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Pupil Social-Stylistic Variability & the Teacher Perception of Student Role Performance

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Gail L.

1979
Pupil Social-Stylistic Variability and the Teacher Perception of Student Role Performance

A Thesis
Presented to
the Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Gail L. Stevens
August 1979
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PUPIL SOCIAL-STYLISTIC VARIABILITY AND THE TEACHER PERCEPTION 
OF STUDENT ROLE PERFORMANCE 

Recommended June 26, 1979 

Director of Thesis 

Approved 8-1-79 

Dean of the Graduate College
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This is the one opportunity throughout this whole paper for me to be the real Gail. So at this time I'd like to put all my professionalism aside and thank my chairperson, Dr. Harry Robe, for his time and direction and for occasionally making my life at WKU very interesting. To Dr. Carl Martray and Dr. Leroy Metze, thanks for your support and guidance during these past grueling months. My acknowledgements wouldn't be complete without thanking Western's Psychology faculty and my fellow second year P.I.T.s, who were a unique group to work with. Thanks goes to my neighbor, Don Kapp, for his ability as a proof-reader and his finesse for knocking the pans off my kitchen wall. A special thanks to John Horan for teaching me the Clint Eastwood method of therapy and to Brian Piispanen for helping me realize what I can become. Finally, I'd like to thank my fingers for typing this whole thing at least three times ... it's finished.
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This study investigated the effects of students' intelligence, locus of control, and creativity on teachers' perceptions of students. Sixty-three fourth graders and two teachers from a local school participated. The Verbal Scale of the WISC-R, the Circles Test from the Torrance Tests of Creative Thinking, and the Nowicki-Strickland I-E Locus of Control Scale for Children were administered to the subjects. The teachers were requested to complete the Teacher Perception of Student Role Performance Scale (TPSRP) on each child. This instrument yielded scores on three factors of student role—Competence, Sociability, and Social Conformity. Multiple regressions were performed to determine the effects of the variables on teacher perceptions for the total sample, High Intelligence (HI), Low Intelligence (LI), and Average Intelligence (AI) groups. Intelligence was the single best predictor for the total sample. Intelligence and fluency contributed to the HI group's ratings on the three factors of the TPSRP whereas intelligence and elaboration were contributors for the LI group. In addition, the HI children were perceived as the least conforming (low SC scores) by their teachers and the LI children as the most conforming (higher SC scores) to the traditional, highly structured classroom environment.
Chapter One

Within society specific traits and characteristics have been identified and labeled as valuable - others are deemed less desirable. Those treasured and emphasized by society are taught to children both at home and school, the assumption being that it is desirable for people to adopt these certain characteristics or assume prescribed roles. Children who learn quickly and conform to the role are frequently praised and rewarded for such behavior whereas those who do not may be punished or negatively labeled. Research has pointed out that both parents and teachers typically prefer those children who have in fact conformed and adopted or developed these valued traits (Hampe, 1975; Getzels & Jackson, 1962; Torrance, 1963, 1962a). It follows, then, that the non-conforming child, one who has not developed the valued traits or assumed the prescribed role, will probably be viewed less favorably by others (i.e., teachers, parents). Of particular interest in this study are the effects of intelligence, divergent thinking/creative ability, and locus of control on teacher perceptions of students. In this study intelligence is defined as the degree to which the child has adopted the attributes of the core culture (Mercer, 1977). Creative/ divergent ability is defined as "the process
of sensing gaps or disturbing missing elements; forming ideas or hypotheses concerning them; testing these hypotheses; communicating the results, possibly modifying and retesting the hypotheses." (Torrance, 1962a, p. 16). Locus of control is described as the degree to which individuals perceive that rewards follow or are contingent upon their own behavior versus the degree to which they feel the reward is controlled by forces outside themselves or independent from their actions (Rotter, 1966). The interaction of the above three variables (intelligence, creativity, and locus of control) will also be examined.

**Intelligence**

The effect of social biases are visible both in schools and methods of psychological testing. Individuals who have not conformed to the expected roles and thus do not score within a specified range on various tests are viewed as deviant and remedial programs are developed for them. Intelligence tests and their scores are frequently used in this manner. Once an IQ score is obtained, a child is labeled as generally intellectually strong or weak, above average or below, and is treated accordingly. What is overlooked is the fact that every individual has intellectual strengths and weaknesses and that intelligence is strongly influenced by one's life experiences. What is considered intelligent behavior in one situation or culture may not be regarded as such in another.
A major problem with general statements about intelligence is that they lead parents and teachers to overlook individual differences in children and as a result to stereotype a child as bright or dull. The tendency is to ignore differences in types of intellectual ability which are influenced by culture, as well as important distinctions between individuals who differ in the degree of these abilities. One problem with general statements is that the reader frequently disregards the fact that different people arrive at the same answer through various intellectual means. A second problem is that intelligence tests measure specific intellectual abilities and neglect others which may result in gross generalizations about an individual's abilities based on the measurement of a few. A third problem of concern is the forgotten influence of culture upon intelligence (Beck, 1976).

Mercer (1977) approached the cultural problem by re-defining intelligence as the degree to which the child has adopted the attributes of the core (Anglocentric) culture. The dominant culture within the United States is identified as the Anglo-American group. Traditionally, intelligence has been viewed as being composed of various cognitive abilities with little or no significance placed upon cultural effects. Using Mercer's definition it follows that intelligence tests could be described as measuring the degree to which the child has adopted the core culture values or accepted (conformed to) that role within the dominant social system.
Guilford (1967) subscribed to a more traditional theory of intelligence which has been used in the development of intelligence tests. The approach is a multi-variate one through which intra-individual differences are accounted for. The unevenness in ability observed in normal populations as well as the mentally deficient, highly gifted, and pathological populations is recognized in this theory. No attempt, however, has been made to explain these differences. Guilford suggests that many factors contribute to intelligence. In his structure-of-intellect model (SOI), three parameters of intelligence are identified along with several categories within each parameter. One of these categories or factors of intelligence is divergent thinking - commonly referred to as creativity. In examining divergent thinking/creative ability, Torrance distinguished four facets of divergent thinking: fluency, originality, flexibility, and elaboration. None of these are measured by the commonly used intelligence tests (Torrance, 1960; Kaufman, 1973). One would begin to question whether or not divergent thinking/creativity is a trait valued by the core culture since it is not incorporated into or measured by traditional tests. Further, how would children exhibiting the questionable trait of creativity be perceived by significant others if this characteristic is not valued by society?
Creativity

