learned helpless behavior (Abramson et al., 1978; Seligman, 1975, 1992). Perfectionism makes gifted children vulnerable to perceptions of inadequacy because it is accompanied by a tendency to set unrealistic performance expectations (Whitmore, 1980). Gifted children who give up and become passive, rather than to come face to face with failure, perceive themselves to be inadequate, though incorrectly so. Their personal or internal attributions regarding their ability is a key characteristic of people with learned

helplessness.

Locus of control in gifted achieving and underachieving children. Laffoon, Jenkins-Friedman, & Tollefson (1989) compared gifted achievers and underachievers with average children to assess locus of control. The Intellectual Achievement Responsibility Scale (Crandall et al., 1965) was used to measure attributions of causality (locus of control). All students had higher internality scores for success than for failure situations. There were group differences with regard to attribution patterns under failure situations. The gifted underachievers and the average children were more external than the achieving gifted children. These findings have been supported by the McClelland et al.'s study (1991). An inconsistency appears to exist with Rimm's (1987) findings which suggested that a gifted underachiever would attribute success to external factors such as luck, rather than internal factors. Laffoon et al.'s study and McClelland et al.'s study are contradictory to the theory of learned helplessness itself (Abramson et al., 1978; Seligman, 1975,1992). The theory of learned helplessness would predict that, under failure situations, internal rather than external attributions would be the common pattern of response. Further studies are necessary to find out exactly how gifted children (both achievers and underachievers) attribute failure.

Research Questions

The goal of the present study is to examine potential differences in attribution scores on the Intellectual Achievement Responsibility (IAR) Scale (Crandall et al., 1965) among three groups of children after they imagine themselves in a failing role: Gifted, gifted underachievers, and unselected children from regular classrooms. The review of the literature has revealed several specific questions.

Does learned helplessness exist in gifted, gifted underachieving, and unselected children, or are gifted children less susceptible to developing learned helplessness than either of the other two groups? Also, to the extent that learned helplessness exists in gifted children, is there a greater incidence of learned helpless behaviors in gifted underachievers relative to gifted children?

Are there qualitative differences in the ways gifted children think, compared to others, or are they different only in terms of degree? To the extent that learned helplessness exists in gifted children, is it expressed in the same ways as in average children?

It is not possible to fully answer question one and the second part of question two because in order to examine all the ways learned helplessness may exist, actual failure would have to be induced in the subjects. Actual induction of failure was not a possibility for this study due to ethical considerations. Since one cannot experimentally

expose children to real failure, a simulation of learned helplessness was created to examine these questions.

CHAPTER 2

Method

Pilot Study A

Two children (1 boy, 1 girl) with a mean age of 10.5 years from regular, unselected suburban classrooms were initially tested to ensure that the experimental procedures were viable and to provide feedback concerning test materials in case any modification was needed. The children completed the Intellectual Achievement Responsibility (IAR) Scale (Crandall et al., 1965). A week later, they were asked to read a story that the author wrote (see Appendix A), put themselves in the role of the seriously failing main character, then fill out the IAR again as if they were the protagonist. The children were asked if they enjoyed the story and to provide the author with ideas as to how the story could be improved. The children provided the author with some valuable feedback which led to minor changes in the story, such as extra sentences to increase impact. One example of this feedback was to further describe the main characters feelings, as not enough detail was included in the original version. The two children were unsure if the main character felt like a loser, or simply if that was how others viewed the character. These children's IAR scores changed after they read the story, which suggested that the story was readable, had the intended impact, and the

children were able to put themselves in the role of someone else.

Pilot Study B

The purpose of the second pilot study was to refine the experimental design. It was necessary to determine if testing effects interfered with performance on the IAR scale, and whether a group of subjects needed to be assigned to a posttest-only group in order to test that effect.

Preliminary data were collected in groups from the McGill-PSBGM Summer "Explorations" enrichment program (n=19), operated by the Giftedness Centre at McGill University. The children who attended this summer program were self-selected or recommended by schools.

A pretest-posttest group (n=8) filled out the Intellectual Achievement Responsibility (IAR) Scale (Crandall et al., 1965), which measures internal-external locus of control. The sample was divided in this way so that it would be possible to check if pretesting with the IAR was biasing the results. A week later, all the children (n=19) were asked to read a story (see Appendix A) about a person in which failure typically happens. Girls were given the female version of the story to read, and boys were given the male version. All 19 children then filled out the IAR scale. A t-test was applied to determine if the story-only posttest group differed from those who were also pretested. There was no significant difference between the two groups

($t(17) = 0.786$, $p < .05$). Therefore, it was decided that the children who would participate in the main study would all be pretested with the IAR, given the story to read, then posttested with the IAR.

Measure of Learned Helplessness

Past research has indicated that, in comparison to mastery-oriented children, learned helpless children attribute failure to internal factors and attribute success to external factors (Clark & Tollefson, 1991; Cullen, 1981; Diener & Dweck, 1978, 1980; Dweck, 1975; Dweck & Repucci, 1973). These findings were in accordance with the theory of learned helplessness (Abramson et al., 1978; Maier & Seligman, 1976, Seligman, 1975, 1992). This study seeks to determine if such a difference exists between gifted, gifted underachieving, and unselected children. The Intellectual Responsibility (IAR) Scale (Crandall et al.) was used for this purpose. The following is an example of a typical item on the IAR: When you don't do well on a test at school, is it (a) because the test was especially hard, or (b) because you didn't study for it?

A high positive score reflects the child's propensity to take personal responsibility for success (internal attributions for success) and a low positive score indicates the child's failure to take responsibility for success, or to externally attribute success. A high negative score reflects a child's propensity to take personal

responsibility for failure (internal attributions for failure), and a low score on this subscale reflects the child's failure to take personal responsibility for failure (external attribution for failure). Learned helpless children are expected to achieve a high negative score and a low positive score, indicative of internal, stable, and global attributional response patterns.

Procedure

The author conducted each testing session in whole class groups at the children's schools. All subjects were told that the purpose of the experiment was to examine how children make sense of their successes and failures. The sample is described below.

Initially, every child filled out the Intellectual Achievement Responsibility Scale (IAR), after being told, "Each item consists of a type of situation that happens often in our daily lives. Please tick off only one answer representing how you would most often feel if this happened to you. Fill out each item as honestly as you can. This is not a test and there are no right or wrong answers."

A week or two after collecting base-line data, the children were asked to read the following story and imagine themselves as the main character. The boys were given the male version of the story to read, and the girls were given the female version. Here is the female version of the story. In the male version, Jane is replaced by John,

accompanied by the appropriate pronouns (see Appendix B). Other than that, the male version of the story is identical to the female version.

> Jane is an eleven year old girl who is very unhappy. She has two brothers and one sister who all make her parents very proud. They all do well in school, or at least they do pretty well. Except Jane. She can't seem to do anything right. She had a teacher this year who she thinks doesn't like her very much. She gets really bad grades in school. But this didn't just start all of a sudden. Last year Jane didn't do well in school either. Last year her grades were so bad that her parents were told that Jane should repeat the grade. But her parents didn't want Jane to repeat a grade.
>
> The whole family went to many psychologists and counsellors to figure out what to do with Jane. Finally, the parents decided to let Jane go into grade six. They thought that if Jane failed grade five that she would feel even worse about herself. So now Jane is in grade six but is still doing terribly. Over the summer she had to go to a special summer camp away from home so she would make friends

and feel good about herself. That didn't work. Jane only got into lots of trouble in camp. She only wanted to get kicked out so that she could get sent home. Jane feels like an outsider in her own family. She is overweight and doesn't really look like her brothers and sister. She feels like the "ugly duckling."

