AN ANALYSIS OF THE PEER RELATIONSHIPS
OF GIFTED AND GIFTED-CREATIVE
PRIMARY STUDENTS

DISSERTATION

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By

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The purpose of this study was to compare the peer relationships of highly gifted and highly gifted-highly creative primary students in a gifted classroom of a public school. The study was conducted using thirty-one highly gifted first, second, and third graders who had scores of 140 or better on the WISC-R, WPPSI, or Otis-Lennon.

At the beginning of the school year, the Creativity Assessment Packet was administered to the class. The top 20 percent scorers in the class (termed gifted-creative) and those who scored in the bottom 20 percent of the class (termed gifted) on the CAP were targeted for observation. In addition, a sociogram was administered to each student individually for the purpose of determining each child's social status. A bivariate correlation coefficient was employed to express the degree of any relationship between creativity scores and rankings on the class sociogram. Observational anecdotes were used in the discussion of the sociometric results.

The following findings resulted from the study. The gifted-creative students, as a group, ranked higher on a
class sociogram on measures of friendship and choice of academic work partners than did the gifted group. On sociometric measures of choice of creative work partners, there was no significant difference. During observations, the gifted students displayed approximately the same amount of positive verbal behaviors as the gifted-creative students. The gifted students did exhibit more isolated behavior, especially during academic tasks, than did their gifted-creative counterparts. The gifted-creative group displayed much more verbal and physical aggression than the gifted group.

This report concludes that in the gifted classroom under investigation, gifted-creative and gifted pupils differ in their peer relationships thus supporting findings documented in past research. However, information from the sociogram seemed to suggest that the gifted-creative students, as a group, achieved higher social status within this gifted classroom than the gifted students.
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CHAPTER I

INTRODUCTION

Background of the Problem

Researchers studying the social abilities of young gifted children have often concluded that the gifted child is generally happy and well-adjusted in relationships with others. The gifted tend to rate higher in studies of social adjustment and peer relations than the average child. Mensh (18) and Abraham (1), in studies of elementary age children, both found that, as a group, gifted children displayed less incidence of maladjustment and more positive behavior than an average group of same-age children. Hildreth (14) found that gifted children seemed more persistent, happier, busier, and more independent than their same-age peers. Terman (25), in his study of 1,000 gifted children, found less maladjusted behavior within his sample than in the general population.

These findings suggest that high levels of social adjustment in gifted children might lead their same-age peers to perceive them as more desirable friends than average or low-achieving classmates. As a group, gifted children seemed to rate higher than average or low-achieving peers on sociometric measures. Clark (7) and Gallagher (9)
have discovered that, in elementary school, bright children seemed to achieve high social status. Grace and Booth (12), in their study of 294 elementary school children, found that high achieving children consistently rated higher on socio-metric measures than low achievers. Miller (19), in a study of 120 fourth and sixth graders, found that the children chose superior students as friends to a significantly higher degree than average students.

Despite many studies attesting to the high social adjustment of gifted children, there is some evidence to suggest that a significant number of gifted children do not conform to these findings. These children may be withdrawn or isolated from the rest of the class. They might be hostile and aggressive even to gifted peers or adults. As a result, they do not seem to achieve favorable social status with their classmates. Torrance (26) and Goertzel (10) have concluded that these gifted children, who seem antisocial or isolated from others, may also have a creative component in their thought processes not found in most of their peers. These gifted children were less likely to be selected for gifted programs generally because of their undesirable behavior. Povey (21) has found that these gifted-creative students were often sullen, withdrawn, moody, aggressive, or just difficult for teachers to manage. Daniels (8) also noticed withdrawn behavior, refusal to
participate, or, at the other extreme, negative attention-getting behavior in certain creative-gifted children.

A study of the differences in the peer relationships and social status between cognitively gifted children and their gifted, but also creative, classmates might add to a fairly limited body of research in this area. It could possibly benefit teachers of young gifted children in promoting greater understanding of their students and their different social abilities. Such a study could provide insight into gifted and gifted-creative students' specific social needs. By promoting understanding of these needs, a base for facilitating and improving gifted children's social relations might be developed. Teachers or counselors of the gifted might have more information to include in the implementation of guidance programs. Adults who work with the gifted might become more aware of children's special social characteristics and thus might be able to assist these students to attain high levels of creative functioning as well as the ability to have satisfactory personal relationships.

Statement of the Problem

The problem of this study was a comparison of the peer relationships of highly gifted and highly gifted-highly creative primary students in a gifted classroom.
Purposes of the Study

The purposes of this study were (1) to compare and analyze the peer relationships of first-, second-, and third-grade gifted and gifted-creative students, and (2) to conduct observations of gifted and gifted-creative students within the natural context of classroom and playground.

Hypotheses

To carry out the purposes of the study, the following hypotheses were tested.

1. Gifted primary students will rate higher on a class sociogram on measures of friendship than gifted-creative students.

2. Gifted primary students will score higher on a class sociogram on measures of choice of academic work partners than gifted-creative students.

3. Gifted primary students will score lower on a class sociogram on measures of choice of creative work partners than gifted-creative students.

4. Gifted primary students will exhibit more positive verbal behaviors and less isolated or aggressive behaviors during observations than gifted-creative students.

Significance of the Study

There is a marked lack of research available in the area of young gifted and creative children. Researchers,
like Terman (25) and Mensh (18), have suggested that most gifted primary students seem to be socially-adept, well-adjusted children. However, as Torrance (26) and Goertzel (10) found, there seems to be a significant number of gifted students, who might be termed gifted-creative, who are possibly more likely to experience problems relating to others. In both gifted and average primary classrooms, Grace and Booth (12) have discovered that high achievers tend to be rated higher by their classmates on sociograms and peer nomination forms. Martinson (17) and Miller (19) conducted studies with similar findings. This widely-held belief that young children can identify the superior students among their number through use of sociograms has been crucial to a number of studies of young gifted children and their social abilities (3, 7, 11, 22). Sociometric measures have also been studied by Renzulli (23) and others (4, 13) as an integral part of many gifted identification batteries.

If primary students, in studies such as Miller's (19) and Grace and Booth's (12), tended to rate gifted students highly on sociograms but gifted-creative students generally appeared to be given low popularity ratings, it might be reasonable to suggest that, within a gifted classroom, the highly gifted students would be more popular with their classmates than the highly gifted-creative students.
Roedell (24) investigated the social interaction skills of a group of gifted preschool students. She discovered a wide range of social abilities among these children. During the school year, the guidance counselor regularly conducted activities aimed at improving the students' social interaction skills. The teacher followed up by providing positive reinforcement each time the children displayed improved social behavior. At the end of the school year the study was repeated. Roedell found that most of the children, including those with poor social behavior at the beginning of the school year, seemed to exhibit improved social interaction skills.

Daniels (8) and Goertzel (10) have also suggested that classroom activities and guidance counseling can improve the social abilities of all gifted children. Any significant specific findings resulting from this study might be helpful to teachers and counselors working with young gifted children. This study could also serve as a sociometric model for teachers to use as a way to form more effective classroom groups, locate and reduce possible social isolates, and decrease cliques (5).

Primary-age children are beginning to encounter greater numbers of peers and adults than during the preschool years. With the onset of influential peers in children's social relationships, children who are identified early as at risk for social problems might be
helped to interact more effectively. Desirable social behavior would enhance children's school and social experiences. This study explores the peer relationships between gifted and gifted-creative primary students and determines some social behaviors which differentiate the two groups.

Definitions of Terms

The following terms have restricted meaning and are thus defined for this study.

Primary students are first-, second-, and third-grade students.

Gifted students are students scoring 140 or above on the Otis-Lennon School Ability Test, the Wechsler Intelligence Scale for Children--R (WISC-R), or the Wechsler Preschool and Primary Scale of Intelligence (WPPSI).

Gifted-creative students are students who scored 140 or above on the Otis-Lennon School Ability Test, the WISC-R, or the WPPSI, and are in the top 20 percent of their class on the Creativity Assessment Packet.

Sociogram is the questionnaire given to students to determine the social status of each child as perceived by classmates.

Peer relationships are the students' ability to interact with same-age classmates.
Observations are the periods of time spent by the researcher watching and recording predetermined categories of behavior of targeted children.

Event-sampling is the use of narrative-checklists to record incidences of predetermined categories of behavior as they occur in their natural context.

Limitations of the Study

This study was limited in the following ways.

1. This study was limited to thirty-one students. If the school district had additional primary gifted classes it would be possible to have a greater number of gifted students and teachers participate.

2. The type of gifted student in the sample is also a limitation of the study. The students in the gifted program were all considered highly gifted with intelligence quotient scores of 140 or higher. Inclusion of other levels of gifted children, perhaps with scores of 120 to 140, might make an impact on the sociometric ratings as well as on the number of students who were termed gifted-creative. Having all levels of giftedness represented in the sample might result in slightly different sociometric and behavioral findings.

3. Limitations also extend to the observation component of this study. Only one observer observed and recorded data on the pupils. Borg and Gall (6) and Almy (2)
suggest that a minimum of two observers is necessary for observational research in order to permit interrater reliability estimates. Partially because of this suggestion, as well as because of the difficulty of getting another observer, observational data were used primarily as anecdotal examples in the discussion of data.

4. A final limitation of the study concerns the use of sociograms. While sociograms have demonstrated reliability in determining children of high social status (5), the results may become confused when applied to lower scoring children. Lazarus and Weinstock (16) suggest that sociograms alone do not distinguish between low status children who are actually socially rejected by their peers and those who are merely shy and withdrawn. These quiet children may simply be overlooked by their classmates since they may do little to initiate friendships or call attention to themselves. Using examples from observations may aid the researcher in discovering which low-scoring children are actual social rejects as opposed to those who are simply quiet.

Basic Assumptions

This study was based upon the following assumptions.