Torrance (1970) determined that knowledge of a child’s creative ability also revealed differential preferences for ways of learning. Many children learn through their own experimentation, manipulation, and inquiry rather than by an authority. They prefer a spontaneous, discovering style as opposed to deliberate, restricted learning. When learning by authority, students are told exactly what they should learn and accept what they are told as truth because it was stated by an authority (e.g., parent, teacher, textbook). This method of learning involves the primary abilities of recognition, memory, and logical reasoning, all of which are assessed by intelligence tests using the traditional theory of intelligence. In creative or divergent learning, children are free to explore, become involved with the task through manipulation of the environment, and seek answers for themselves. This method of learning involves recognition, memory, and logical reasoning as well as evaluation, divergent thinking (e.g., fluency, flexibility, originality, elaboration), and re-definition.

Children who engage in divergent learning possess characteristics deemed "undesirable" by teachers (Torrance, 1963; Kaltsounis, 1977a, b; Kaltsounis & Higdon, 1977). These children are curious in nature. They explore and manipulate their environment and prefer to learn in this manner rather than remain seated while the teacher lectures.
It is highly probable that these children, if placed in a more traditional, highly structured classroom, will be somewhat disruptive when attempting to learn creatively. Children who are labeled creative and attempt to use this style are probably viewed as non-conforming by their teachers and parents. It is assumed that they possess traits which are not valued by the core culture and have not adopted the student role outlined by the school/society.

**Locus of Control**

Just as student intelligence and preferred learning style appears to effect teacher perceptions, so might student personality characteristics. Information about personality traits would assist researchers and teachers in 1) developing a more global understanding of children as students, 2) determining how students function within the classroom, and 3) discerning how they are perceived by teachers. Of particular interest is locus of control because of the importance of reinforcements in a classroom setting. Rotter (1966) studied the effect of a reinforcement following a given behavior and that individual's perception of the causal relationship between his behavior and the reward. If a reinforcement is viewed by an individual as following his/her own action, yet not entirely contingent upon it, then it is perceived as the result of luck, chance, fate, under the control of powerful others, or some complex force. A belief in this perception of reinforcement is labeled external locus
of control. If, on the other hand, a person perceives the reinforcement as contingent upon his/her own behavior or characteristics, then his/her belief would be labeled internal locus of control.

In social learning theory, reinforcements serve to strengthen the expectancy that a specific behavior will be followed by reinforcement in future situations. Once the individual expects reinforcement following a given behavior, failure to reinforce will reduce or extinguish the specific behavior. If the reinforcement is viewed as not contingent upon the individual's behavior, then its occurrence will not serve to increase the behavior as much as when the reinforcement is viewed as contingent. Expectancies in situations are determined by specific experiences and to some degree by the expectancies in other situations perceived as similar. Rotter (1966) has hypothesized that locus of control is important in understanding the nature of the learning process in different situations. It follows, then, that determining children's locus of control will help identify their source of reinforcement and assist in understanding their functioning in the classroom environment.

Measuring intelligence (using Mercer's definition of intelligence) and divergent thinking/creativity as well as identifying a child's locus of control will yield information as to how the child functions in the classroom. It is assumed that the effectiveness of a child's functioning in that setting will affect the teacher's perception of that
child. By understanding the interaction of intelligence, creativity, and locus of control and their effect on teachers' perceptions, information will be obtained which will be useful in assisting the teachers to help the children function more effectively within the classroom environment.
Chapter Two

Limited research has been conducted investigating the effects of students' intelligence, divergent thinking/creative ability, and locus of control on teachers' perceptions of students. It is the purpose of this study to investigate this interaction and determine the degree to which these variables contribute to teacher perceptions. The review of the literature for this study will be reported in three sections: intelligence, creativity as a learning style, and creativity as a personality trait.

Intelligence

The review of research conducted using Mercer's definition of intelligence is limited. As a result, the review of the literature in this section is confined to that research done by her. Mercer (1977) stated that the norms which govern public schools are those present in the dominant Anglo culture. As a result, the curriculum reflects the monolingual and monocultural ideologies of the school/culture implying that the dominant cultural group norms are "correct" and those individuals who do not agree with these norms are in error. This bias is evident in academic achievement and intelligence tests which have embodied the
Anglocentric values of the schools and now serve to reflect those expectations for academic performance. These standardized tests define what schools consider "normal" and "abnormal" academic performance. The results can be interpreted as a measure of the child's performance in relation to the norms of the traditional public school. Further, these tests predict the child's success and failure in academic roles in the school. The WISC-R will be used in this study to:

1) measure the learned behaviors linked with the student role within the culture, and
2) to predict those children who will have difficulty mastering this role.

It is assumed that children scoring high on the WISC-R will have successfully assumed the student role, whereas those children scoring low will not have mastered the role. Further, it is assumed that teachers would prefer children who have adapted to (are functioning well within) the student role, thus labeling them conforming (and desirable) children. The reverse would hold for non-conforming (less desirable) children.