She wishes she could look more like her brothers and sister.

Maybe then, people would like her. Whenever she tries to fit in with the family, something always goes wrong. Whenever she tries to please her parents, they never seem to be satisfied and they always tell Jane that she could do better. Nothing is ever good enough. Maybe her parents are right, Jane thinks. Maybe she is stupid. Maybe she can never be like her brothers and sister.

After everyone completed reading the story, the experimenter held a brief discussion about the main character in the story and the children were urged to ask questions to ensure complete understanding of the story and to gain a real sense of how the character in the tale felt. Each child was then required to imagine himself or herself as the main character in the story and then once more to

fill out the Intellectual Achievement Responsibility Scale (Crandall et al., 1965) as if he or she were that main character in the story. They were told to forget about how they would personally answer the questions and to focus on how the person in the story would answer them.

Sample

Five separate groups of subjects were available for this research: Children from the McGill Summer "Explorations" program (self-selected gifted, n=6), school-identified gifted children (n=13), identified gifted underachieving children (n=8), and unselected children from two regular classrooms (n=13 and n=7).

The first step was to verify that these groups could be combined into the three target groups consisting of gifted, gifted underachieving, and unselected children. The gifted children from the Explorations program, and the school-identified gifted children were compared to determine if their patterns of responses on the IAR scale were similar enough for them to be treated as one discrete group. Similarly, the unselected children from the two regular classrooms were compared to determine if their responses were similar enough for them to be treated as one group.

To compare the two groups of gifted children, two-factor repeated measures "mixed" analyses of variance (ANOVA) were performed, one comparing negative scores, and the other comparing positive scores. There were no

significant interactions or group differences in experimental groups on both positive and negative scores. There was a significant trials effect ($F(1,16)=57.53$, $p<.001$) for positive scores, indicating a decline over trials for both gifted groups. Because there were no significant interactions or group differences, these two groups were combined to form one group of gifted children ($n=18$).

The same analyses were repeated to compare the two groups of unselected children. There were no significant interactions or group differences on either positive or negative scores. There was a significant trials effect ($F(1,18)=8.68$, $p<.01$) for positive scores, indicating a decline over trials for both unselected groups. Because no significant interactional or group differences existed, the two groups of unselected children were combined to form one group ($n=20$).

The tested subjects were 47 children (26 boys and 21 girls between 10 and 12 years of age (mean=10.84) from four schools in predominantly white, middle class suburbs of Montreal, Quebec. Two children who were not in grades five or six were omitted from all analyses, therefore 45 children remained in the sample (25 boys, 20 girls) with a mean age of 10.92. The children were enrolled in gifted programs (9 girls, 9 boys), an underachieving gifted classroom (1 girl, 6 boys), and two regular, unselected classrooms (10 girls,

10 boys). The children in the gifted program were selected on the basis of their overall high academic performance plus parent and teacher nominations, and self-selection. The children in the underachieving classroom were selected due to a discrepancy between their potential for high academic success and their actual performance. The regular, nongifted children (control) were taken from unselected fifth and sixth grade classrooms. Written permission to participate was obtained from each child's legal guardian.

Description of Testing of the Main Hypotheses

The identified gifted children were compared to the unselected, nongifted children to assess whether learned helplessness could be simulated in gifted children and, if so, if it was expressed in similar ways as in average children. The gifted underachievers were included to examine if learned helplessness appeared to a greater extent in that population as opposed to regular gifted children. The three groups of children's positive and negative scores were compared by two-factor repeated measures "mixed" analyses of variance (ANOVAs) to verify group differences in attributional patterns and to determine if there was any change within groups from pre- to-posttesting.

To verify gender differences, the analyses of variance were recalculated separately for boys and girls.

CHAPTER 3

Results

Overall Positive Scores

There were no significant Groups-by-Trials interactions for positive scores among experimental groups. There was a steady drop in positive scores for all three groups across trials. There was a significant main effect for both "Groups" ($F(2,42)=3.97$, $p<.05$), and "Trials" ($F(1,42)=56.22$, $p<.05$). This indicates that the groups differed significantly initially and finally in their positive scores and that the average scores declined significantly but in parallel for all three groups after reading the story. The results are presented in Tables 1 and 2, and in Figure 1.

Table 1

Means for Overall Positive Scores

	Pretest	Posttest
Gifted	13.94	6.50
Gifted Underachievers	11.42	4.57
Unselected	13.00	9.50

Table 2

Analysis of Variance: Repeated Measures "Mixed" Design

Overall Positive Scores

Source	SS	df	MS	F	p
TOTAL	1994.33	89			
Between	692.83	44			
Groups	110.08	2	55.04	3.97	p<.05
Error	582.75	42	13.87		
Within	1301.50	45			
Trials	700.01	1	700.01	56.22	p<.05
Trials by Groups	78.42	2	39.21	3.15	ns
Error	523.09	42	12.45		