1. It was assumed that the subjects responded truthfully to the sociometric questions.

2. It was also assumed that the presence of an unobtrusive observer did not inhibit the natural social behavior of the children.
3. Furthermore, this study assumed that there are observable differences in the social behavior of gifted and gifted-creative students.

Summary

This study was designed to compare the differences in the peer relationships between highly gifted and highly gifted-creative primary students in a gifted classroom. The study also focused on specific behaviors of targeted children during observations on the playground and in the classroom.

A review of literature pertaining to general social development, characteristics of the gifted, social abilities of the gifted, and difficulties in social relations is found in Chapter II. The methodology and procedures employed in the study are described in Chapter III. An analysis of the results is provided in Chapter IV. Chapter V provides a summary of the findings, implications, and recommendations for further research.
CHAPTER BIBLIOGRAPHY


CHAPTER II

REVIEW OF RELATED LITERATURE

The amount of literature concerning gifted children has increased during the past twenty-five years. Led by Terman's (57) longitudinal study of 1,000 geniuses, the research has suggested that many of the myths and stereotypes regarding gifted students are not valid. Research on large populations of gifted children suggests that their personality traits encompass the whole spectrum found in the general population (30, 56). This information indicates that gifted children do not fall into an easily described pattern of behaviors.

Social Development in the Primary Years

Primary-age children's social environment expands rapidly to include other significant adults and greater contact with peers as soon as they enter school. This extended social sphere begins to have an impact on the children's socialization—the process by which children acquire behaviors, beliefs, and standards that are appropriate in the cultural group and family (9). This new, expanded environment includes greater chances for social interaction outside the familiar family group which
forces children to face new problems and challenges in dealing with others. The central focus of children's formerly primary social environment, the home, now is shared with the school and possibly other groups such as scouts, little league sports, and church-related functions. A whole new world of adults and peers can now influence children's actions in social situations.

Preschool-age children may still be physically dependent on parents as exhibited by clinging behavior in an unfamiliar situation or, when away from parents, clutching a stuffed animal, blanket or other comfort device which is reminiscent of home (40). By the time children are ready for kindergarten, they are usually more physically independent of parents but may still seek verbal reassurance or approval in similar situations. As children reach the primary grades, they are beginning to be more autonomous and independent (9, 40), but some of their social dependence may be transferred from the home to peers. Conformity of behavior to the social group's norms increases during the primary years (5, 11). The more popular students in school at this stage are often rated as more conforming and cooperative (6, 7).

During the primary years, informal groups formed by children dominate the school and neighborhood environment. Few formal rules and a fluctuating membership tend to
characterize these groups (21). These social groups give children the opportunity to interact with peers in a variety of contexts. They must learn to deal with hostility and aggression. Children learn to relate to a same-age leader as well as learning to lead and influence others (9). Gradually, through multiple contacts with other people, children become more aware of others as individual beings and, therefore, become less egocentric.

**General Characteristics of Gifted Children**

Marland (33), in his report to the Congress of the United States on the education of the gifted and talented, divided the definition of giftedness into five basic categories: (1) superior intellectual ability, (2) a specific talent within an area of curriculum such as mathematics or science, (3) creative thinking ability, (4) leadership ability, and (5) special talent in the visual or performing arts. The report went on to assert that gifted children would have one or more of these characteristics.

Renzulli (43) defines giftedness as a triad consisting of above average ability, creativity, and task commitment. Other studies have repeated the assertion that gifted children tend to possess a high degree of task commitment (42, 51, 52). Gifted children have also shown a marked
tendency to be physically superior to their same-age peers, to walk an average of one month earlier than the norm as well as to talk an average of 3.5 months earlier (57).

Sisk (51) brought the identification of the gifted and talented into the early childhood years with her list of the characteristics of very young gifted children. She found that these children often began to talk at an earlier than average age and exhibited a more advanced vocabulary throughout early childhood. For example, a bright eighteen month old might be speaking in four or five word sentences and singing simple songs while his peers have vocabularies of only a handful of words.

Gifted preschoolers may also possess a keen observation of the world around them and a curiosity to match (51). Most children do go through stages of curiosity but a gifted child may want to know every minute detail of everything, whether it is an everyday ritual or a new and different toy.

Gifted children are often capable of retaining a large amount of a variety of information (51). They may display an astonishing memory, particularly in subjects of great personal interest. Gifted five year olds may have the names and vital statistics of dinosaurs committed to memory.

Young gifted children may have periods of intense concentration (51). These periods may be manifested in
collections of special objects such as rocks, shells or model planes. This concentration is also seen in periods of study and isolation by which gifted children may need to assimilate all of the information to which they are exposed.

Gifted preschoolers seem to have the ability to understand complex concepts and relationships as well as to think abstractly at a younger-than-normal age (51). Consequently, many gifted youngsters display an early fascination with time and money or abstract concepts like love or truth.

Gifted children may have a broad and changing spectrum of interests (51). They may become completely absorbed in a hobby for a relatively long period of time and then switch their attention to something totally different for an equally long period.

Sisk (51) asserts that gifted children have strong critical thinking skills. They may notice and comment on contradictions in daily life. They are also unusually critical of themselves and others. Finally, many gifted young children display an early and unusually adept talent in music, art, athletics, or the performing arts.

Possibly because of these attributes, many gifted youngsters are adept at communicating with others. Due to their ability to communicate verbally they may be perceived as easy to get along with. Consequently, they are usually well-liked by their classmates and teachers. Theoretically,
these perceptions may lead to the tendency of many gifted children to have a very healthy self-concept (42, 52).

Gifted children tend to solve problems very effectively (51) and therefore seem to exhibit less frustration and anxiety than average children in problem-solving situations (37). Coupled with these low levels of general anxiety is the tendency to have a very healthy self-concept. Therefore, gifted children are perceived to have an internal locus of control and a well-defined ability for self-discipline (37).

**Characteristics of Gifted-Creative Children**

A number of researchers have included creativity as an integral part of giftedness (16, 44, 59). Getzels and Jackson (16) have also identified creativity as an important component of giftedness but have carried their studies further and singled out those gifted children who are also highly creative for intense research. They found that, although gifted and gifted-creative children share many of the same characteristics, there were a number of significant differences between the two groups.

Other studies have also focused on the particular characteristics of gifted-creative children. Some researchers have defined creativity as a function of knowledge and imagination. Guilford (19) and others (10, 41, 59) have
noted that gifted-creative children tend to have a zany sense of humor and be very independent but self-disciplined. They seem to be able to tolerate ambiguity well in order to effectively solve problems. They are willing to take risks with their problem-solving abilities. Gifted-creative students have divergent thinking abilities requiring special aptitudes such as: (1) fluency, the ability to think of many solutions to a problem; (2) flexibility, the ability to come up with a variety of ideas; (3) originality, the ability to produce novel and unique ideas; and (4) elaboration, the ability to expand and extend an existing idea (19).

Additional researchers define creativity as an intuitive sense (13, 34, 35, 39). They contend that gifted children have the capability to tap their unconscious thought processes. They tend to be very sensitive to themselves and others and usually have a rich fantasy life. These children are very enthusiastic when confronted with novel experiences and will quickly get involved.

Still other studies look on creativity as a perceptive, unconscious feeling, scanning the powerful actions of the whole mind. They contend that gifted-creative children have deep concentration abilities. They accept the unknown. These children often dare to be different and can withstand the opinions of others (28, 56).

May (35) felt that the key ingredient of creativity is inventiveness. Creatively gifted children appear to be very
receptive to new experiences and possess high aesthetic values. May also felt that gifted-creative children have an internal locus of control and so can defer closure or judgments in order to reach a more satisfactory conclusion.

Rogers (48) contends that gifted-creative students are very open to life's experiences, even those which are novel. He, too, noticed an internal locus of control in these children and paired it with an internal locus of evaluation; that is they consider the value of a product to their satisfaction or meaning and are relatively uninfluenced by other people. Rogers also described gifted-creative children's ability to toy with elements and concepts and to approach them in new and different ways. These children seemed to be open to new ideas and lack rigidity in their problem-solving strategies.

Jex and Merrill (45) looked at one particular group of creatively gifted people—scientists. They found that scientists have a healthy, but not massive, self-concept. They also discovered a common vein of perseverance and task commitment among their subjects. The scientists seemed to be preoccupied with things and ideas more than with people. They were not gregarious in temperament and either ignored or showed a distaste for interpersonal conflict.

A number of studies have investigated specific differences between gifted and gifted-creative children.
MacKinnon (32) discovered that his gifted-creative subjects seemed to hold to some inner standard of excellence when completing a project. Conversely, gifted subjects were more concerned with meeting outside standards and showed a greater sense of responsibility to the whole group.

Wallach and Kogan (62, 63) noticed that highly gifted-highly creative children had the longest attention spans in their sample, but were also the most likely to disrupt the class. Highly gifted, but not very creative, children were also the most likely to disrupt the class. They, too, had a long attention span and were more determined to finish assignments to teacher specifications than their more creative counterparts. They were also less willing to take chances and more willing to inhibit themselves to do well in school. The gifted children tended to show major concern for academic success and rated academic achievement high in their estimation of their own and other's social status. They were more preoccupied with how others viewed them than were the gifted-creative children. The creative subjects were very aware of both adults and peers and had the capacity to work well with both but were very aware of their own identities.

Weisberger and Springer (64) also studied a group of gifted children. They found many of the same differences between gifted and gifted-creative children as their colleagues. They also noticed a greater sensitivity and self-awareness among the highly creative children. This
research also reinforced other findings that highly gifted-highly creative children maintain their own sense of evaluation and so are more independent from social influences (32, 48, 55, 63).