Creativity - Learning Style

As previously mentioned, divergent or creative ability is both a facet of intelligence and learning style. In reviewing creativity as a learning style, Torrance (1970) stated that many children appear to learn more effectively in creative ways rather than by authority (e.g., teacher). These individuals learn more if allowed the freedom to use their creative/divergent thinking ability and make little
educational progress when teachers insist they learn only through them. In similar studies by Clark (1964) and Hamburg (1964), third to sixth graders were administered the Verbal and Figural Forms of the Torrance Tests of Creative Thinking to determine pupil preference for learning experiences. Two types of learning experiences were defined: 1) closed-structured learning where the goals are established by the teacher with the materials, methods, actions, and activity specified, and 2) open-structured learning where the goals are set by the teacher or pupils, but materials, activities, and methods are not specified. The characteristics of the closed-structured experience are dependence, conformity, teacher orientation, convergent thinking, rigidity, and an autocratic atmosphere. Characteristics of the open-structured situation are democracy, flexibility, emphasis on the child, independence, divergent thinking, curiosity, originality, and creativity. Clark (1964) computed a .32 correlation between the composite creativity measure and the measure of preference for open-structure learning experience (n=177). Hamburg (1964) obtained a correlation between the same variables of .24 (n=241). In both studies a higher correlation was computed between creativity and preference for open-structure learning than intelligence and preference for open-structure learning.

MacDonald and Raths (1964) used three levels of creativity as measured by the Torrance Tests of Creative Thinking to place fourth and sixth grade children in classroom tasks
varying in openness of structure, frustration, and passivity. Highly creative children were more productive on frustrating tasks than were the less creative children. The least creative students were less productive in open tasks whereas the most creative ones reacted less favorably to closed tasks. The conclusion can be drawn that students with varying levels of creative thinking ability will respond differently to different types of curriculum tasks or assignments. Similarly, MacKinnon (1961) reported that highly creative architects were described by the California Personality Inventory as flexible and strongly motivated to achieve, primarily in the situations where they were allowed freedom of thought and action rather than where they were required to conform. In addition, these individuals were not concerned with social restraints or other people’s opinions. Durrell and Chambers (1958) stated that elaborate thinking (a facet of creativity) was more evident in group discussions than in individual or whole class activities. These studies suggest, again, that creative individuals may have a learning style that does not readily fit into the traditional, highly structured classroom. It is further assumed that these children would be viewed less favorably by their teachers, as their differing learning style and personal characteristics may have a disruptive effect on the class.

Attempts have been made to determine whether different descriptive terms are applied to conforming (desirable) as opposed to non-conforming (less desirable) students. Hampe
(1975) investigated the differences in personality between a "learning disabled" child, one who was a behavior problem and is difficult to manage in a classroom, and a "normal" child who presented no problems in class. Based on the results of the Louisville Behavior Checklist as completed by the parents and the School Behavior Checklist completed by the teachers of the students, the "disabled" child was described as having a very high activity level with a large energy expenditure and actions which are random rather than goal-directed, being infantile rather than age appropriate, and displaying actions which are socially disapproved and result in little academic achievement. Long and Henderson (1974) determined that attentiveness (the extent to which the child follows directions) was deemed an important student characteristic by teachers. Children who experienced difficulty restraining their physical activities and thoughts to an assigned task were frequently considered a problem. It was found that teachers often explain difficult and non-conforming children as "problems," implying that there may be specific pupil characteristics which affect teacher perceptions of them as students.

Creativity - Personality Trait

Of interest in this study are two facets of creativity - elaboration and fluency. Of specific interest is their effect upon teacher perceptions. Elaboration is defined as the ability to develop, embroider, embellish, carry out, or elaborate ideas. Fluency is the number of responses minus
the number of duplications and irrelevant responses (Torrance, 1966). These two concepts will yield information as to children's creative/ divergent thinking ability as well as their preferred learning style.

In studying elaboration, both Ashton (1974) and Kaltsounis (1976) discovered specific personality traits associated with this concept. Ashton identified the following as being associated with high elaboration: industrious, disturbs existing organization and procedures, feels strong emotions, affectionate, non-conforming, inquisitive, energetic, curious, intuitive, and spirited in disagreement. Kaltsounis described high elaborators as relating ideas, preferring adventure to routine, imaginative, industrious, dislike doing things in a prescribed way, enjoyment of challenging tasks, willing to take risks, and intellectual curiosity. Both studies indicate that certain personality traits are associated with creativity—specifically elaboration. Also noted was the curious nature of elaborators and their dislike for the routine and organization which is frequently found in the classroom. Several of the traits mentioned above are ones found by both Hampe (1975) and Long and Henderson (1974) to be those of the non-conforming child. Again, it is assumed that a child's dislike of routine, organization, etc., may color both parental and teacher perceptions of expected student behavior.

Torrance (1962, a) discovered that when highly creative students were compared with highly intelligent students, the more intelligent were better known by their teachers and also
considered more desirable by their fellow students. Those students who were highly creative and highly intelligent were considered less desirable than the highly intelligent, less creative students. Children who were both highly creative and intelligent were viewed by their teachers as more unruly, dominant, independent, studious, and harder working than the students in other groups. Similarly, Getzels and Jackson (1962) determined that teachers preferred students with high IQs and less outstanding creativity scores to those children with outstanding creativity scores and lower IQs even though the latter group achieved more scholastically than expected. This preference may result in the teachers consciously or unconsciously rewarding the students in terms of their own ideals which appear to favor intelligence over creativity. Myers and Torrance (1961) found that teachers were not able to reinforce and encourage the creative capabilities in their students if their own values did not support creativity. As a result creative behavior was often punished rather than rewarded.