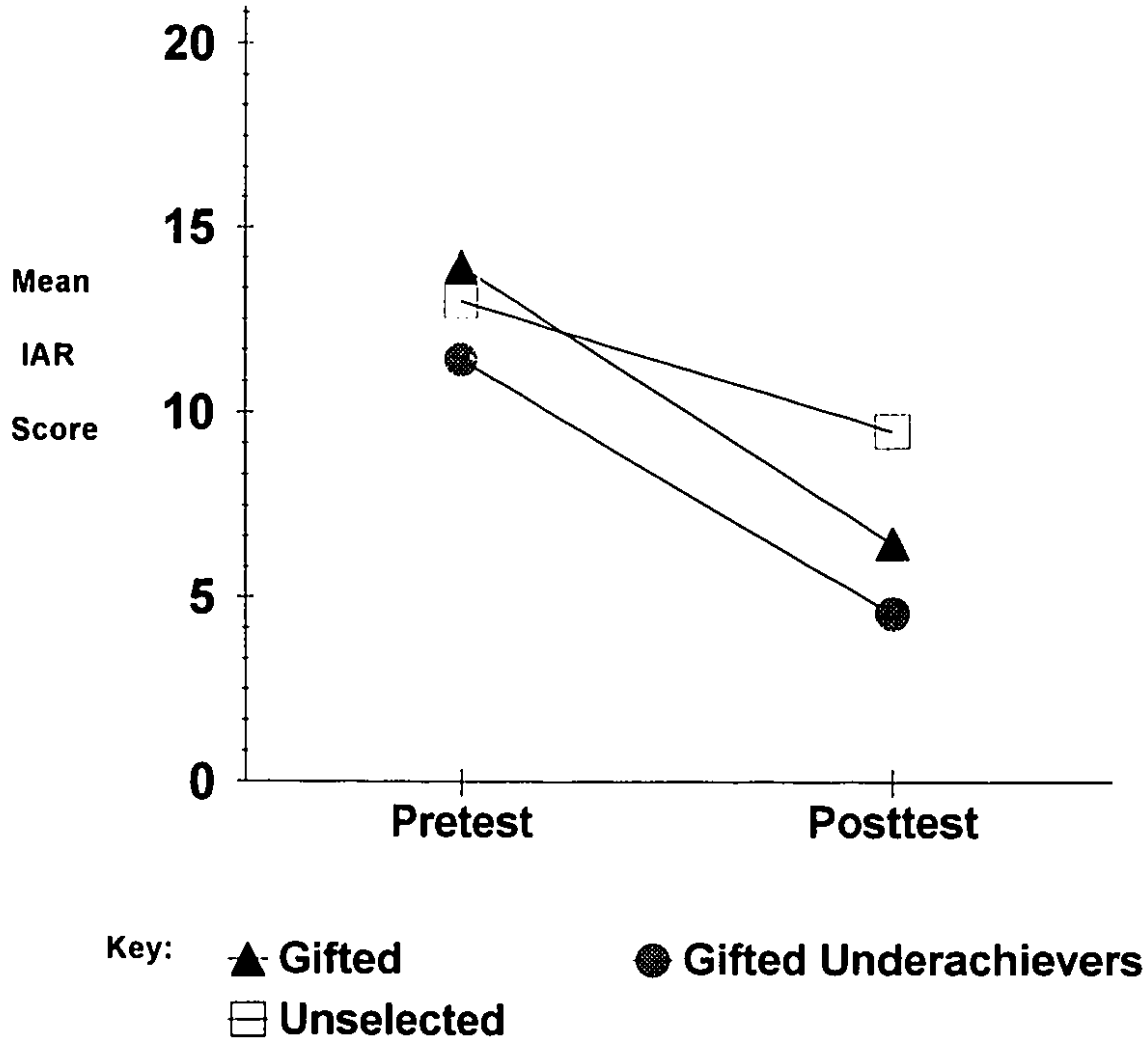
Critical Values

F((2,42), p=.05)=3.22

F((1,42), p=.05)=4.07

Figure 1

Overall Positive Scores from Pre- to Posttest



Scheffé tests of post hoc comparisons indicated significant differences between the unselected group and both gifted groups (gifted and gifted underachievers) on the posttest of positive scores. There were no significant differences among any groups at pretest, or between the gifted and gifted underachievers at either time.

Overall Negative Scores

There were no significant interactions or main effects for experimental groups for negative scores, indicating that the groups' negative scores did not differ from each other or change across trials. The results are presented in Tables 3 and 4, and Figure 2.

Table 3

Means for Overall Negative Scores

	Pretest	Posttest
Gifted	10.72	11.61
Gifted Underachievers	9.14	11.85
Unselected	11.00	9.60

Table 4

Analysis of Variance: Repeated Measures "Mixed" Design

Overall Negative Scores

Source	SS	df	MS	F	p
TOTAL	935.66	89			
Between	490.16	44			
Groups	14.76	2	7.38	0.65	ns
Error	475.40	42	11.32		
Within	445.50	45			
Trials	0.54	1	0.54	0.06	ns
Trials by Groups	51.94	2	25.97	2.77	ns
Error	393.02	42	9.36		

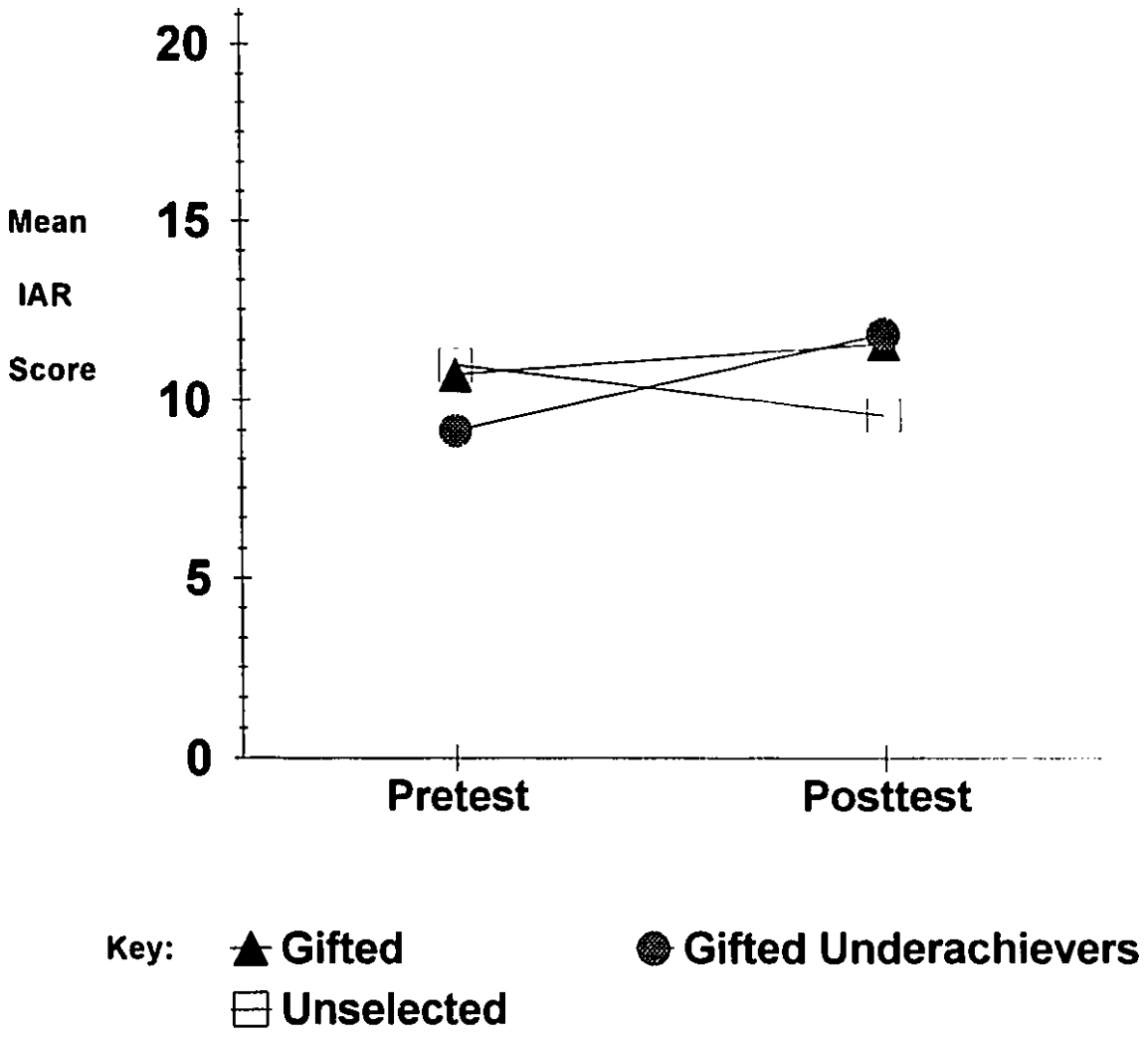
Critical Values

$F((2,42), p=.05)=3.22$

$F(91,24), p=.05)=4.07$

Figure 2

Overall Negative Scores from Pre-to-Posttest



Gender Differences

The review of the literature suggested there might be gender differences in attributional styles (Deaux, 1984; Deaux & Emswiller, 1974; Lewis, 1989). Four separate analyses of variance were conducted to examine the patterns of (a) boys' positive scores, (b) boys' negative scores, (c) girls' positive scores, and (d) girls' negative scores.

Males' positive scores. An analysis of variance (ANOVA) was performed for the males' positive scores. A two-factor repeated measures "mixed" design (ANOVA) revealed that there was no significant Trials-by-Groups interaction effect for the boys' positive scores. There were significant declines in positive scores among the boys in all three groups ($F(2,22)=4.47$, $p<.05$) and significant steady declines in positive scores for all three groups across trials ($F(1,22)=20.29$, $p<.05$). The results are presented in Tables 5 and 6, and in Figure 3.