Singer and Rummo (50) noted many of the same characteristic differences between gifted and gifted-creative subjects in their study of gifted kindergarten children. They specifically studied the relationship between intelligence quotient, creativity, and behavioral style. Like so many others, they also found a greater degree of autonomy in the gifted-creative students than the gifted students. The gifted-creative children displayed more curiosity and willingness to explore novel ideas and situations. They were also very persistent in their work and showed a highly developed sense of humor.

Social Behavior of the Gifted

In Levine's study of teachers' impressions of the social abilities of gifted children, using the California Preschool Social Competency Scale (30), he discovered that their social abilities covered a wide range. The diversity of most personality traits to be found among gifted children often lead researchers to study closely those areas which seem to show a clear-cut pattern.

Beginning with Terman's (57) initial findings, in 1925, evidence of superior social ability among gifted children
began to surface. Gifted children appeared happier, busier, more persistent, and more independent than their same-age peers (22). Liddle (31) studied 45,000 elementary school children and concluded that high intelligence quotient scores were positively correlated with exceptional social talent but were negatively correlated to social maladjustment. Other research led to similar conclusions. Abraham (1) and Mensh (36) found that gifted children, as a group, tended to be happy and well-adjusted when dealing with others and exhibited a lower degree of social maladjustment than the general population. Altman (3) also supported the view of equal or superior social adjustment of the gifted. Johnson and Yarborough (25) agreed that gifted children related more effectively to other people and displayed more positive attitudes toward adults, school, and family than other same-age children. Gifted children seem to achieve a higher-than-average level of personal and social functioning (24). Gifted youngsters seem to display an earlier empathy with others as well as an earlier and deeper sensitivity to injustice and inequalities than their same-age peers (17). They were also more likely to show evidence of a positive self-concept and a low level of anxiety when placed in a social situation (37, 49). They tended to assume leadership roles more readily and seemed comfortable with independence (10, 51).
When specific social traits of young gifted children were analyzed, additional interesting differences were documented between the gifted and their chronological peers. The gifted groups scored higher on social adjustment sub-tests of personality measures than their same-age classmates. In the Lehman and Erdwins study (29), groups of gifted third graders, average third graders, and average sixth graders were compared on two personality scales: the California Test of Personality (58) and Children's Social Attitudes and Values (58). As a group, the gifted students scored higher than their chronological agemates on all measures and even higher on some measures than the sixth-grade group. The gifted group exhibited the ability to interact tactfully with others, were less aggressive, and seemed to feel more secure with other people. In most areas of maladjustment, the gifted third graders scored lower than the other two groups. The only exception seemed to be in the area of physical complaints. The gifted children had the same number of colds, stomach aches, and bitten fingernails as their same-age peers.

Preschool and primary-age gifted children also seemed to be superior in the social abilities related to their advanced cognitive development. Gifted preschoolers, in particular, had more ideas about ways to solve theoretical social conflicts and how to act cooperatively than average
preschool children (2, 47). Despite their advanced ability to reason out solutions to social problems, the gifted preschoolers did not always transfer these solutions to actual behavior. This suggests that, although children may be cognitively gifted, emotionally they may be very similar to the average same-age child (46). Other studies have shown similar results, relating advanced stages of cognitive development and verbal abilities to increased ability to solve hypothetical social situations. James and Lessany-Abdi (23) studied gifted and non-gifted preschool children using a social behavior inventory. They discovered lower incidences of negative verbal behavior in the gifted group than in the non-gifted group.

Creatively gifted students also displayed their social abilities in two additional studies. Art pupils, in Sloane and Sosniak's study (53), provided enormous amounts of emotional and technical support for each other. They challenged and pushed their classmates on to their creative goals. Gustin's study (20) of advanced mathematics students also revealed that they challenged each other intellectually. Unlike the art students, the mathematicians were not otherwise very social and stated feelings of isolation and being different from their peers.

In general, gifted children, especially in elementary school, were well-liked and admired by their classmates.
Bright youngsters tended to rate high on sociograms which included questions on desirable friends (38, 61). The more intelligent students seemed more accepted by their agemates and enjoyed a high social status through their early school years (9, 14). In Grace and Booth's study (18), of a survey of 294 elementary school children, the high achievers tended to rate higher than average in popularity while the low achieving students rated below average.

Problems in Social Relations of Young Gifted Children

As research involving comparisons within the gifted population developed, certain groups of young gifted children did not appear to fit these new ideas concerning the social adaptability of the gifted. These children were sullen, withdrawn, moody, aggressive, or often considered hyperactive and difficult to manage. They had fewer friends than their peers and seemed isolated (43). After working with these apparently atypical gifted children, Daniels (12) hypothesized that many gifted children receive little or no appropriate positive reinforcement because parents and teachers routinely expect superior performance and fail to provide adequate rewards. This failure resulted in withdrawal from groups or refusals to participate, attention-getting behavior, and compulsion to be perfect in all areas. Torrance (60) and Goertzel (17) concluded that
many gifted troublemakers also exhibited a highly creative streak not found in other cognitively gifted students. Torrance (60) discovered that gifted-creative pupils were less likely to be selected for gifted programs than those who were only cognitively gifted, usually because they frequently displayed behaviors considered unacceptable in a gifted classroom. Bosse (8) determined that gifted-creative students tended to display a highly developed, but not always appropriate, use of humor in class. They broke school rules more frequently than most of their classmates. Bosse noted that the highly creative youngsters usually worked independently more often than the norm and sometimes at a different pace from the rest of the class. They also began work without waiting for directions more frequently than the other children and were less likely to volunteer to answer questions. Stone (54) also found that highly creative students were more likely than others to be identified as behavior problems by their teachers and fellow students (62).

Gifted-creative students, however, may view themselves differently than those around them. Rogers (48) noted that, perhaps due to some internal locus of evaluation, creatively gifted students viewed the value of a product, whether it was a school assignment or a self-initiated project, only to themselves and their own satisfaction. Gallagher (14) discovered that highly creative youngsters often saw little
relationship between their own values and those of their teachers or society. The children realized their differences but did not care or did not seem to feel that they needed to change or conform to standards other than their own. Gallagher's subjects seemed to be inner-directed and did not appear to have as many or as close intimate relationships, either with parents or peers, as their classmates. Williams (65) also noticed that gifted-creative students were independent, nonconforming, and often seemed impulsive. Although these youngsters realized and accepted their differences, they did not seem to value these traits. Instead, they rated obedience, diligence, and cooperation more desirable than all other traits except imagination.

In self-reports, gifted-creative children were more likely to report feelings of low self-esteem and unhappiness at school than other gifted peers. These gifted-creative children were also less accepted by peers of all intellectual levels (50). They admitted to fewer social interactions and reported that they felt conscious of being different from their classmates (20). The gifted-creative youngsters, despite feelings of isolation and nonconformity, did not seem to feel compelled to be influenced by those around them (64).

Khatena (26) found that gifted-creative students are often dominated by creative forces that cause them to do
things that are in direct conflict with what others have planned. These constant conflicts and confrontations constantly call for cognitive and emotional readjustment. If they can not cope personality and social problems may emerge. Repression of creative needs and pressure to conform can lead to serious problems with self-concept and misbehavior. Khatena also feels that when creative students start repressing their urge to learn creatively they may also lose interest in or become resistant to learning altogether. Interactions with other children can be a problem for very gifted-creative youngsters although the situation can often be remedied when companions are on the same creative or cognitive level (33).

Summary

Social development of the young child during the primary years expands to include a growing number of significant adults and other children. Increasing interactions and relationships mold the child's social being. Gifted primary children have been shown, by a number of studies, to be particularly adept at developing and maintaining effective interpersonal relationships. They are admired by their peers and desired as friends. However, it does appear that a distinct group of gifted youngsters may not always conform to the concept of social adaptability. These children seemed to be characterized by creativity
in their thought processes. The literature suggests that gifted-creative children may encounter more problems in social relationships than children who are solely cognitively gifted.
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CHAPTER III

METHODS AND PROCEDURES FOR
COLLECTION OF DATA

The purposes of this study were to compare and analyze the peer relationships of first-, second-, and third-grade gifted and gifted-creative students through sociometric measures as well as through observations within the natural context of classroom and playground.

The Population

The primary gifted program consists of thirty-five primary students from all over the school district. The program is housed at a central elementary school. Thirty-two out of thirty-five pupils were given parental permission to participate in the study. One child was dropped from the project because of her age. The Creativity Assessment Packet (CAP) is normed from age six to adult and the child had just turned five. Therefore, thirty-one students participated in this study.

The children in this sample were first-, second-, and third-grade students, ranging in age from six years and one month to nine years and one month. The group included twenty girls and eleven boys. One child was Oriental, one
A child was Hispanic and the remainder were Anglo. Nine of the children were in first grade, ten were in second grade, and twelve were third graders.

Description of the Gifted Program

The gifted program was beginning its second year of operation at the onset of this study. Thirty-five primary students were taught by two teachers trained in gifted education in a large double classroom. Unlike the school district's regular gifted program, this gifted program is not a pull-out program consisting of a few hours a week but rather a self-contained, permanent, multi-age, multi-level classroom. The gifted students stay together throughout the school day and would, conceivably, remain in the same class until fourth grade, at which time they would move into the intermediate gifted program.

The gifted program follows a plan for the students' advanced academic progress. The pupils are pretested for the state-mandated essential elements for their grade level at the beginning of the school year. Those skills which are shown to be mastered are not retaught. Each child is at least one grade level ahead in each subject area. Placement of students in language arts and mathematics groups is flexible and based on the child's individual abilities.

The language arts program consists of reading, spelling, handwriting, English, Latin, and composition. Basal reading
programs are not used for instruction in reading. Instead, the Junior Great Books (7) series is used to teach reading and comprehension. The series consists of classic children's novels at gradually increasing levels of difficulty. At the beginning of the school year the students read on third- through eighth-grade levels with one reading group at each level.