Torrance (1962,b) later investigated the concepts of under and overachievement, IQ, and creativity. Fifth grade students were given standard tests of achievement (Iowa), intelligence (Lorge-Thorndike), and creative thinking (Torrance) at the beginning of the school year and five months later. Under and overachievement were then estimated both in terms of expected growth and expected level. The children were divided into three equal groups on the basis
of creative thinking scores. In Teacher A's class five of seven highly creative children were underachieving based on their level of achievement. Six of the seven were underachievers due to their failure to make as much gain in achievement over the five month period as expected of children with their ability. All twelve of the children having low scores on the creativity tests overachieved on the basis of level of attainment. Eleven of the twelve overachieved in terms of gains during the time period. Teacher A's score on a creativity measure was the lowest of the nineteen teachers in the study. Being relatively uncreative herself, she probably did not reward or appreciate the creative thinking of her students. In addition, she did not allow her pupils to learn creatively as she did not prefer that mode herself. Classroom observations and identification of Teacher A's theoretical background suggest that she was probably intolerant of highly creative children and their preferred ways of learning. In Teacher B's classroom the four highly creative and ten low creative children were overachievers. This teacher attained the second highest score on the creative thinking test. The implications of this study indicate that the learning situation which encourages creativity may provide an environment in which both highly creative and relatively uncreative children learn more than would be expected based on their IQs. In a similar study Litman (1977) found that over a six year period children in open classrooms obtained higher achievement scores, held better attendance
records, and became increasingly more creative in their expressions than children in traditional classrooms. Elias (1977) also found that students in the moderately open schools scored highest on achievement measures while students in open schools scored highest on creativity measures. It appears that the open classroom encourages creative learning which, in turn, may help children make greater educational gains.

Further action on the above mentioned studies would suggest that schools consider providing both highly creative and uncreative children classroom experiences allowing them to learn through their preferred style, with a teacher tolerant of such a style, or both. Torrance's finding was similar to that of Getzels and Jackson (1962) and Myers and Torrance (1961), suggesting that teachers consciously or unconsciously reward students in terms of their own values. Again it is questionable whether creative/divergent thinking is perceived by teachers as a valued characteristic in a student and whether it is a trait typical of the conforming child.

Kaltsounis (1977,a) identified characteristics valued by teachers and by experts on creativity. A rank-order correlation of .20 was found between both groups' perceptions indicating that the most valued traits of each group were quite different. The teachers did not rank independence in thinking and judgement as highly as the experts. Shyness, bashfulness, and "always asking questions" were considered
undesirable traits. "Getting along with" others was viewed as more important than "getting ahead" of them. Being critical of others, stubborn, talkative, and having a tendency to regress were characteristics placed on the list the teachers valued least. Kaltsounis (1977,a) found similar results when he investigated black teachers' perceptions of the ideal student. In a later study, student teachers identified the following as characteristics valued most in students: considerate, socially well-adjusted, obedient, and does work on time. Characteristics valued least in students were disturbs organization in the class, non-conforming, negativistic, talkative, and stubborn (Kaltsounis & Higdon, 1977). Almost all of the above mentioned traits were ones identified by Torrance (1963) as personality characteristics of creative individuals which are not valued by teachers or society. An assumption could be made that children exhibiting these characteristics which are not valued by either teachers/schools or society will not be functioning well within the student role. Further, children who do conform to the expected role will probably be viewed differently by their teachers than those who do not conform to the role.

Locus of Control

The above mentioned studies have indicated that certain characteristics in a child affect teacher perceptions. Intelligence and creativity are two traits which are thought to have an influence. However, little research has been conducted
investigating the effect of student locus of control upon teacher perceptions. Based on Rotter's theory of locus of control, it is assumed that children with an internal locus of control would be viewed more favorably by teachers, as they do not require continuous reinforcement from the teacher. These children obtain it themselves. On the other hand, external children would be constantly seeking attention and approval from the teacher. This might have a disruptive effect upon the class and the teacher's perceptions of these children.

It is the purpose of this study to investigate the degree to which student intelligence, creativity, and locus of control influence teacher perceptions of pupil performance. The WISC-R will serve as a measure of the child's ability to function within the student role as defined by the culture. The creative/divergent ability of the child will be measured to obtain an estimate of his/her creative capacity and learning style. Locus of control will be identified to determine the individual's source of reinforcements.

Based upon the review of the literature in these areas, it is hypothesized that children scoring low on the WISC-R, high on creativity, and having an external locus of control will be viewed as non-conforming students by their teachers. As the intelligence test scores increase, creativity scores decrease, and locus of control becomes internal, the pupils will be perceived as more conforming.
Chapter Three

Subjects

The subjects were 63 children in two fourth grade classes attending a small rural elementary school in Southern Kentucky. The children ranged in age from 9 years, 5 months to 11 years, 4 months. There were 35 females and 28 males, of which 55 were white children and 8 were black children. The classroom environment was considered to be that of a traditional classroom.

Instruments

The Verbal Scale of the Wechsler Intelligence Scale for Children-Revised (WISC-R), a measure of intelligence, the Nowicki-Strickland Internal-External Locus of Control Scale for Children (CNS I-E), a measure of locus of control, and the Circles Test from the Torrance Tests of Creative Thinking were administered to each subject. The Teacher Perception of Student Role Performance (TPSRP) from SOMPA was completed by the teachers to determine their perceptions of each participating subject in their class.

WISC-R. Using WISC-R scores subjects can be placed on a continuum from high to low on a set of tasks which measure those skills needed to succeed in the student role.
The Verbal Scale was administered as a measure of student role conformity. The four subtests (Information, Similarities, Vocabulary, and Comprehension) from the Verbal Scale were administered because of their high correlations with that scale (Wechsler, 1974). Table 1 lists the inter-correlations of the subtests with the Verbal Scale of the WISC-R.

Table 1

<table>
<thead>
<tr>
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<th>Information</th>
<th>Similarities</th>
<th>Vocabulary</th>
<th>Comprehension</th>
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<td>9½ yrs.</td>
<td>.75</td>
<td>.75</td>
<td>.84</td>
<td>.70</td>
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<tr>
<td>10½ yrs.</td>
<td>.70</td>
<td>.75</td>
<td>.76</td>
<td>.63</td>
</tr>
<tr>
<td>11½ yrs.</td>
<td>.80</td>
<td>.76</td>
<td>.79</td>
<td>.72</td>
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Mercer (1977) calculated similarly high inter-correlations among the WISC-R subtest scores and the Verbal Scale for the SOMPA sample: Information $r = .76$; Similarities $r = .79$; Comprehension $r = .70$. In addition, Kaufman (1979) found, upon reviewing ten separate studies using ten different samples, that those four subtests of the Verbal Scale never loaded below .53 on the Verbal Comprehension factor. The subjects in the various studies ranged from normal whites, blacks, Chicanos, and American-Papagos, to mentally retarded, learning disabled, and psychotic samples.