Table 5

Means for Males' Positive Scores

	Pretest	Posttest
Gifted	14.11	8.11
Gifted Underachievers	11.00	5.00
Unselected	13.50	10.20

Table 6

Analysis of Variance: Repeated Measures "Mixed" Design

Males' Positive Scores

Source	SS	df	MS	F	p
TOTAL	1057.22	49			
Between	404.72	24			
Groups	116.89	2	58.44	4.47	$p<.05$
Error	287.83	22	13.08		
Within	652.50	25			
Trials	302.58	1	302.58	20.29	$p<.05$
Trials by Groups	21.87	2	10.94	.73	ns
Error	328.05	22	14.91		

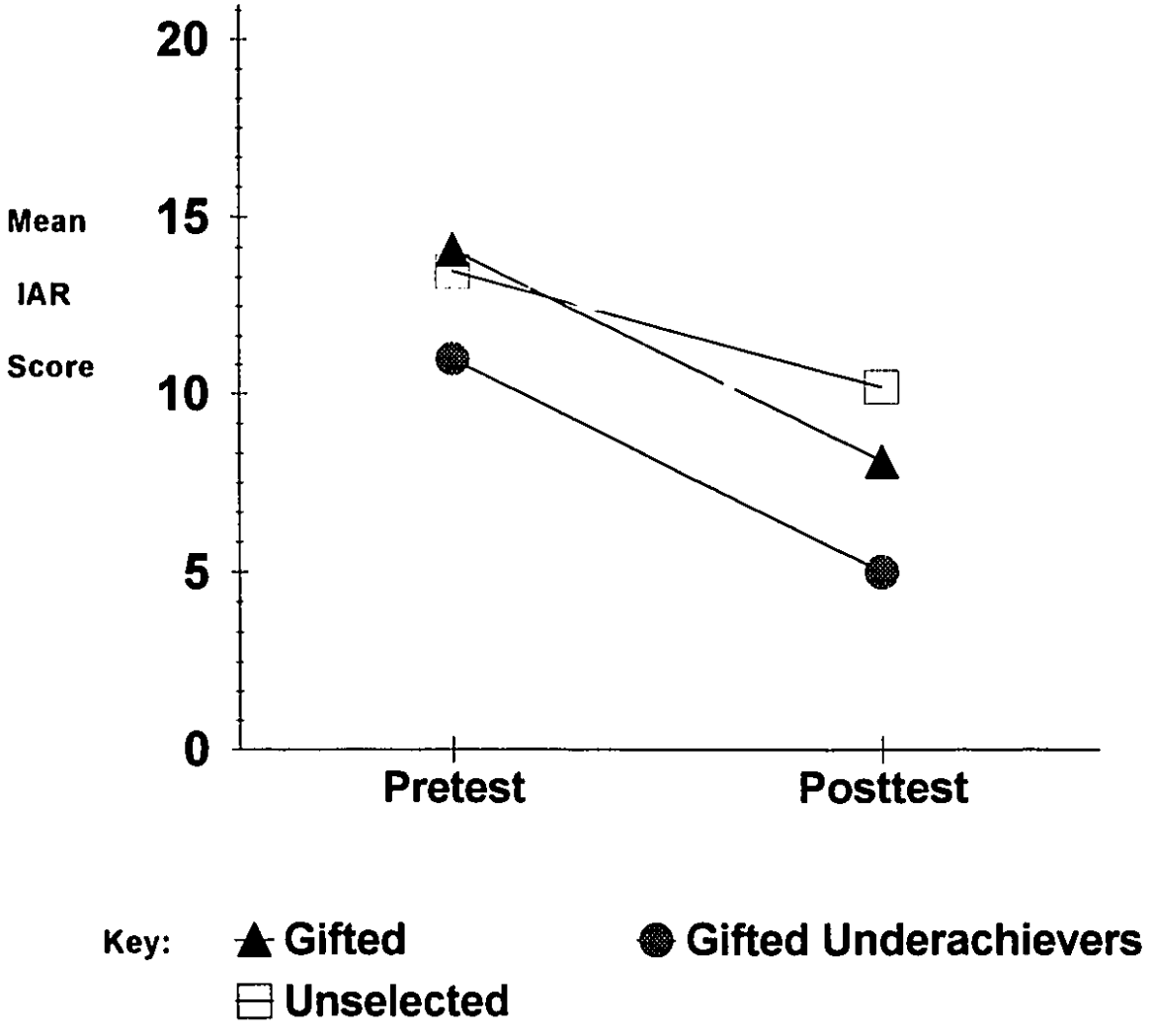
Critical Values

$F((1,22), p=.05)=4.30$

$F((2,22), p=.05)=3.44$

Figure 3

Males' Positive Scores from Pre- to Posttest



Males' negatives scores. The same statistical analysis as above was replicated for the boys' negative scores. There were no significant interactions or main effects for the boys' negative scores. The results are presented in Tables 7 and 8, and figure 4.

Table 7

Means for Males' Negative Scores

	Pretest	Posttest
Gifted	11.33	11.89
Gifted Underachievers	9.17	13.00
Unselected	11.10	9.70

Table 8

Analysis of Variance: Repeated Measures "Mixed" Design

Males' Negative Scores

Source	SS	df	MS	F	p
TOTAL	504.00	49			
Between	262.00	24			
Groups	14.00	2	7.00	.62	ns
Error	248.00	22	11.27		
Within	242.00	25			
Trials	3.92	1	3.92	.46	ns
Trials by Groups	51.36	2	25.68	3.03	ns
Error	181.72	22	8.48		