Two different spelling programs are used in the gifted classroom. The first graders use the second-grade spelling basal (14) which is phonetically based. As soon as they feel comfortable with their spelling skills they join the second- and third-grade students in an advanced spelling program. This program, called Casting a Spell, includes a variety of words and activities centered on specific themes. Third- through eighth-grade levels are used in this classroom. The students proceed at their own pace so that placement of students in the program remains flexible. Activities include creative writing, dictionary and research skills, classification skills, word structure, grammar and usage, and word games.

During handwriting, the first-grade students concentrate on improving their manuscript writing skills. The second and third graders, meanwhile, are learning cursive writing.

English grammar and usage is taught through the English basal series used in the school district (10). It is taught
in conjunction with composition. Both second- and third-grade English books are used in the gifted classroom. Latin is also taught twice a week. Latin lessons focus on conversational skills and historical background.

Composition is taught daily. One story topic is assigned at the beginning of the week. The children write, proof-read, edit, and rewrite each story. At the end of the school year, each child's stories are professionally bound and become a special memento of that school year.

The gifted program uses the Mathematics Today (1) basal series that is used throughout the school district. The essential elements for each grade level are covered on an accelerated basis. At the beginning of the school year, students range in ability from second through fourth grade. Independent enrichment activities such as logic skills and think laboratories are included in the mathematics program.

The science and social studies curriculum for the gifted program is based on concepts taken from the second- and third-grade essential elements. Both are taught on an extended basis using a variety of experiments, observations, and hands-on activities. Social studies is taught in three, year-long cycles to the whole class together. By the end of third grade, gifted students should have mastered the entire gifted social studies curriculum. The Graphics Learning Kit (6) is used for map skills and other hands-on
activities while Communities and Resources (16) is used for studying the community, the city, the country, and the world.

The students in the gifted program receive instruction in all academic subject areas in the gifted classroom. They go to the appropriate classrooms for music, physical education, and computers. In addition, regular sessions with the school's guidance counselor are scheduled.

Selection of the Sample

Thirty-one students in the gifted program comprised the sample for this research. To be admitted into the gifted program a student must score 140 or above on the Otis-Lennon, the WISC-R, or the WPPSI, score at least the 90th percentile on several achievement tests, and have referrals from parents, counselors, teachers, or peers. They should also have mastered all essential elements on their current grade level and have exhibited exceptional academic and intellectual achievement.

In addition, specific children in the gifted program were targeted for observation. The top 20 percent scorers on the CAP, six students, and the 20 percent of the students who scored lowest on the CAP, six students, were observed a minimum of five times each during the first two months of school. The observer used a narrative-checklist to focus on predetermined behaviors (Appendix B).
Permission was obtained from the assistant superintendent of the school district to use the students in the primary gifted program as subjects for this research. The study was also discussed with the principal of the elementary school, the program director of the school district, and the two classroom teachers. Prior to the beginning of the school year, at the first gifted parents meeting, a short presentation describing the study was delivered (Appendix C). Individual test results were made available to the parents at their request at the conclusion of the data collection (Appendix D). A brief summary of the results was also sent to the parents (Appendix E). All group observations were conducted at frequent, regular intervals throughout the first two months of school. All observations occurred during regular classroom and playground activities.

Instruments

Two standardized tests were administered to the students in the gifted program as well as a class sociogram:

1. (a) the Otis-Lennon School Ability Test (18) or
   (b) the Wechsler Intelligence Scale for Children--Revised (24) or (c) the Wechsler Preschool and Primary Scale of Intelligence (25),
2. the Creativity Assessment Packet (26),
3. Sociogram, and
4. Observations—event-sampling and narrative.
The Otis-Lennon School Ability Test (hereafter referred to as the Otis-Lennon) was already in use by the school district to determine entry for some students into the gifted program. For the purposes of this study, it was used to determine cognitive giftedness. The Otis-Lennon includes subtests of pictorial and geometric classification and analogies, quantitative problems, verbal comprehension, and following directions. The School Ability Index is used to interpret raw scores on the basis of three-month intervals. Corresponding percentiles and stanines are also included. The School Ability Index is easily related to intelligence quotient scores since its mean score is 100 with a standard deviation of 16.

The Otis-Lennon was standardized on approximately 130,000 students from 70 school systems representing a cross-section of the national school population. The sample was based on ethnic and socioeconomic positions, geographical regions, and school enrollment size.

A test's reliability refers to the extent the measure is consistent. Two forms of reliability, internal consistency and test-retest stability, are reported for the Otis-Lennon. The Kuder-Richardson coefficients for age range between .90 and .95, while the coefficients for grade range between .88 and .94. These reliability coefficients strongly indicate that this is an internally consistent and
homogeneous measure. Test-retest stability correlations range from .94 to .92 over a six-month period.

Evidence for the validity of the Otis-Lennon is given through comparisons with the Metropolitan Achievement Test, the Wechsler Intelligence Scale for Children--Revised (WISC-R), and the Stanford-Binet (17). For grades one through three (the scope of this study) the correlations range from .58 with the Stanford-Binet to .86 with the WISC-R. The Metropolitan Achievement Test correlations range from .61 to .68 (17).

The Wechsler Intelligence Scale for Children--Revised was also used to screen some primary students for the gifted program. The WISC-R consists of twelve subtests: verbal (information, comprehension, arithmetic, similarities, vocabulary, digit span) and performance (picture completion, picture arrangement, block design, object assembly, coding, mazes). The WISC-R yields three types of scores: full-scale intelligence quotients, verbal and performance intelligence quotients, and the subtest scaled scores. The standard error of measurement for the primary age group is 4.75 for the full-scale intelligence score. The mean score is 100 with a standard deviation of 15.

The WISC-R was standardized on a representative sample of the 1970 United States population based on geographic regions, ethnicity, and socioeconomic status. Its validity
is given through comparisons with the Peabody Picture Vocabulary (PPVT) and the Otis-Lennon. The correlation with the PPVT is .67 and .86 with the Otis-Lennon (17, 22, 23).

The Wechsler Preschool and Primary Scale of Intelligence (WPPSI) was also used to determine entry into the gifted program. The WPPSI provides many of the same measures as the WISC-R but is intended for use with younger children ages 4 to 6.5 years. It consists of eleven subtests: verbal (information, comprehension, arithmetic, similarities, sentences, vocabulary) and performance (block design, picture completion, animal house, mazes, geometric design).

Average reliabilities for the WPPSI range from .77 to .87 for the individual subtests and .93 to .96 for three intelligence quotient scales. Validity studies comparing the WPPSI to the Stanford-Binet yielded a median correlation of .81. The WPPSI also correlates highly to the WISC-R and both are equivalent predictors of achievement (17, 22, 23).

The Creativity Assessment Packet, or CAP (26), consists of two tests and a rating instrument to be used by parents or teachers. The test of divergent thinking produces six scores: fluency, flexibility, originality, elaboration, title and total. The second test in the CAP, the test of divergent feeling, includes five scores:
curiosity, imagination, complexity, risk-taking, and total. The final instrument in the CAP is the Williams Scale, a rating form on which parents or teachers can rate their impressions of the children on the previously mentioned dimensions. The test manual includes a Pupil Assessment Matrix which converts weighted raw scores into percentiles based on norms. Test-retest reliability over a ten-month period is around .65 while validities of the two children's performance subtests are .71 and .76 (17).

Each student in the study was also asked to answer questions for a short sociogram to determine the social status of each student. Topics included desirable work partners on specified types of projects and desirable playmates (Appendix A). The sociogram has been shown to be a valid and reliable index of the actual peer relations of preschool and primary students as it provides a picture of children's social relationships from the child's perspective (2, 3, 19). It also has proven useful in evaluating the social behavior of unpopular children (5). Sociograms have been shown to produce stable results over the length of the school year (11).

In addition to the Otis-Lennon, the CAP, and the sociogram, general classroom and playground observations occurred on a regular basis throughout the first two months of school. Specific behaviors were targeted for observation
including: physical and verbal aggression, isolation, verbal reinforcement and verbal offers of help (Appendix B). Differences in frequency of occurrence of these behaviors between gifted and gifted-creative students were noted and are discussed in Chapters IV and V.

Using a combination narrative-checklist, the researcher was able to record and study certain behaviors as they occurred in a natural setting. The checklist recorded both child-initiated and child-recipient behaviors (Appendix B). Studies have shown that children produce more positive initiations toward most preferred peers than toward least preferred peers. These same studies showed no difference in the amount of negative initiations toward the two groups (2, 12).

Research Design

This study was designed to examine relationships between giftedness, creativity, and social status. At the beginning of the school year, in September, the first-, second-, and third-grade students in the gifted program were given the Creativity Assessment Packet. Any child who scored in the top 20 percent of the class was identified as gifted-creative for the purposes of this study.

During the second month of school, a sociogram was administered to each child in the study. The questions were constructed simply, using concrete examples. The
researcher displayed snapshots of each child in the class so that the subjects would not have to rely solely on memory for the names of peers. The sociogram was administered on a day when no one in the gifted class was absent in order to maximize each child's chance to be chosen. The researcher emphasized that any child could be chosen for any answer. There was no limit on the number of times a child could be chosen. The children were told that these answers would be kept strictly confidential. The students were also informed that the answers would be used to help the classroom teachers form groups for different projects throughout the year. The children were reminded that since all of the children in the class have choices that must be considered, they might not get all of their choices as work partners. The sociogram procedures were kept casual in tone and were administered in a separate, private area outside of the classroom (4, 13).

The questions on the sociogram covered desirable academic and creative work partners (Appendix A). The sociogram also included questions about desirable playmates since sociometric measures can be reliably used to reveal friendships, especially close friendships (21). Correlations were computed between total scores on the CAP and popularity ratings on the class sociogram.