A satisfactory estimate of internal consistency for the five subtests of the Verbal Scale was calculated with the split-half technique, corrected by the Spearman-Brown formula: $r = .94$ for 9½ year olds; $r = .93$ for 10½ year olds; $r = .95$ for 11½ year olds.
Finally, the decision to administer the Verbal Scale only as opposed to the entire WISC-R was based on the results of a study reported by Mercer (1977). She found the Verbal Scale of the WISC to correlate as highly or more highly than the Performance and Full Scale scores with the three factors (Competence, Sociability, Social Conformity) of the Teacher Perception of Student Role Performance Scale (See Table 2). The highest correlations were consistently found

### Table 2

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<td>.38</td>
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between the three factors and the Verbal score rather than the Performance or Full Scale score. No reliable relationship was noted between the Performance scores of the WISC and the interpersonal role skill factors of Sociability and Social Conformity. This indicated that the WISC is more closely related to the cognitive skills (Competence) associated with the student role than the social conduct (Social Conformity) and interpersonal relationships skills (Sociability) related to the role. Assuming the correlations of WISC-R scores and teacher ratings for children in the SOMPA sample would be approximately the same as those originally reported by Mercer using the WISC, it would appear
that the coefficients between the Verbal scores and the factor measuring scholastic performance (Competence) are adequate. It was also noted that the WISC-R is not an acceptable measure of interpersonal skills. However, the Verbal Scale does correlate as highly with these two factors as does the Performance Scale or the Full Scale score. The TPSRP can provide more reliable information as to that portion of the student role.

CNS 1-E. The CNS 1-E was developed as a valid and reliable measure of locus of control for children in grades three to twelve. The instrument is comprised of 40 forced-choice items with the child marking "yes" if the item is applicable and "no" if it is not. Bi-serial item correlations computed for the males and females at the third, seventh, and eleventh grades indicated that the item-total relationships are moderate but consistent for all ages. A satisfactory estimate of internal consistency was obtained using the split-half method corrected by the Spearman-Brown formula: $r = .63$ for grades 3 to 5; $r = .68$ for grades 6 to 8; $r = .74$ for grades 9 to 11; $r = .81$ for grade 12. Test-retest reliability was determined using three grade levels, six weeks apart; .63 for third grade, .66 for seventh grade, and .71 for tenth grade. Construct validity was studied and the CNS 1-E correlated significantly (third grade $r = .31$, $p \leq .01$; seventh grade $r = .51$, $p \leq .01$) with the Intellectual Achievement Responsibility scale, the Bialer-Cromwell scale ($r = .41$, $p \leq .05$ with 9 to 11 year olds), and the Rotter scale
A factor analysis revealed that a general factor is consistent across all ages accounting for 36% of the variance at the elementary level, 38% at the junior high level, and 41% at the high school level. Factor I focused on the general feeling of helplessness and failure to control or direct things occurring around the person. Factors II and III accounted for from 8% to 19% of the variance and were not as general across age. Factor II basically dealt with achievement and strength for both male and female elementary age children, whereas Factor III concerned itself with luck (Nowicki & Strickland, 1973; Nowicki, 1976).

The Circles Test. The Figural Form of the Circles Test from the Torrance Tests of Creative Thinking was administered to measure elaboration and fluency. The task utilizes nine circles approximately two inches in diameter. The subjects were instructed to draw as many unique and unusual pictures as they were able to in 15 minutes. More sheets of circles were available if desired. The subjects were also instructed to write down a title for each picture.

In the Repeated Figures Activity of which the Circles Test is included, a deliberate attempt is made to stimulate and encourage all four types of divergent thinking. Specific to this study, fluency (the number of responses minus the number of duplication and irrelevant responses) is stimulated by the instruction "see how many objects or pictures you can
make," and elaboration (the ability to develop, embroider, embellish, carry out, or elaborate ideas) by "put as many ideas as you can in each one and make them tell as complete and interesting a story as you can." The time limitation does not allow emphasis on all four types of thinking. As a result, individual response tendencies are evidenced. Higher elaboration scores are typically noted on the Circles Test (Torrance, 1966). The repetition of a single stimulus, as in this task, requires the ability to face the stimulus again and again and perceive it in a new and different manner.

The Circles Test yielded satisfactory test-retest reliability for both elaboration and fluency in a study involving 54 seventh grade subjects. Reliability coefficients of .61 for fluency and .74 for elaboration were obtained. Grover (1963) obtained a reliability coefficient of .69 on the Circles Test after testing and re-testing 101 ninth grade students one week apart.

Because of the multiple facets of creativity and the many ways through which it is exhibited, Torrance (1966) stated that to establish overall validity would be grossly inappropriate. Various studies have been conducted investigating the validity of the tests and the concepts of fluency and elaboration. These can be reviewed in the Norms-Technical Manual of the Torrance Tests of Creative Thinking.

**TPSRP.** The Teacher Perception of Student Role Performance consists of eighteen five-point semantic differential ratings. Three scales have been developed, Sociability,
Social Conformity, and Competence. Each has six ratings per scale. The adjective pairs associated with each of the three factors are as follows: 1) Social Conformity - kind/cruel, obedient/disobedient, not prone to anger/prone to anger, easy to discipline/difficult to discipline, cooperative/obstructive, patient/impatient; 2) Competence - intelligent/dull-minded, quick/slow, able to concentrate/subject to distraction, organized/disorganized, good memory/poor memory, persevering/quitting; 3) Sociability - extrovert/introvert, sociable/unsociable, warm/cold, colorful/colorless, friendly/aloof, cheerful/morose.