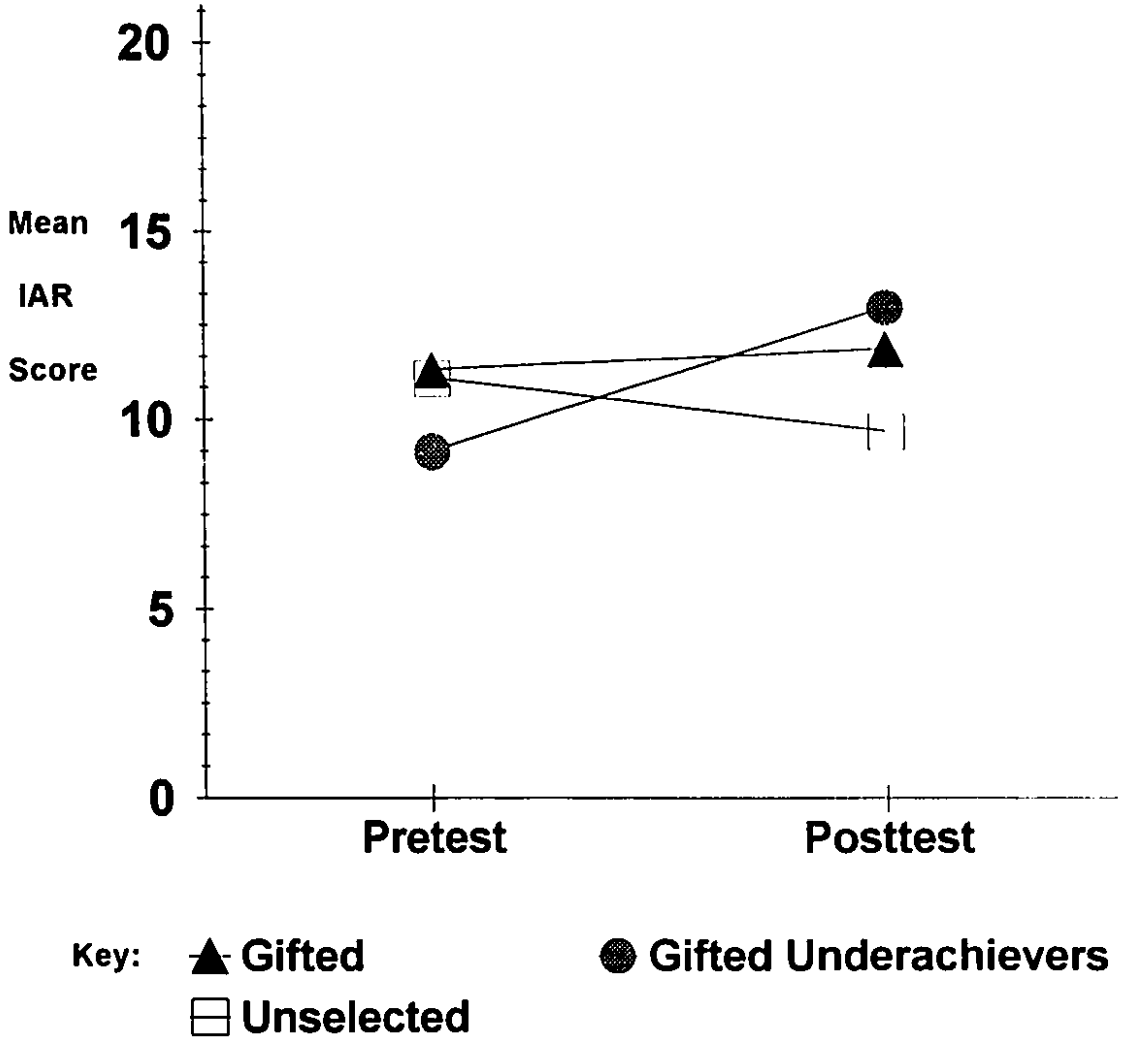
Critical Values

$F((2,22),p=.05)=3.44$

$F((1,22),P=.05)=4.30$

Figure 4

Males' Negative Scores from Pre-to-Posttest



Females' positive scores. There was a significant Trials-by-Groups interaction for the girls' positive scores ($F(2,17)=4.07$, $p<.05$) There were no significant group differences when comparing the girls positive scores but a significant Trials effect was noted ($F(1,17)=43.03$, $p<.05$). The girls' positive scores all dropped from pre- to posttest, but the group they were in was related to the amount of decline. The female gifted underachievers' positive scores dropped the most, followed by the gifted group, and finally, the unselected group. The results are presented in Tables 9 and 10, and in Figure 5.

Table 9

Means for Females' Positive Scores

	Pretest	Posttest
Gifted	13.78	5.00
Gifted Underachievers	14.00	2.00
Unselected	12.50	8.80

Table 10

Analysis of Variance: Repeated Measures "Mixed" Design

Females' Positive Scores

Source	SS	df	MS	F	p
TOTAL	925.90	39			
Between	276.90	19			
Groups	23.07	2	11.54	.77	ns
Error	253.83	17	14.93		
Within	649.00	20			
Trials	409.60	1	409.60	3.03	$p<.05$
Trials by Groups	77.57	2	38.78	4.07	$p<.05$
Error	161.83	17	9.52		

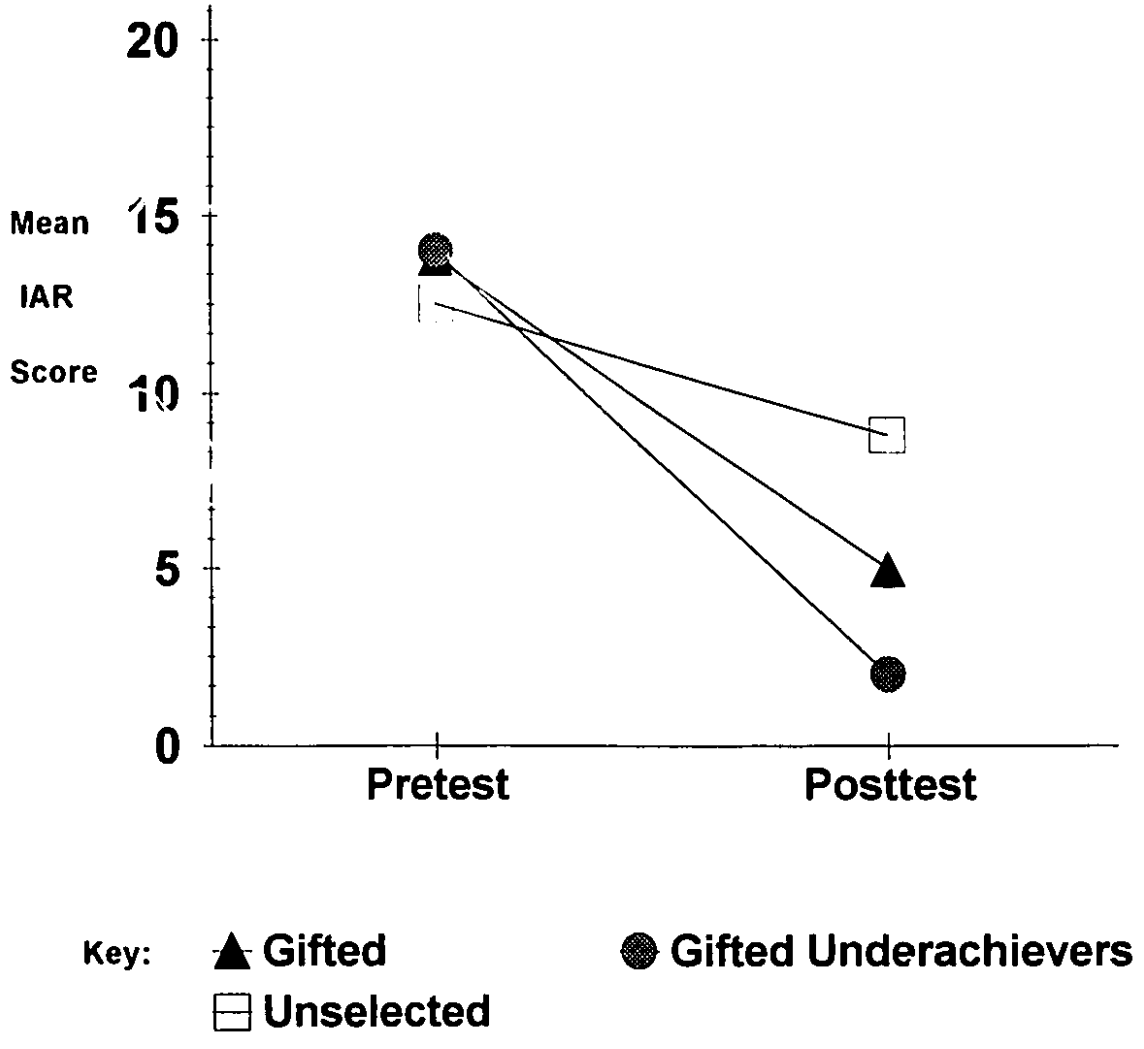
Critical Values

$F((2,17), p=.05)=3.59$

$F((1,17), p=.05)=4.45$

Figure 5

Females' Positive Scores from Pre- to-Posttest



Females' negative scores. There were no significant interactions or main effects for the girls' negative scores. The results are presented in Tables 11 and 12, and Figure 6.