Sociometric peer nomination elicits a practical indication of the degree to which a child is accepted by peers.
However, positive peer choice alone does not distinguish between children who are isolated from their peers and those who are actually disliked or rejected (4, 15). Since evidence of negative results with response to negative sociometric questions (e.g., Who would you least like to play with?) is inconclusive, this study did not include negative questions in the sociogram (2, 4). As a result, observational data were used as an anecdotal source for discussion of the results from the CAP and the popularity ratings (4, 13).

Regular and frequent observations which focused on specific behaviors were implemented in the classroom and on the playground. The six children with the highest scores on the CAP (termed gifted-creative) and the six children with the lowest scores on the CAP (termed gifted) were targeted for observation. The children were chosen for observation because they represented the extreme ends of the creativity spectrum in the class.

Event sampling techniques were used to observe predetermined categories of behavior. The researcher chose to observe positive behaviors, such as verbal offers of help and verbal reinforcement, and negative behaviors, such as physical and verbal aggression. Evidence of isolated behavior in some gifted-creative children occurs in the literature (5). Therefore, the checklist included a category
for isolated behavior. The checklist also recorded child-initiated and child-recipient behavior since the literature has shown differences in initiative behavior toward more popular children (2, 12).

Each child was observed at least five times during the first two months of school. Observations were made of the targeted children in small groups without a teacher nearby. The observations were made during roughly equal number of academic (language arts and mathematics) and creative (art and writing) tasks and play periods. The observer sat at the side of the classroom or playground. She avoided interaction and eye contact with the students as much as possible. In the case of child-initiated interactions, the researcher responded as briefly as possible to avoid incurring continuing interaction (9). Such procedures, coupled with many observation periods within a short time span have been shown to reveal a greater possible range of behaviors (9, 20). The gifted class is accustomed to frequent visitors and has shown a tendency to ignore observers.

Procedures for the Analysis of Data

Testing of Hypotheses

A bivariate correlation coefficient was employed to express the degree of any relationship between creativity, giftedness, and popularity on a class sociogram for each of
the three hypotheses. The mean scores of the gifted group on all levels of the sociogram were compared to the mean scores of the gifted-creative group. A plus or minus value was calculated and used to determine whether the proportions of each group differed significantly.

**Reporting of Data**

After all computations were made, the data were entered into tables for ease of reporting and interpretation. A sample table for all three hypotheses is presented (see Table I).

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gifted</td>
</tr>
<tr>
<td>Academic Work Partner</td>
<td>.xx</td>
</tr>
<tr>
<td>Creative Task Partner</td>
<td>.xx</td>
</tr>
<tr>
<td>Playmate</td>
<td>.xx</td>
</tr>
</tbody>
</table>

**Summary**

This chapter describes the instruments and procedures used for the collection of the data during this research.
A description of the population and explanation of the gifted program was presented. The research design was described in detail and procedures used in analyzing the data were briefly explained. The following chapter further analyzes the data collected and discusses the results of the study.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

ANALYSIS OF DATA AND FINDINGS

Introduction

The purposes of this study were to (1) explore the peer relationships between gifted and gifted-creative primary students through sociograms and observations, and (2) determine which, if any, social behaviors differentiated the gifted from gifted-creative children.

At the beginning of the school year the students in the primary gifted program were given the Creativity Assessment Packet or CAP (12). The students who scored in the top 20 percent on the CAP were designated as gifted-creative while the bottom 20 percent were termed gifted. Both groups contained six children.

In October a sociogram was administered on an individual basis to all of the children in the class. Class rankings were formulated and compared to the CAP scores to determine what, if any, correlations existed between creativity and social status. Observations of the six gifted and six gifted-creative pupils were conducted focusing on predetermined categories of positive, negative and isolated behavior. Each targeted child was observed five times during the first two months of school. The
observational data were used to obtain additional information to facilitate the interpretation of the sociometric scores. The observations were also used to examine the possible differences between the social behaviors of gifted and gifted-creative students.

Discussion of the administration and results of the CAP and sociogram are included in this chapter. Correlations between creativity scores and sociometric ratings are also included in the findings. Finally, discussion of the observational data and its relation to CAP scores and sociometric ratings are contained in this chapter.

**Creativity Assessment Packet**

At the beginning of the school year, thirty-two children in the gifted program were given the Creativity Assessment Packet (CAP). One child was dropped because she had just turned five and the CAP is normed from six years to adult. The six students who scored in the top 20 percent were designated gifted-creative. The six students who scored in the bottom 20 percent were termed gifted.

The Creativity Assessment Packet consisted of two subtests, completed by the students, and the Williams Scale, completed by the parents. The first subtest, the Test of Divergent Thinking, included twelve boxes with indeterminate squiggles. The students were given twenty-five minutes to draw a picture or design using the squiggle
in each box. After completing each box the children were to think of a clever title for the picture and write it below the box. The pictures were scored on (1) fluency, the number of pictures completed, (2) flexibility, the number of times the kind or category of picture shifted from box to box, (3) originality, where the picture was drawn in each box, (4) elaboration, the number of pictures which were asymmetrical, and (5) title, the length and complexity of vocabulary used.

In the test of Divergent Thinking, the gifted group had an average raw score of 66 out of a total possible score of 131. The gifted score was in the thirty-seventh percentile. The gifted-creative group had a mean raw score of 93, in the ninety-fourth percentile. The entire class had an average raw score of 81 which fell in the sixty-seventh percentile (see Table II).

The test of Divergent Feeling was an untimed test which measured how students felt about themselves in situations involving curiosity, imagination, risk-taking and complexity. The test consisted of fifty personal statements which the students were to decide were either like, unlike, or could not decide about themselves. The total possible score was 100.

In the Test of Divergent Feeling, the gifted group scored an average 45.6, or in the seventeenth percentile.
### TABLE II
MEAN RAW AND PERCENTILE SCORES ON THE CREATIVITY ASSESSMENT PACKET

<table>
<thead>
<tr>
<th>Group</th>
<th>Test of Divergent Thinking*</th>
<th>Test of Divergent Feeling**</th>
<th>Williams Scale**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gifted (n = 6)</td>
<td>66 (37%)</td>
<td>45.6 (17%)</td>
<td>64 (84%)</td>
</tr>
<tr>
<td>Gifted-Creative (n = 6)</td>
<td>93 (94%)</td>
<td>74.8 (84%)</td>
<td>77 (94%)</td>
</tr>
<tr>
<td>Whole Class (n = 31)</td>
<td>81 (67%)</td>
<td>64 (50%)</td>
<td>67 (84%)</td>
</tr>
</tbody>
</table>

*Total possible score of 131.

**Total possible score of 100.

The gifted-creative group had an average raw score of 74.8, or in the eighty-fourth percentile. The class as a whole had a mean raw score of 64, or in the fiftieth percentile.

The Williams Scale was distributed to the parents of the students in the study along with a cover letter of explanation (Appendix F). The test consisted of a fifty-item scale covering traits of fluency, flexibility, elaboration, originality, curiosity, imagination, risk-taking, and complexity measured in the two preceding subtests. The parents were to decide if their children were often, sometimes, or seldom like each statement. The Williams Scale had a total possible score of 100.
On the Williams Scale, the gifted group had an average raw score of 64, or in the eighty-fourth percentile. The gifted-creative group had an average raw score of 77, or in the ninety-fourth percentile. The class as a whole had an average raw score of 67, or in the eighty-fourth percentile.

**Sociogram**

During the second month of school a sociogram was administered to each child in the gifted class on an individual basis. The questions were constructed using concrete examples. The researcher displayed snapshots of each child in the class so that the subjects would not have to rely solely on memory for the names of peers. The sociogram was administered on a day when no one in the class was absent. The researcher emphasized that any child could be chosen for any answer. There was no limit on the number of times a child could be chosen. The students were told that their answers were considered confidential and would only be shared with the teachers in order to help them form groups for different projects throughout the year. The sociogram procedures were kept casual in tone and were administered in a separate, private area outside of the classroom (2, 7).

The questions on the sociogram solicited responses concerning desirable academic and creative work partners
(Appendix A). The sociogram also included questions about desirable playmates (9). All thirty-five students in the class were included in the sociogram. Therefore, each child could be chosen from zero to thirty-five times for each sociometric question.

On questions of desirable academic work partners (e.g., Who would you most like to work with in a hard mathematics problem?), the children in the gifted groups were chosen an average of 1.16 times. The students in the gifted-creative group were chosen an average of 2.16 times. The mean times chosen for the class was a whole was 1.97 times (see Table III).

**TABLE III**

**MEAN SCORES ON THE SOCIODRAM**

(N = 35)

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Gifted Scores N=6</th>
<th>Gifted-Creative Scores N=6</th>
<th>Whole Class Scores N=30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Work Partner</td>
<td>1.16</td>
<td>2.16</td>
<td>1.97</td>
</tr>
<tr>
<td>Creative Work Partner</td>
<td>1.66</td>
<td>1.83</td>
<td>2.0</td>
</tr>
<tr>
<td>Playmate</td>
<td>1.16</td>
<td>3.13</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4.00</strong></td>
<td><strong>7.83</strong></td>
<td><strong>5.97</strong></td>
</tr>
</tbody>
</table>

When asked to choose desirable creative task partners (e.g., Who would you most like to work with on writing a
really funny story?), the children in the gifted group were chosen an average of 1.66 times. The students in the gifted-creative group were chosen an average of 1.83 times. The whole class average was 2 times chosen.

The children were also asked to choose desirable playmates (e.g., Who would you most like to play with?). The gifted groups were chosen an average of 1.16 times while the children in the gifted-creative groups were chosen an average of 3.13 times. The whole class had an average of 2 times chosen.

Total average scores for the entire six questions on the sociograms were computed for each group as well as the entire class. In total, the children in the gifted group were chosen an average of 4 times. The students in the gifted-creative group were chosen in all, an average of 7.83 times. The children in the entire class were chosen an average of 5.97 times.