A factor analysis using a sample of 2700 elementary school children (900 black, 900 Hispanic, and 900 white) from four California school districts revealed that the factors were similar regardless of the ethnic group. Factor I (Social Conformity) accounted for 61.8% of the variance for white students and 60.96% for black students. High scores indicate emotional stability as well as high conformity. Factor II (Competence) accounted for 23.4% of the variance in the ratings for white students and 23.8% for black students. High scores are associated with high competence, intelligence, ability to concentrate, organization, memory, and perseverance. Factor III (Sociability) accounted for 14.8% of the variance for white students and 15.39% for black students. High scores indicate high sociability, tendency toward extroversion, warmth, and cheerfulness.
Procedure

The Verbal Scale (Information, Similarities, Vocabulary, and Comprehension subtests) of the WISC-R were individually administered to the subjects by one of two trained WISC-R administrators. The same examiner who administered the test also scored that profile. The CNS I-E and the Circles Test were group administered to each class. The examiner distributed the CNS I-E to the subjects and read the items aloud (See Appendix A for instructions). The subjects were allowed 15 minutes to complete the Circles Test (See Appendix B for instructions) and were provided with as many sheets of circles as they requested. The teachers were instructed to complete the Teacher Perception of Student Role Performance Scale on each child in their class who participated in the study. They were furthermore instructed to spend no more than five minutes completing the scale. The teachers' first impressions was the information desired.
Chapter Four

The purpose of this study was to examine the effects of pupil intelligence, creative ability, and locus of control on teachers' perceptions of children. In order to analyze the data, thirteen stepwise inclusion multiple regressions were performed on each of the three dependent variables (Sociability, Comprehension, Social Conformity), as shown in Table 3.

Table 3
Dependent and independent variable combinations for multiple regressions

<table>
<thead>
<tr>
<th>Variables studied</th>
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<tbody>
<tr>
<td>Intelligence (IQ)</td>
</tr>
<tr>
<td>Locus of Control (LofC)</td>
</tr>
<tr>
<td>Fluency (Flu)</td>
</tr>
<tr>
<td>Elaboration (Elab)</td>
</tr>
<tr>
<td>IQ, LofC</td>
</tr>
<tr>
<td>IQ, Elab</td>
</tr>
<tr>
<td>IQ, Flu</td>
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<tr>
<td>LofC, Elab</td>
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<tr>
<td>LofC, Flu</td>
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<tr>
<td>Elab, Flu</td>
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<td>IQ, LofC, Flu</td>
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<tr>
<td>LofC, Elab, Flu</td>
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</table>

The analysis was performed first on the total sample. The entire sample was then subdivided into three intelligence groups since intelligence correlated the most highly with the three independent variables. High, low and average intelligence groups were formed by including those subjects
one standard deviation above (IQ ≥ 122 as the High Group) and below (IQ ≤ 92 as the Low Group) the mean IQ of the total sample. The Average Group consisted of those subjects whose IQs were between the cut-off points of the High and Low Groups (IQs of 93 to 121). Multiple regressions were then performed for each group.

Portions of the following major hypothesis were supported by the results:

1) Children scoring low on the WISC-R, high on creativity, and having an external locus of control would be viewed by their teachers as non-conforming students.

The Low Intelligence (LI) group received a slightly higher score on the Social Conformity (SC) factor and significantly lower scores on the Competence (C) and Sociability (S) factors of the TPSRP than the High Intelligence (HI) group (See Table 4). They did receive slightly lower ratings on these factors than the AI group or total sample, but the difference was not significant. This group was also slightly more elaborate than the HI children as well as less fluent. The difference, however, was not significant.

Table 5 presents the correlations between the three factors of the TPSRP and the independent variables for the entire sample, HI, LI, and AI groups. The following was found for the LI group: \( r = .35713 \) elaboration and Factor SC; \( r = -.30834 \) IQ and Factor C; \( r = -.27878 \) fluency and Factor S and \( r = -.25360 \) elaboration and Factor S; \( r = .39872 \) elaboration and locus of control. None of the above correlations were significant.
### Table 4

Standard Deviations and Means for the Total Sample, HI, LI, and AI Groups

<table>
<thead>
<tr>
<th></th>
<th>SC</th>
<th>C</th>
<th>S</th>
<th>IQ</th>
<th>LofC</th>
<th>Elab</th>
<th>Flu</th>
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* p ≤ 0.01
** p ≤ 0.02  Significantly different from the LI group
Table 5

Inter-correlation Coefficients of the Three Factors and Variables

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* P<.01  
** P<.02  
+ P<.05  
++ P<.10
In sum, the results suggested that the children who scored low on the WISC-R were relatively uncreative as well as externally oriented. These children received higher scores on the SC factor and lower scores on factor C and S than the HI and AI groups or the total sample.

Portions of the second major hypothesis were supported by the results:

2) As intelligence scores increase, creativity scores decrease, and locus of control becomes more internal, the student will be viewed as more conforming.

The High Intelligence (HI) group obtained significantly higher ratings on the Sociability and Competence factors than the LI group. They did receive slightly higher ratings than the AI group or total sample but the difference was not significant (See Table 4). These children were significantly more internal and slightly more fluent and less elaborate than the LI group. The correlations of the variables and factors for the HI group yielded the following: $r = .15562$ fluency and Factor SC; $r = -.22460$ locus of control and Factor C; $r = .54553$ fluency and Factor S and $r = .53779$ IQ and Factor S. None of the above correlations were significant. Elaboration and fluency, however, correlated significantly ($r = .82719$) at the $p \leq .01$ level.

The HI group's Factor C and S scores were significantly greater than the LI group at the $p \leq .01$ level and locus of control was significantly more internal at the $p \leq .02$ level.
The children scoring high on the WISC-R also were creative and internally oriented. The teachers assigned these students lower scores on the SC factor but higher ratings than the other children on the C and S factors.