Table 11

Means for Females' Negative Scores

	Pretest	Posttest
Gifted	10.11	11.33
Gifted Underachievers	9.00	5.00
Unselected	10.90	9.50

Table 12

Analysis of Variance: Repeated Measures "Mixed" Design

Females' Negative Scores

Source	SS	df	MS	F	p
TOTAL	419.98	39			
Between	216.48	19			
Groups	25.16	2	12.58	1.12	ns
Error	191.32	17	11.25		
Within	203.50	20			
Trials	1.23	1	.23	.12	ns
Trials by Groups	23.30	2	11.65	1.10	ns
Error	178.97	17	10.52		

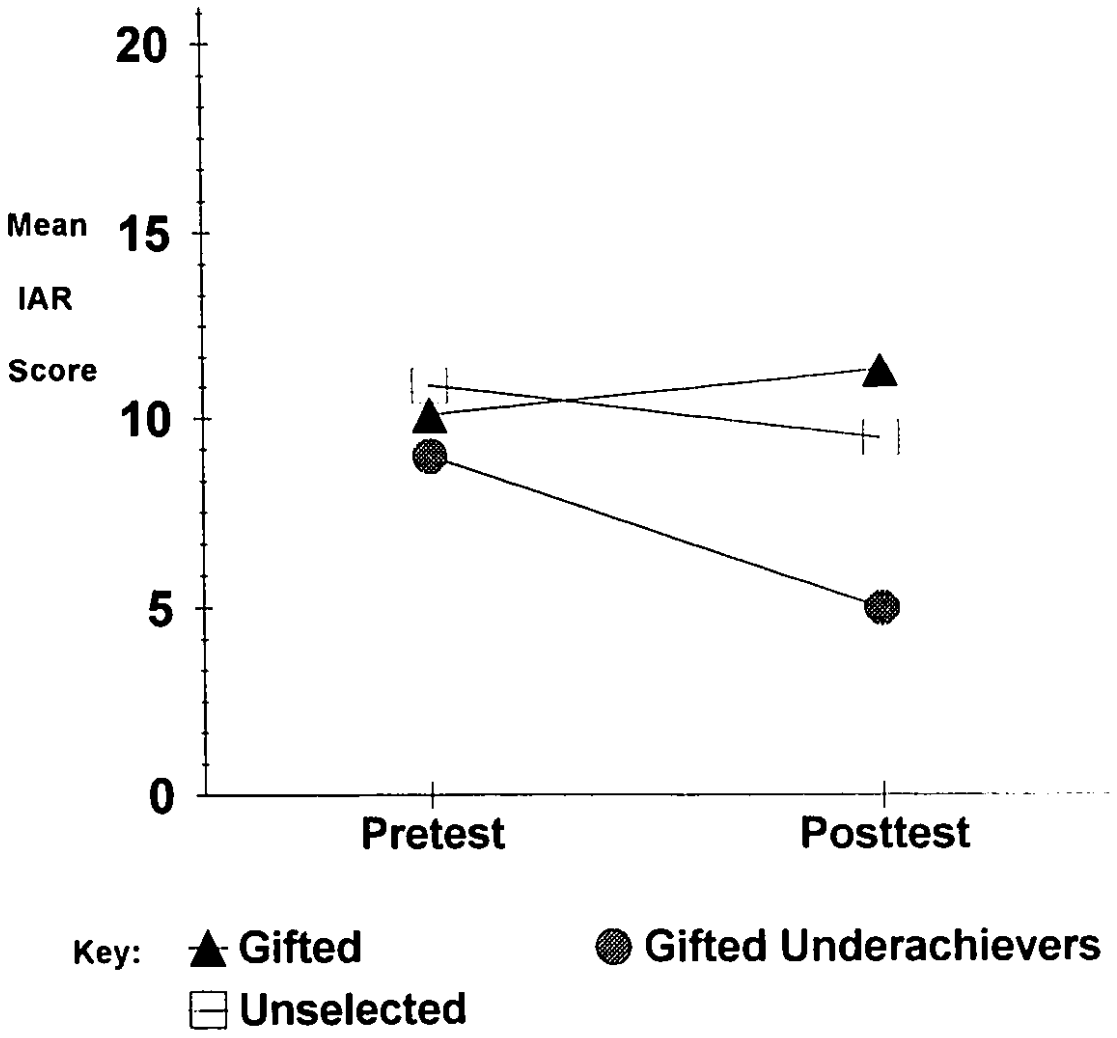
Critical Values

$F((2,17),p=.05)=3.59$

$F((1,17),p=.05)=4.45$

Figure 6

Females' Negative Scores from Pre- to-Posttest



CHAPTER 4

Discussion

This study explored differences in attributional style between gifted, gifted underachieving, and unselected children, to investigate susceptibility to learned helplessness. The theory of learned helplessness (Abramson et al., 1978; Maier & Seligman, 1976; Seligman, 1975, 1992) would predict that, under failure situations, internal rather than external attributions would be the common pattern of response. Negative scores that rose during posttest, in combination with positive scores that dropped at posttest, would be an indication that learned helpless behavior was elicited.

Positive Scores: Group Differences and Change Across Trials

All three groups (without regard for gender) significantly lowered their positive scores at the posttest. This is an indication that they took less personal responsibility for success (making more external attributions) after imagining themselves in a failing role. Learned helpless people tend to underestimate their ability for success and attribute success to external causes (Diener & Dweck, 1980), which is only one indication that learned helplessness was elicited and that the experimental manipulation had the desired effect.

Group differences in positive scores were apparent.

The unselected group of children's positive scores were significantly higher than both groups of gifted children (identified gifted and gifted underachievers) at posttest, and their positive scores did not drop as drastically at posttest as did the other two groups. This may be an indication that the intellectual ability of the nongifted pupils is not as flexible or sophisticated as that of the gifted learners, as they may not have as much of a capacity to put themselves into the role of another character.

The review of the literature suggested that gifted children are able to think differently in such ways as being able to represent problems with more sophistication (e.g., going beyond the context of what is given to them in a problem in order to reach a solution), exhibiting more flexibility in using valid solution strategies, and using more metacognitive strategies, than nongifted children (Cheng, in press; Shore, 1991; Shore & Dover, 1987). These thought patterns may have been at work when the subjects were required to put themselves in the role of the failing main character when answering the Intellectual Achievement Responsibility (IAR) Scale (Crandall et al., 1965). This exercise required awareness of one's own thought processes (metacognition) in order for them to answer the scale as if they were somebody else. This task also required flexibility, and sometimes the subjects were required to go beyond the context of what was in the story, and make

assumptions based on what they read in the story, in order to answer the scale as if they were actually the character portrayed.