Correlations Between CAP Scores and Sociometric Scores

A bivariate correlation coefficient was employed to express the degree of any relationship between creativity, as measured by the Creativity Assessment Packet, giftedness, and social status on a class sociogram. The mean scores of the gifted group on all levels of the sociogram, as well as total scores, were compared to the mean scores of the
gifted-creative group. A plus or minus value was calculated and used to determine whether the proportions of each group were significantly different (see Table IV).

TABLE IV

BIVARIATE CORRELATION BETWEEN GIFTED AND GIFTED-CREATIVE STUDENTS' SCORES ON A SOCIOGRAM

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Ratings on CAP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gifted n=6</td>
</tr>
<tr>
<td>Desirable Academic Work Partner</td>
<td>-.91</td>
</tr>
<tr>
<td>Desirable Creative Work Partner</td>
<td>-.36</td>
</tr>
<tr>
<td>Desirable Playmate</td>
<td>-.70</td>
</tr>
<tr>
<td>Total Sociometric Score</td>
<td>-.83</td>
</tr>
</tbody>
</table>

Significantly different correlations occurred at the .05 level between the academic work partner ratings of gifted and gifted-creative subjects. The relationship between scores on the CAP and desirability as an academic work partner were -.91 for the gifted group and .40 for the gifted-creative group. Due to the small number of subjects in the sample, the apparent statistical significance of -.91 for the gifted group might be reduced to a directional significance (3).

The relationship between scores on the CAP and desirability as a creative work partner was -.36 for the
gifted group but only -.005 for the gifted creative group. The correlation between scores on the CAP and desirability as a friend was -.70 for the gifted group and -.19 for the gifted-creative group. Finally, when comparing scores on the CAP and total number of times chosen on the sociogram, the relationship was -.83 for the gifted group and .10 for the gifted-creative group.

Observations

Sociometric measures can indicate the degree to which children are accepted by their peers. However, peer choice alone does not always distinguish between children who are isolated from their peers and those who are actually disliked or rejected (2, 8). As a result, observational data were used as an anecdotal source for discussion and interpretation of the results from the CAP and sociogram.

Regular and frequent observations which focused on specific behaviors were implemented in the classroom and on the playground. The six children who scored highest on the CAP (termed gifted-creative) and the six children who scored lowest on the CAP (termed gifted) were targeted for observation. These children were chosen because they represented the extreme ends of the creativity spectrum found in this gifted class. Event-sampling techniques were used to observe predetermined categories of behavior. Using a combination narrative-checklist the researcher was able to
record and describe certain behaviors as they occurred in a natural setting (Appendix B). The checklist also included child-initiated and child-recipient behaviors (1, 6).

The children were observed at least five times during the first two months of school. Observations were made of the targeted children as they interacted in small groups without a teacher nearby. Each observation lasted approximately thirty minutes. The observations were made during roughly equal numbers of academic tasks, creative tasks, and play periods (4).

**Academic Tasks**

The subjects were observed during academic tasks consisting of independent seatwork. The observations were made during language arts (spelling, grammar, and handwriting), mathematics, science, and social studies. The class rules allowed the students to talk during seatwork as long as they did not disturb the rest of the class. Since the children could visit quietly or ask for help whenever they chose, isolated or non-interactive behavior was readily apparent (see Table V).

Each child was observed twice during academic seatwork. The gifted-creative group seemed to interact with other children around them more frequently and for longer periods of time than the gifted group. Kayla was the only gifted-creative subject who displayed isolated behavior. She
# TABLE V

## ACADEMIC TASK OBSERVATIONS

<table>
<thead>
<tr>
<th>Observed Behavior</th>
<th>Frequency of Behavior</th>
<th>Kayla</th>
<th>Larissa</th>
<th>Brian</th>
<th>Edward</th>
<th>Walter</th>
<th>Julie</th>
<th>Miranda</th>
<th>Beth</th>
<th>Sabrina</th>
<th>Mark</th>
<th>Elisa</th>
<th>Jessica</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Aggression--fighting, kicking, hitting, pinching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R=1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Verbal Aggression--insults, name-calling, taunting, threats</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>R=2</td>
<td>R=1</td>
<td>R=1</td>
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<tr>
<td>Isolated Behavior--choosing to play, work alone</td>
<td></td>
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<td></td>
<td></td>
<td>2</td>
<td>I=4</td>
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<td>Verbal Reinforcement--&quot;you're my friend&quot; &quot;that's a great idea&quot; etc.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>R=1</td>
<td></td>
<td></td>
<td>I=1</td>
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<tr>
<td>Verbal Offers of Help--at work, play</td>
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<td>I=1</td>
<td>R=7</td>
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</table>

R = Child is recipient of behavior.  
I = Child is initiator of behavior.
generally worked quietly at her seat and several times rebuffed questions from other students. The other children in the gifted-creative groups were almost continually interacting, arguing and criticizing the work of those around them or offering and receiving help.

The gifted group generally worked quietly at their seats, completing each task and then going on to the next assignment. These children mostly worked by themselves, although they occasionally asked for or offered assistance.

**Creative Tasks**

The children were each observed once during a variety of art activities. During art activities, once instructions were given, the class atmosphere became informal and interaction between students was allowed. Students often walked around the room to look at classmates' work (see Table VI).

During art activities the two groups exhibited similar amounts of isolated behavior, verbal reinforcement and offers of help. However, the gifted-creative group was often critical of other children's projects. Once gifted-creative child, Brian, was so insulting of other children's work that they reciprocated the insults then ignored him. Miranda, a gifted pupil, continually asked the teacher if she was completing her picture correctly.
<table>
<thead>
<tr>
<th>Observed Behavior</th>
<th>Frequency of Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gifted-Creative</td>
</tr>
<tr>
<td></td>
<td>Kayla</td>
</tr>
<tr>
<td>Physical Aggression--fighting, kicking, hitting, pinching</td>
<td></td>
</tr>
<tr>
<td>Verbal Aggression--insults, name-calling, taunting, threats</td>
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<tr>
<td>Isolated Behavior--choosing to play, work alone</td>
<td>1</td>
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<td>Verbal Reinforcement--&quot;you're my friend&quot; &quot;that's a great idea&quot; etc.</td>
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<tr>
<td>Verbal Offers of Help--at work, play</td>
<td></td>
</tr>
</tbody>
</table>

R = Child is recipient of behavior.  I = Child is initiator of behavior.
Play Behavior

The students were observed twice each during recess. The children played on a black-topped surface, on playground equipment and on a playing field. There were often other classes on the playground at the same time but observations were only conducted when the children were interacting with other members of the gifted class.

The students exhibited mostly cooperative play during observations. Elisa, in the gifted group, tended to change activities often and went in and out of a number of play situations. She never really participated in any of them so her behavior was considered isolated. Elisa's isolated behavior was partly her own choice and partly because she was often ignored by the other children.

The gifted-creative group showed more aggression than the gifted group on the playground. Larissa and Beth got into a shoving match during a game of four-square. Brian and a number of other boys, including Edward, got into a number of fights. The fights were usually initiated by Brian over his interpretation of the rules of whatever game was in progress or because he tried to take away the balls that others were playing with. After each incident, Brian usually was forced to play by himself because no one else would play with him. Edward was also highly critical of his playmates' sports abilities. Kayla and Walter each chose to play alone.
<table>
<thead>
<tr>
<th>Observed Behavior</th>
<th>Frequency of Behavior</th>
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<tbody>
<tr>
<td></td>
<td>Gifted-Creative</td>
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<tr>
<td></td>
<td>Kayla</td>
</tr>
<tr>
<td>Physical Aggression--fighting, kicking, hitting, pinching</td>
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</tr>
<tr>
<td>Verbal Aggression--insults, name-calling, taunting, threats</td>
<td>I*</td>
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<tr>
<td>Verbal Reinforcement--&quot;you're my friend&quot; &quot;that's a great idea&quot; etc.</td>
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<tr>
<td>Verbal Offers of Help--at work, play</td>
<td>I=1</td>
</tr>
</tbody>
</table>

R = Child is recipient of behavior.  I = Child is initiator of behavior.

*Multiple times.
Total Observations

The children in this study were each observed five times. Each observation lasted approximately thirty minutes. The observations included two academic periods, two play periods, and one art activity (Tables XIII and IX).

Kayla.—Kayla exhibited the most incidences of isolated behaviors of all the targeted students. Although she was occasionally approached by other children during classroom activities, she usually ignored them or only answered briefly. Her isolation seemed self-imposed, possibly the result of shyness. Nevertheless, her sociometric ranking was equal to or above the class average.

Larissa.—Larissa was a very verbal child who continually interacted with those around her. She seemed to be very critical and demanding in her interactions. She also had the highest sociometric rating in the entire class.

Brian.—Brian seemed to be a very aggressive child who was often forced to play alone because he started fights or insulted others. Within the classroom he usually interacted cooperatively. He was not chosen by anyone in the class on the sociogram.

Edward.—Edward was generally helpful and cooperative to his classmates during observations. On nearly all occasions, though, he would criticize or insult other
<table>
<thead>
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<th>Gifted-Creative</th>
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<tr>
<td></td>
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<td>Larissa</td>
<td>Brian</td>
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<td>R=1</td>
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R = Child is recipient of behavior. I = Child is initiator of behavior.
TABLE IX
SOCIO-METRIC RATINGS OF TARGETED CHILDREN

<table>
<thead>
<tr>
<th>Student</th>
<th>Grade</th>
<th>Friendship Rating (Class $\bar{x} = 2$)</th>
<th>Academic Rating (Class $\bar{x} = 1.97$)</th>
<th>Creative Rating (Class $\bar{x} = 2$)</th>
<th>Total Rating (Class $\bar{x} = 5.97$)</th>
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<tr>
<td></td>
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<td>3</td>
<td>4</td>
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<td>2</td>
<td>8</td>
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<tr>
<td>Larissa</td>
<td>1</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>15</td>
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<tr>
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<td>3</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>Edward</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>14</td>
</tr>
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<td>Walter</td>
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<td>2</td>
<td>0</td>
<td>2</td>
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<td>Julie</td>
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<td></td>
<td></td>
<td>Gifted</td>
<td></td>
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</tr>
<tr>
<td>Miranda</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>8</td>
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<td>1</td>
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<td>Sabrina</td>
<td>2</td>
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<td>2</td>
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<td>4</td>
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<tr>
<td>Mark</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
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<td>Elisa</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Jessica</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>7</td>
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</table>
children's work or athletic abilities. He interacted with others a lot and had the second highest sociometric rating in the class. Most of the children who chose him for an academic work partner said they did so because he excelled in mathematics. The teacher corroborated their comments.