The total population yielded the following significant correlations: $r = 0.39463$ IQ and Factor C; $r = 0.45340$ IQ and Factor S, and $r = -0.47156$ IQ and locus of control, $p \leq 0.01$; $r = -0.27981$ locus of control and Factor C, $p \leq 0.05$; $r = 0.22275$ fluency and Factor SC; $r = -0.23381$ locus of control and Factor S, $p \leq 0.10$. Supplementary analyses yielded information as to the AI group. These children were slightly more fluent than the other groups. The difference, however, was not significant. The following correlations were found: $r = 0.24989$ fluency and Factor SC; $r = -0.28390$ locus of control and Factor S; $r = -0.44986$ locus of control and IQ; $r = 0.19321$ elaboration and Factor C; $r = 0.31827$ IQ and Factor S. IQ and Factor S correlated significantly at the $p \leq 0.05$ level, locus of control and IQ were significantly correlated, $p \leq 0.01$. Factor S and locus of control were significant at the $p \leq 0.10$ level.

The following inter-correlations among the factors were found: total sample - Factor C and SC ($r = 0.44747$), and Factors S and C ($r = 0.42603$) were both significant, $p \leq 0.01$. HI group - Factors C and SC ($r = 0.57169$); LI group - Factors C and SC ($r = 0.51211$) correlated, and Factors S and SC ($r = -0.73374$) were significant at the $p \leq 0.02$ level; AI group - Factors C and SC ($r = 0.47667$), and Factors S and C ($r = 0.53497$).
were both significant at the $p \leq 0.01$ level. For the total sample and the AI group, Factors C and SC significantly correlated. For the HI and LI groups these factors moderately correlated, suggesting that regardless of high or low intelligence, Factors C and SC are related.

Another way of analyzing the data was to calculate the amount of variance (in the TPSRP) accounted for by a single or a combination of variables. It was noted for the total sample that IQ alone accounted for 20.55% of the variance of Factor S and 15.57% of the variance of Factor C. Fluency accounted for 4.962% of Factor SC. Adding fluency with IQ accounted for 20.749% of the variance in Factor S. Similarly, when locus of control was combined with IQ, 16.703% of the variance of Factor C was accounted for. Although adding another variable to IQ allowed for better predictive ability, intelligence was still the single best predictor for the total sample.

In summarizing the results, the HI group received significantly higher scores on the Factor C and S ratings than the LI group (See Table 5). This group also obtained significantly lower CNS scores, indicating they were more internal than the LI group. The following significant correlations were noted: total sample - Factors C and SC, Factors C and S, IQ and Factor C, locus of control and Factor C, IQ and Factor S, locus of control and Factor S, fluency and Factor SC, locus of control and IQ. For the HI group fluency and elaboration significantly correlated.
Factors S and SC correlated significantly for the LI group. For the AI group the following significant interactions were found: Factors C and SC, Factors S and C, Factors S and IQ, Factor S and locus of control, and locus of control and IQ.
Chapter Five

Previous research has examined the influence of certain personality characteristics and stylistic differences of students on the perceptions of their teachers. This study investigated the effects of student intelligence, locus of control, and creative ability upon teacher perceptions. The results partially supported the findings of previous research. In investigating some of these variables, Torrance (1962,a) and Getzels and Jackson (1962) found that highly intelligent, less creative students were viewed as more desirable by teachers than highly intelligent, highly creative students. The present study found that intelligence, whether high or low, plays a major role in teachers' perceptions of students. Elaboration and fluency were also found to influence teacher perceptions. In this chapter the following will be discussed: interpretation of the results, limitations of the study, and implications for further research.

Interpretation of the results

The total sample's mean IQ (as listed on Table 4) was slightly above average and yielded a locus of control mean score slightly lower than that reported by Nowicki and Strickland (1973) for fourth graders (X= 18.44, SD = 3.58
for males; $X = 18.80$, $SD = 3.63$ for females; total $n=114$). Internal locus of control significantly correlated with Factors C and S. Although the correlations were low, this finding suggests that internal locus of control may be related to high ratings on these two factors. In addition, it was also noted that IQ and locus of control significantly correlated. This finding is consistent with previous research which suggests that internal locus of control is associated with above average intelligence (Nowicki & Strickland, 1973). The relationship between Factor C and S and locus of control was expected since IQ also correlated significantly with these same factors. Fluency appeared to be significantly correlated with Factor SC.

For the HI group, IQ and fluency correlated moderately but not significantly with Factor S, indicating that these characteristics contributed to the rating on the factor. Fluency also moderately correlated with both IQ and elaboration, which supported the findings of Viola (1977). In the current study as IQ increased, fluency also increased for the HI group. It would appear that this group is both fluent and elaborate when responding in the classroom, as indicated by the highly significant relationship between these variables. These children, being quite intelligent, may ask fairly complex or detailed questions of the teacher. They appear to have good social skills and are perceived as competent students by the teacher. It would seem that they possess some of the characteristics research has found teachers
desire most in students. However, these children received lower ratings on the SC factor than did the other groups. This finding was consistent with that of MacKinnon (1961), who found highly creative people to be unconcerned with social constraints. The current study suggests that teachers may state they prefer an intelligent child, yet see the creative child as non-conforming compared to other relatively uncreative children. This may lead to lower ratings on the conformity factor as the highly intelligent, creative child does not appear to fit well into the traditional classroom. These students probably frequently ask many questions, request more work than the teacher has prepared, or attempt to learn creatively and perhaps independently (i.e., the student prefers an unstructured teaching environment). As a result, these children may be viewed by the teacher as having a disruptive effect on the classroom. It is also probable that these students, because of their good social skills, will attempt to interact with other children. This tendency may also be negatively viewed and perceived as disruptive to the traditional classroom. Although teachers frequently indicate that they prefer bright children, it is questionable whether the intelligent child who possesses higher degrees of creativity fits well in the traditional classroom.