After reading the story, a brief discussion was held with the subjects, at which time they were urged to comment or ask questions about the story. This step was taken to ensure that the children really gained a sense of what the character in the story was all about, in order to be able to cast themselves in that role. The two groups of gifted children (especially the identified gifted group) asked many questions, made many comments, and held elaborate discussions with the examiner, whereas the unselected children did not. Furthermore, the school-identified gifted children appeared to receive cues from the story and went beyond the context of the story, to further develop their range of factual knowledge. They did question and comment on the main character's feelings to clarify any misconceptions. They also asked questions relating to how the schools are run, due to a twist in the story pertaining to a school's recommendation that the main character fail a grade, but parental permission was necessary. Once one of the children brought up that issue, the remainder of the children in the group kept the discussion alive. It was apparent that the gifted children enjoyed learning new things. The issue of genetics transpired during the discussion of the story as well. One child asked how it was

possible that the main character in the story was not bright when the others in the family were. These observations support the view that gifted children's thought processes are more sophisticated than nongifted children because they go beyond the context of the problem. Furthermore, the gifted children in the gifted classroom wanted to put themselves in the role of the character in the story so completely that they asked if they could have permission to lie on the questionnaire if they felt the character in the story would not answer some items honestly. This observation does not support Whitmore's (1980) contention that gifted children are only different from others in terms of degree. The school-identified gifted children in this study appeared to use qualitatively different thinking strategies than the other groups of children, supporting the views that gifted children are more creative, exert more effort, and think differently than nongifted children (Cheng, in press; Renzulli,1978; Shore, 1991; Shore & Dover, 1987; Sternberg & Davidson, 1986).

No Trials-by-Groups interaction for positive scores reached significance, although the test statistic was very close to the critical value and significance would probably have been reached were the sample size larger.

Negative Scores: Group Differences and Change Across Trials

There were no significant differences among groups for negative scores, nor did the groups' scores significantly

change across trials. This is an indication that none of the three groups took any more or less personal responsibility for failure, nor did they take increasing amounts of failure after imagining themselves in a failing role. These results are inconsistent with those by Kanoy et al., (1980) who found that achievers had significantly higher total internal locus of control scores on the IAR than the underachievers, indicating that the achievers took more responsibility for both success and failure. It may be suggested that the lack of group differences in how the subjects take responsibility for failure supports Whitmore's (1980) contention that people are all the same. Her view, however, does not explain why the groups differed in their attributions of success.

Learned helpless people not only underestimate their successes and attribute them to luck, but most importantly, attribute negative events (such as failure) to internal, global, and stable causes (Abramson et al., 1978; Diener & Dweck, 1978, 1980; Dweck & Goetz, 1978; Nolen-Hoeksema, Seligman, & Girgus, 1986). According to that definition, learned helpless behavior was not completely simulated in any of the three experimental groups.

Gender Differences: Positive Scores

Gender differences existed in the patterns of the boys' and girls' attributions of success. Both boys' and girls' positive scores dropped significantly from pre- to posttest,

indicating they both took less responsibility for success after imagining themselves as a failure. There were significant differences among groups of boys, but none for girls. There was a significant Trials-by-Groups effect for girls, but not for boys. This will be discussed below.

In addition to the significant Trials-by-Groups interaction for the girls, there was also a significant Trials main effect. All three groups of girls' positive scores dropped significantly at posttest, although the unselected groups' positive scores dropped the least. This pattern of results was not apparent for the boys in the unselected group. Furthermore, the female gifted underachievers' positive scores declined the most at posttest. The sample size was significantly smaller in the female gifted underachievers group (n=1), which may have an effect on the validity of these results. The fact that the unselected groups' scores were the lowest at posttest, is consistent with the previous overall findings.

A significant difference was found among the three groups of boys and all three groups lowered their positive scores at posttest. These results are consistent with the overall group results when boys and girls were combined. The gifted underachieving boys showed the lowest scores overall at pretest, and dropped the most from pre- to posttest.

Because the male underachievers' scores on the positive

scale were lowest at pretest and dropped the most from pre- to posttest, and the underachieving girls positive scores dropped the most at posttest, the results of this study support the hypothesis that underachieving gifted, especially females, are more susceptible to developing learned helplessness (Davis & Rimm, 1985; Fine & Pitts, 1980, Rimm, 1987: Whitmore,1980), and that male underachieving gifted children may attribute success to external factors to begin with. However, when the males and females were combined for the overall results, this effect was masked or was spurious when groups were broken up by gender, due to unequal and small cell sizes.

No significant differences existed between the boys' and girls' attributions of success at pretest, and both groups lowered their positive scores after imagining failure at posttest. These findings regarding positive IAR scores, do not support previous findings on general gender differences, where males tend to take more internal responsibility for success than females and exert more effort than females when faced with failure (Deaux, 1984; Deaux & Emswiller, 1974; Dweck & Reppucci, 1973; Lewis, 1989).

Gender Differences: Negative Scores

No significant differences in the patterns of attribution between the boys and girls existed for negative scores. There were no significant interactions or main

effects in either group. These results are consistent with the overall results, when boys and girls were combined. However, when looking at Figures 4 and 6, it can be seen that the underachieving females' negative scores declined, but the underachieving males' negative scores rose at posttest although significance was not reached. These particular contrasts were not directly tested in the main hypothesis, however, interesting questions may be raised. The boys' responses on the Intellectual Responsibility (IAR) Scale were characteristic of how people with learned helplessness would respond: Their negative scores rose at posttest, indicating they took more internal responsibility for failure, and their positive scores declined at posttest, indicating they took less personal responsibility for success. It may be possible that the IAR Scale, which has no published norms, elicits different response patterns in males and females and that the boys in this study responded differently to items dealing with attributions of failure than the girls. Further studies to examine this possibility may be necessary.

CHAPTER 5

Conclusions

The goal of the present study was to examine potential differences in attribution scores on the Intellectual Achievement Responsibility (IAR) Scale (Crandall et al., 1965) among three groups of children after they imagine themselves in a failing role: Gifted, gifted underachievers, and unselected children from regular classrooms. The review of the literature suggested several specific questions.

Does learned helplessness exist in gifted, gifted underachieving, and unselected children, or are gifted children less susceptible to developing learned helplessness than either of the other two groups? To the extent that learned helplessness does exist in gifted children, are gifted underachievers more susceptible?

Are there qualitative differences in the ways gifted children think, compared to others, or are they different only in terms of degree? To the extent that learned helplessness exists in gifted children, is it expressed in the same ways as in average children?

Group Differences and Susceptibility to Learned Helpless Behavior

The first question posed in this study was, does learned helplessness exist in gifted, gifted underachieving, and unselected children, or are gifted children less

susceptible to developing learned helplessness than either of the other two groups? The review of the literature suggests that gifted learners or children who are "mastery-oriented" possess metacognitive skills which affect their ability to cope with failure. Metacognition may act as a buffer against stress, such as failure (Clark & Tollefson, 1991; Cullen, 1981; Diener & Dweck, 1978; Wooding & Bingham, 1988). This study examined whether or not gifted children are indeed less susceptible to developing learned helpless characteristics, even if they possess this "buffer."

No significant interactions or group differences existed in how all the children responded to failure. None of the three groups' negative scores changed significantly from pre- to posttesting. Learned helplessness, in this context, was not elicited in any of the three groups.

One aspect of learned helpless behavior did appear and that is that all three groups significantly lowered their positive scores from pre- to posttest. This is an indication that all groups were taking less responsibility for success after casting themselves in a failing role. There were also significant differences among the groups in this domain. The two groups of gifted children (identified gifted and gifted underachievers) showed significantly lower scores at posttesting, compared to the unselected group. This indicates that the one aspect of learned helplessness that was elicited from the experimental manipulation was the

same for both groups of gifted children. The gifted underachievers may have been using talent, creativity, and sophisticated thought processes to the same extent as the gifted children.