**Walter.**--Walter seemed to enjoy helping his classmates and was often distracted by those around him. He also tended to be critical of others and occasionally teased them. Walter's sociometric ranking was slightly below average in total.

**Julie.**--Julie did not exhibit many of the targeted behaviors on the observation checklist. Basically, she seemed to be a cooperative child who interacted a lot with others, both in the classroom and on the playground. She rated above average on the sociometric friendship measure but had an average ranking overall.

**Miranda.**--Miranda usually worked quietly during classroom activities, completing one task before continuing on to the next. The children sitting near her occasionally offered help or advice but she generally worked alone. She often asked the teacher if she was doing an assignment correctly and made an obvious effort to do her work neatly and carefully. Her neatness and accuracy might have been the reason she ranked above average in choice of creative
work partner according to the teacher. The teacher felt that the children equated pretty handwriting with being artistic. During recess, she usually played with a group of girls. She ranked above average in her overall sociometric score.

**Beth.**—Beth interacted continually with those around her during classroom observation times. She seemed interested in what those around her were doing. She seemed proud of her neat, careful work. She ranked below the class average on the sociogram.

**Sabrina.**—Sabrina tended to work alone, ignoring those around her, during academic skills. Even when her work was done, she stayed at her seat instead of joining another child in a center activity. She was very complimentary of her classmates' art work. Her overall ranking on the sociogram was slightly below average.

**Mark.**—Mark also worked quietly at his seat during academic periods. He interacted cooperatively with others during art and recess. His overall sociometric ranking was slightly below average.

**Elisa.**—Elisa usually chose to work and play alone. She often talked to herself and ignored her classmates. She was the only child in the class who chose the same
person for all the questions on the sociogram, although no one in the class chose her.

Jessica.—Jessica worked quietly at her seat during academic periods although she interacted with several children during other observation times. She ranked slightly above average in overall sociometric ratings.

Discussion

The following hypotheses were tested in this study and are presented for discussion.

1. Gifted primary students will rate higher on a class sociogram on measures of friendship than gifted-creative students.

In this sample, the gifted students rated lower on choice of friends than the gifted-creative students. As playmates, the gifted were chosen an average of 1.16 times while gifted-creative children were chosen 3.13 times. The correlations between scores on the CAP and rankings on sociometric measures of friendship were -.70 for the gifted group and -.19 for the gifted-creative group. Due to the small sample size these results may be termed directionally significant rather than statistically significant (7). These results seem to contradict much of what other research has said which suggests that gifted-creative children were less accepted by their peers. Other research has generally
looked at gifted-creative children within the context of a regular rather than a gifted classroom. Also, approximately one-third of the class had been involved in weekly sessions with the guidance counselor during the previous year. Another reason for these findings was that the teachers in this classroom seemed to value and encourage creative thinking. These teacher attitudes were likely to create increased status for the most creative students. The available literature did not address teacher attitudes toward creative thinking.

2. Gifted primary students will score higher on a class sociogram on measures of choice of academic work partners than gifted-creative students.

Among these subjects, gifted students were chosen as academic work partners an average of 1.16 times while gifted-creative students were chosen 2.16 times. The correlation between scores on the CAP and rankings on this sociometric measure were -.91 for the gifted group and .40 for the gifted-creative group. Again, due to the small sample size the results are only directionally significant (3). However, the definitely negative correlation between gifted children with low creativity scores and their ratings on sociometric measure of academic work partners seems, once again, to directly contradict past research. Since this class also encouraged creative and divergent thinking
within academic areas, gifted-creative students might be perceived as better students than their peers.

3. Gifted primary students will score lower on a class sociogram on measures of choice of creative work partners than gifted-creative students.

In this sample, gifted students were chosen an average of 1.66 times as creative work partners while gifted-creative students were chosen 1.83 times. The correlations between scores on the CAP and rankings on this sociometric measure were -.36 for the gifted group and -.005 for the gifted-creative group. The differences between these two groups on this measure of choice of creative work partner were slight and of seemingly little significance (3). Due to the lack of research available in this area, there is very little literature with which to compare these results. Creativity, or lack of it, did not seem to be an issue in the students' choices. Another factor involved in these sociometric rankings might be the small range. No child was chosen more than four times on this particular measure. According to the classroom teachers, several of the students who were chosen most often for creative work partners but who had low creativity scores might have been picked because they were exceptionally careful. As a result, their work was attractive and neat. The teachers felt that neat, careful, and attractive work and art projects might be equated with creativity by this age group.
4. Gifted primary students will exhibit more positive verbal behaviors and less isolated or aggressive behaviors during observations than gifted-creative students.

In this study, the gifted students displayed about the same amount of positive verbal behaviors as the gifted-creative students. They did, however, display more isolated behavior, especially during academic tasks, than their gifted-creative counterparts. This isolated behavior during academic tasks might agree with research concerning the general conformity of gifted, but not creative, students (11). These gifted students seemed more intent on doing their assignments correctly than in socializing. They exhibited more concern with academic success and the correct way of doing a task, even on open-ended art activities, than the gifted-creative students. As a result, they tended to focus on the task assigned rather than what might be happening in the classroom. As stated in the hypothesis, the gifted group did exhibit much less physical and verbal aggression than the gifted-creative group. This finding agrees with other research in this area (2, 5, 10).

Summary

This chapter reviewed the procedures used in data collection and reported the results of the Creativity Assessment Packet and the sociogram. The gifted-creative subjects scored higher than their gifted counterparts on
all sociometric measures. Due to the small sample size, the correlation must be termed directionally significant rather than statistically significant. Nevertheless, this directional significance seems to indicate a possible need for replicating this study on a larger scale. A larger sample size might either clarify these results or determine whether the correlations were a chance occurrence.

Finally, the results of the observations were discussed and explained. In general, the gifted-creative group had the highest incidence of verbal and physical aggression. The gifted group displayed isolated behavior more frequently. Both groups showed positive verbal interactions.
CHAPTER BIBLIOGRAPHY


5. Getzels, J. and P. Jackson, Creativity and Intelligence, University of Chicago, John Wiley and Sons, 1962.


CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to compare and analyze the differences in the peer relations of gifted and gifted-creative primary students. The children in the study were given the Creativity Assessment Packet (CAP) at the onset of the study (18). The most creative and least creative students in the primary gifted program, six in each group, were targeted for observation. In addition, a sociogram was administered to the entire class to determine the social status of each child in the study. A bivariate correlation coefficient was employed to express the degree of any relationship between creativity, giftedness, and ranking on the class sociogram. Observational anecdotes were used in the discussion of the sociometric results.

Findings

The findings presented in this section apply only to the subjects used in this study. The findings may have been influenced by the small sample size (2) or the use of a single observer (5). The unique atmosphere of this
gifted program may have also influenced the final results. The following findings resulted from this study.

1. As a group, the gifted students ranked much lower on choice of friendship than the gifted-creative students.

2. Gifted students were also less likely to be chosen as academic work partners than the gifted-creative students.

3. No significant difference was found between gifted and gifted-creative pupils on choice of creative work partners.

4. No significant difference was found in the amount of positive verbal behaviors between gifted and gifted-creative students during observations.

5. During observations, gifted students displayed more isolated behavior, particularly during academic tasks, than the gifted-creative students.

6. The gifted children displayed significantly less verbal and physical aggression than the gifted-creative children during observations.

Conclusions

The following conclusions are based upon the findings of this particular study.

1. Gifted creative children can demonstrate certain positive personal attributes which maximize their selection as preferred playmates and work partners.
2. Gifted children can display isolated behavior similar to that which is described in the literature as characteristic of gifted-creative children.

Implications

The following implications are suggested from the data in this study. This study could have meaning for training in gifted education and its value to gifted and creative students. These results add to the small body of research that exists concerning the differences in the interpersonal relationships of gifted and gifted-creative students. Finally, this study could have implications in the area of guidance and counseling of gifted and creative children.

Special training for the teachers of the gifted, especially in identification and achievement of creative pupils, has been endorsed by Mayfield (15) and others (7, 17). Gifted-creative students are often misunderstood and labeled as troublemakers. Realization of some of the personality traits of gifted-creative students, as in their differing peer relationships, can lead to more gifted-creative students being included in gifted programs. Promotion of a classroom atmosphere which encourages and molds creative and divergent thinking may lead to a higher social valuation of gifted-creative children as it seems to in this study.
If, as Khatena (13) implies, an adverse classroom environment can create conflict with others and lead to constant social problems for the gifted-creative child, then lack of this repressive atmosphere in the classroom in this study requires further investigation. The absence of low social status in most of the gifted-creative students in this class seems to indicate that a nurturant and creative atmosphere coupled with reasonable structure may alleviate this problem.

Feldhusen (4) proposed that gifted and creative children be placed with children of similar mental age and abilities. The apparent social success of most of the gifted-creative students in this study seems to substantiate this theory while it contradicts Torrance (17) and Goertzels' (7) theories of impaired social abilities of the gifted-creative.