The second research question was, to the extent that learned helplessness does exist in gifted children, are gifted underachievers more susceptible? A gifted underachiever is an individual who performs below the level at which he or she might be capable of achieving success (Supplee, 1990; Whitmore,1980, 1986). Gifted achievers are said to have higher internal locus of control (taking personal responsibility for success and failure) than underachievers. Underachievers do not internalize the relationship between actions and outcomes. They tend to attribute success to luck (Davis & Rimm, 1985; Fine & Pitts, 1980, Rimm, 1987; Whitmore, 1980). Rimm (1987) did not explain gifted underachievers attributional styles in response to failure. The present study examined (to the extent that learned helplessness exists in gifted children) if there is a greater incidence of learned helplessness in underachieving gifted children, relative to gifted children.

Overall group differences did exist which showed that the unselected children showed the highest positive scores at posttest in comparison to the gifted and gifted underachieving groups. This would indicate that the unselected children exhibited less learned helpless behavior

on one measure than the other two groups. However, when comparing the boys and girls separately, an interesting pattern arose. Both the boys and girls across all three groups decreased their positive scores from pre- to posttest. The girls in the unselected groups' positive scores dropped significantly less than the other two groups. This pattern was not apparent for the boys in the unselected group. The girls' positive scores in the underachieving gifted group dropped the most and the boys positive scores in the underachieving group were the lower than the other two groups at pretest. These findings would suggest that gifted underachievers, especially females, when exposed to failure, may be most susceptible to developing one aspect of learned helpless behavior (i.e., not taking personal responsibility for success after imagining failure), and that male underachieving gifted children may attribute success to external factors to begin with.

Qualitative Differences in Thinking Processes

The third research question addressed the issue of whether or not there were qualitative differences in the ways gifted children think, in the context examined in this study, compared to others, or are they different only in terms of degree? Results from this study further support theorizing that gifted children think differently than others (Cheng, in press; Cullen, 1981; Shore, 1986, 1991; Shore & Dover, 1987) in that the two groups of gifted

children (gifted and gifted underachievers) more often responded in ways that the literature suggests are indicative of the use of metacognitive processes, more flexibility, and more sophistication when imagining themselves in the role of another, than nongifted, unselected children.

Finally, the fourth research question is, to the extent that learned helplessness exists in gifted children, is it expressed in the same ways as in average children? The two groups of gifted childrens' positive scores were significantly lower than the unselected groups' at posttest, which indicates that learned helpless behavior would possibly not be expressed in the same ways in gifted children as in unselected children. This study only required the children to role-play and it was noted that the gifted groups were more able to role-play than the unselected group. What this study did not measure, however, is how gifted children cope when actual failure occurs. This type of study would be necessary in order to conclude that gifted children do not express helpless behavior in similar ways to other children.

Limitations of Present Study and Suggestions for Future Research

One aspect of learned helpless behavior was apparent in the present study, and that is that all groups, after casting themselves in a failing role, took less

responsibility for success. This result ir itself forms an interesting contribution to research. Unfortunately, group differences on personal responsibility for failure were not significant.

One possibility for this pattern of results is that some items on the Intellectual Achievement Responsibility (IAR) Scale Crandall et al., 1965) "pull" for positive responses (Crandall et al., 1965). The scoring of the IAR is ambiguous because it is uncertain as to why responses to certain items are scored for internal attributions for success.

Had the sample size in the present study been larger, perhaps significant changes on the IAR negative items would have appeared. Furthermore, the experimental manipulation appeared to have impact, because significant differences appeared on the positive scale, however, future studies should possibly utilize more than the one measure of inducing failure, to further increase impact. Since actual induction of failure in subjects is unethical, it may be beneficial to conduct a study in which the experimenter measures attributions of failure directly after students receive grades on a test and examine differences in attributional patterns among those students who succeeded and those who failed.

Educational Implications

It has been documented that teachers respond

differently to males and females in the classroom. When boys fail, teachers tell them that if they try harder next time, they would be capable of success. Effort is therefore linked with success or failure. Girls are not likely to receive the same type of feedback equating success and failure with effort. Girls, in response, tend to internalize failures and attribute them to lack of ability as opposed to effort (Dweck et al., 1978). Linking effort with success or failure is crucial to the theory of learned helplessness (Abramson et al., 1978; Maier & Seligman, 1976; Seligman, 1975, 1992) because if people learn that failure is due to lack of effort and that they have control through effort, they will not develop learned helplessness. Studies in attribution training have shown that if children learn to link effort with success and failure, they will demonstrate less helplessness behavior (Dweck, 1973, cited in Seligman, 1975, 1992; Dweck, 1975; Fowler & Peterson, 1981). This attribution training has implications for what teachers can do in their classrooms. If teachers learn to give proper feedback to children and emphasize effort when reporting a child's grade or performance, children may indeed learn that they have control over their own outcomes thus reducing the chance that learned helplessness will develop. Another possibility is that children may realize this and use "lack of effort" as a means of manipulation. Nonetheless, this type of feedback is crucial for teachers to give all

students, in all educational environments, to prevent the possible onset of some learned helpless behaviors.

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APPENDIX A

The Female Version of the Story

Jane is an eleven year old girl who is very unhappy. She has two brothers and one sister who all make her parents very proud. They all do well in school, or at least they do pretty well. Except Jane. She can't seem to do anything right. She had a teacher this year who she thinks doesn't like her very much. She gets really bad grades in school. But this didn't just start all of a sudden. Last year Jane didn't do well in school either. Last year her grades were so bad that her parents were told that Jane should repeat the grade. But her parents didn't want Jane to repeat a grade. The whole family went to many psychologists and counsellors to figure out what to do with Jane. Finally, the parents decided to let Jane go into grade six. They thought that if Jane failed grade five that she would feel even worse about herself. So now Jane is in grade six but is still doing terribly. Over the summer she had to go to a special summer camp away from home so she would make friends and feel good about herself. That didn't work. Jane only got into lots of trouble in camp. She only wanted to get kicked out so that she could get sent home.

Jane feels like an outsider in her own family. She is overweight and doesn't really look like her brothers and sister. She feels like the "ugly duckling." She wishes she could look more like her brothers and sister. Maybe then, people would like her. Whenever she tries to fit in with the family, something always goes wrong. Whenever she tries

to please her parents, they never seem to be satisfied and they always tell Jane that she could do better. Nothing is ever good enough. Maybe her parents are right, Jane thinks. Maybe she is stupid. Maybe she can never be like her brothers and sister.

APPENDIX B

The Male Version of the Story

John is an eleven year old boy who is very unhappy. He has two brothers and one sister who all make his parents very proud. They all do well in school, or at least they all do pretty well. Except John. He can't seem to do anything right. He had a teacher this year who he thinks doesn't like him very much. He gets really bad grades in school. But this didn't just start all of a sudden. Last year John didn't do well in school either. Last year his grades were so bad that his parents were told that John should repeat the grade. But his parents didn't want John to repeat the grade. The whole family went to many psychologists and counsellors to figure out what to do with John. Finally, the parents decided to let John go into grade six. They thought that if John failed grade five, that he would feel even worse about himself. So now John is in grade six but is still doing terribly. Over the summer he had to go to a special summer camp away from home so that he could make friends and feel good about himself. That didn't work. John only got into lots of trouble in camp. He only wanted to get kicked out so that he could get sent home.

John feels like an outsider in his own family. He is overweight and doesn't really look like his brothers and sister. He feels like the "ugly duckling." He wishes he could look more like his brothers and sister. Maybe then, people would like him. Whenever he tries to fit in with the

family, something always goes wrong. Whenever he tries to please his parents, they never seem to be satisfied and always tell John he could do better. Maybe his parents are right, John thinks. Maybe he is stupid. Maybe he could never be like his brothers and sister.