Bonney and Hampleman (1) encouraged the use of sociograms to identify and study students who were having problems maintaining positive peer relationships. Teachers could study the results and react accordingly. Sociograms, such as the one used in this study, could be used to aid teachers in forming classroom groups in order to reduce incidences of isolated children and to decrease cliques. These sociograms could also serve as an interpersonal class assessment to locate and remediate isolated and rejected children.
Through sociometric measures and observation, social isolates can be identified and helped. Hartup (9) contended that social isolates can be assisted, through counseling and restructuring of class groups, to gain self-confidence and to initiate successful social behavior. Roedell (16) further substantiated this attitude with her study which provided guidance counseling and teacher reinforcement for gifted preschool children. These studies seem to suggest that guidance counseling, initiated by sociograms and observations, could aid the social abilities of gifted students.

Goertzel (7) and Daniels (3) also suggest guidance in specific competency areas. Areas in the affective domain might include self-image, group dynamics, leadership, and career exploration. In these studies, appropriate guidance seemed to lead to happier self-reports in gifted and gifted-creative students. The classroom used for the present study incorporates weekly sessions with the guidance counselor. Reports from the teachers indicated that these sessions during the previous school year resulted in improved social behavior in many of the children and aided the overall classroom atmosphere. A follow-up study at the end of this school year might have empirically reinforced these reports.

Finally, this study might have implications for the guidance and counseling of gifted and gifted-creative
students. Khatena (14) encouraged guidance of these children to (1) insure accessibility to other gifted and creative children and activities, (2) make these students more aware of themselves and others and what they have to offer each other, (3) develop tolerance of and interest in divergent viewpoints, and (4) assist these students to attain high levels of creative functioning and achievement.

Gowan (8) also advocated counseling and guidance for teachers of gifted and creative students. He proposed that well-trained teachers could provide a fostering atmosphere in the classroom. They could avoid setting up unfavorable evaluations of children's creative attempts, be tolerant of novel ideas, and provide opportunities for children to work independently. Gowan felt that teachers could facilitate their students' mental health. They could help children build their own value systems, help them handle disappointment, and render appropriate praise. Teachers could also facilitate children's social relations by giving them responsibilities and helping them to understand their own and other's behavior. Gowan also said that teachers of the gifted children could facilitate their students' peer friendships by exposing the children to all types of playmates including others like themselves.
Recommendations

This study suggests recommendations for further research. The recommendations are as follows.

1. A replication of Roedell's preschool study (16) is recommended with elementary gifted and gifted-creative students. The students could be observed, tested, and given sociometric measures at the onset of the school year. Guidance counseling aimed at improving interpersonal relationships could be incorporated into the regular class schedule. At the end of the school year; follow-up sociometric measures could be given and observations made to determine the effects of the counseling on the children's social status and interpersonal behavior.

2. Since some researchers, like Jensen (12), feel that gifted and gifted-creative students have differing thought processes, it is recommended that gifted and gifted-creative students should be compared on specific thinking skills.

3. It is recommended that any potential differences between performance intelligence quotient scores and verbal intelligence quotient scores be studied and compared for gifted and gifted-creative students.

4. Since Hicks (10) has shown that some creative thinking skills can be improved through class activities, it is recommended that a study similar to the present one
be done to determine if enhanced creative thinking skills can influence social status. The CAP and sociograms could be given at the beginning of the school year. Regular activities which involve creative thought processes as well as appropriate teacher reinforcement could be implemented. At the end of the school year, follow-up sociograms and the CAP could be given to determine if creative thinking skills had improved and if the improvement had affected the children's social status.

5. As Horowitz and O'Brien (11) have demonstrated, some gifted-creative students are productive and successful while some are not. Longitudinal research could investigate differences in personalities of gifted-creative children which produce productive and non-productive results.

6. It is further recommended that differences in gifted-creative boys and gifted-creative girls be investigated. Such research could determine if boys are more likely to be identified as gifted-creative than girls and if the social status of gifted-creative boys and gifted-creative girls differ throughout their school years.
CHAPTER BIBLIOGRAPHY


APPENDICES
Appendix A

Class Sociogram

**Academic Work Partner**

1. Who would you most like to work with on:
   - Spelling?
   - A hard math problem?

2. Who would you most like to work with on:
   - An art project?
   - Writing a really funny story?

3. Who would you most like to:
   - Play with?
   - Sit next to?
Appendix B

Observation Data

Date: Time:
Place: Activity:

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<thead>
<tr>
<th>Frequency of Behaviors</th>
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<tr>
<td>Observed Behavior</td>
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<td>Physical Aggression—</td>
</tr>
<tr>
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<td>hitting, pinching</td>
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<td>Verbal Aggression—</td>
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<tr>
<td>insults, name-calling,</td>
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<tr>
<td>taunting, threats</td>
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<tr>
<td>choosing to play,</td>
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<td>work alone</td>
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<td>Verbal Reinforcement—</td>
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<td>&quot;you're my friend&quot;</td>
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<tr>
<td>&quot;that's a great idea&quot;</td>
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<tr>
<td>etc.</td>
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<tr>
<td>Verbal Offers of Help—</td>
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<td>at work, play</td>
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</tbody>
</table>

Comments:

Key: R—child is recipient of behavior.
I—child is initiator of behavior.
Appendix C

Dear Parents,

My name is Debra Blatt Greene and I am currently working on my dissertation at North Texas State University. This fall I hope to be working with the Program to compile the research information I'll need to complete my dissertation. If you choose to allow me to work with your child, please be assured that all data collected will be kept strictly confidential and used only as a means to analyze groups of children not the individual child.

I plan to study the social abilities of the young gifted child. This will involve one or two short (30 minutes) group testing situations and a certain amount of general group observation. Any of your child's testing information will, of course, be available to you and a summary of my group findings will be sent to you during the Spring semester.

The attached Informed Consent form should be signed and returned to Jane Bidlack. Please excuse some of the "strong wording" but this is a NTSU general research consent form and is also used for scientific and psychological experiments.

I hope to be working with you and your child this fall. Thank you for your cooperation.

Sincerely,

[Signature]

Debra Blatt Greene
Appendix D

PUPIL ASSESSMENT MATRIX

Student's Name________________________________________Date 9/22/86

School  Country  Place  Elementary School (Carrollton, Texas)

Grade  Age  Sex  Ethnicity

Additional Data________________________________________

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<th>standard deviations</th>
<th>-1.0</th>
<th>-.5</th>
<th>MEAN</th>
<th>.5</th>
<th>1.0</th>
<th>1.5</th>
<th>2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>percentile ranks</td>
<td>17%</td>
<td>27%</td>
<td>50%</td>
<td>67%</td>
<td>84%</td>
<td>94%</td>
<td>98%+</td>
</tr>
</tbody>
</table>

| Total Score (131)    |      |     |      |    |
| Fluency (12)         |      |     |      |    |
| Flexibility (11)     |      |     |      |    |
| Originality (36)     |      |     |      |    |
| Elaboration (36)     |      |     |      |    |
| Title (36)           |      |     |      |    |

| Total Score (100)    |      |     |      |    |
| Curiosity (24)       |      |     |      |    |
| Imagination (24)     |      |     |      |    |
| Complexity (26)      |      |     |      |    |
| Risk-Taking (26)     |      |     |      |    |

WILLIAMS SCALE (100)

CREATIVITY ASSESSMENT PACKET

Test of Divergent Thinking
Test of Divergent Feeling
The Williams Scale

by
Dr. Frank Williams
D.O.K. Publishers, Inc.
Appendix E

CREATIVE THINKING

Explanation of Creativity Assessment Packet

Creative thinking is the ability to think of a lot of ideas when there is a problem or a need for ideas. It is also the ability to think of many different kinds of ideas, to think of unique or original ideas, and to develop or elaborate ideas. Frank Williams (1981) states that there are four cognitive behaviors involved in the creative process: fluency, flexibility, originality, and elaboration. Furthermore, Williams includes four affective behaviors often found in creative individuals: curiosity, risk-taking, complexity, and imagination.

The Creativity Assessment Packet attempts to measure both the cognitive and affective creative behaviors found in all students. The scores recorded on the Pupil Assessment Matrix reflect the students raw score. This raw score is entered in the box under the appropriate percentile column. For example, a Fluency raw score of 6 would be entered in the 50 percentile column indicating that this student scored higher in Fluency than 50% of other students of the same age who took the CAP.

The following is a brief explanation of the cognitive and affective behaviors measured by the Creativity Assessment Packet:

**Test of Divergent Thinking**

FLUENCY—The ability to generate a great number of ideas relevant to a particular topic or problem.
FLEXIBILITY—The ability to generate a variety of ideas, to take different types of approaches.
ORIGINALITY—The ability to come up with novel or unique ideas.
ELABORATION—The ability to embellish upon an idea and to expand it.

**Test of Divergent Feeling**

CURiosity—The willingness to be inquisitive and wonder, to be open to puzzling situations, to follow a hunch.
IMAGINATION—The ability to think beyond what has been experienced, visualize mental images.
COMPLEXITY—The ability to be challenged to seek many alternatives, delve into intricate problems or ideas, see gaps between the way things are and how they could be.
RISK TAKING—The willingness to guess, expose oneself to failure or criticism, to defend one’s own ideas.

The Williams Scale

The Williams Scale is designed to be answered by parents or teachers and incorporates the factors in both cognitive and affective behaviors.
September 30, 1986

Dear Parent,

Thank you once again for allowing your child to be a part of my doctoral study. As part of the study you child has taken the first two subtests of the Creativity Assessment Packet. The final subtest consists of the Williams Scale designed to be answered by parents. I would appreciate your help in filling out the scale on your child. The directions are found on the first page of the scale. The answers on page 4 should be fairly brief and will be beneficial to the Program.

Please return the scale to school by Friday, October 3. Thank you for your cooperation and participation. Your child's test results will be available to you at parent conference time.

Sincerely,

Debra Blatt Greene
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