Elaboration and fluency negatively correlated with Factor S for the LI group. The relationship was not significant, however. This suggested that for this group,
as elaboration and fluency both increased, the rating on Factor S decreased. IQ negatively correlated with Factor C. Upon closer inspection of this finding, it was noted that some students who obtained IQ scores at the upper end of this group also received Competence ratings lower than those of students with IQs at the lower portion of this group. Elaboration moderately correlated with Factor SC, suggesting that as elaboration increased, the SC ratings increased. Both Factors S and SC, and Factors S and C were negatively correlated. As the Factor S rating increased, Factor C's decreased. Similarly, as S decreased, Factor SC ratings increased. The moderate correlation between IQ and elaboration suggests that for this population the two variables are related. External locus of control and elaboration also moderately correlated which was consistent with the findings of Glover and Sautter (1976). This finding suggests that externally controlled children might tend to conform more to traditional modes of responding which have been reinforced by significant others in the past. In the current study the LI group received slightly higher ratings than the other groups on the SC factor, indicating that these children were perceived by their teachers as slightly more conforming. These students do not appear to have good social skills or verbal skills, which may affect their interaction with peers. They are quite elaborate, yet their lack of fluency suggests that they may not complete assigned work as they may become elaborate because
they do not have "all the answers." These children probably have difficulty in an unstructured situation and as a result seek structure from the teacher. Since the LI students appear to have poor social skills and consequently receive little attention from their peers, the teacher may serve as their only source of reinforcement (external locus of control). The LI group was more conforming because they desired, and perhaps sought, structure from the teacher and adapted well to the traditional, highly structured classroom. These results were consistent with those of Elias (1977) who found a significant negative correlation between dependence and internal locus of control suggesting that external locus of control may be related to dependency in children. Further, it is probable that these children would function better in a structured environment. This, again, indicates that children may function more effectively in the classroom as well as learn more when allowed to use their preferred learning style.

Internal locus of control significantly correlated with Factor S for the AI group, indicating that internal locus of control was related to high ratings on this factor. This finding was further supported by the significant correlations between IQ and Factor S, and the significant correlation between IQ and internal locus of control. The group was slightly more fluent than the HI group, yet not as elaborate. These children probably ask questions and interact in the classroom, but are not as elaborate or complex in their
responses as the HI group. Further, these students may enjoy learning creatively, but also require some structure to function well. They are neither as conforming as the LI child, nor as non-conforming as the HI child.

The study's results are consistent with those of Torrance (1962,a) which stated that highly intelligent students were viewed as more desirable by fellow students (as suspected based on the Sociability rating on the TPSRP used in this study). Teachers described highly intelligent, creative children as dominant, unruly, studious, independent, and less desirable than highly intelligent, less creative children (Torrance, 1960). It appears that teachers prefer bright children who will conform to the more traditional classroom.

The classrooms that participated in this study were considered to be more traditional/conventional oriented classrooms as they were similar to those described by previous studies. Applebee (1977) compared the formal and informal teaching practices in open plan and conventional classrooms. The formal teachers used class teaching significantly more than informal teachers, engaged in a significantly greater proportion of teacher talk, did not permit pupil movement except for the purpose of lining for the teacher's attention, did not allow pupil choice, and used small groups as an organizational device, not for pupil planning. The informal teacher structured a network of activities which provided significantly more simultaneous
occurring activities and opportunities for pupil choice, encouraged small group work involving pupil planning, allowed significantly more pupil movement at their discretion, and valued pupil talk more than in the traditional classrooms. In fact, more than 80% of the language to which pupils were expected to attend to was from peers.

Since the two classes used in the current study were more traditionally oriented, it follows that children who interfere with the "structure" of the classroom environment would be viewed as non-conforming. This finding verifies Mercer's assumption that children who do conform to the student role, or portions of it, will receive higher ratings on the TPSRP. In this study, the LI group were socially conforming; thus received the higher ratings.

The degree of conformity to the expected student role may be associated with the child's self-concept. Highly intelligent and creative children are probably aware of their abilities and are able to obtain reinforcement by manipulating their environment (internal locus of control). As a result these children may not need to conform in order to obtain reinforcements/approval of the teacher. On the other hand, low intelligence, highly elaborate children are aware of their limitations and may have developed a more negative self-concept. These children, who have poor verbal and social skills, appear to be experiencing difficulty interacting with others. Being externally oriented, yet unable to obtain reinforcements from fellow students. LI students
conform more to the student role in order to gain teacher approval/reinforcements. Finally, AI children may be somewhat unsure of themselves and their abilities. As a result, they conform somewhat to teacher expectations. These children, however, do not require as highly structured an environment as the LI children but more structure than that preferred by the HI children.

The correlations between the WISC-R IQ and the three factors of the TPSRP differed from those found by Mercer (1977) using the WISC. In this study a significantly greater correlation between IQ and Factor S was found suggesting that for this population, intelligence was related to Sociability (See Table 6). The SC factor and IQ did not correlate.

Table 6

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The discrepancies between the results of Mercer's study and this study may, in part, be due to the differences in geographic locations and the disparate values associated with those areas. It is quite possible that children in Kentucky are taught values that children in California are not (e.g., "Children should be seen and not heard," or similar types of quotations). Kentucky is typically viewed
as being in the "Bible Belt" as well as being more traditionally oriented than California. In addition, Mercer's sample ranged across many classrooms and teachers whereas this study used only two classrooms and teachers.

**Limitations of the study**

One major weakness within this study was the small number of teachers involved. Since only two classrooms and teachers were used, the results were subject to those teachers' personal biases/perceptions. A greater number of teachers would have allowed for a more global view of teacher perceptions as well as helped control confounding. Randomly selecting five students from 30 or more classrooms and having those teachers complete the TFSRP would: 1) eliminate a great amount of teacher personal biases from the study, 2) give a better cross-section of teacher perceptions, and 3) enable a greater number of students and teachers to participate. The random selection of students from classrooms should yield a normal distribution of scores on all measures.

A second weakness in this study was the method of scoring for elaboration on the Circles Test. This was a rather subjective process. The procedure outlined by Torrance in the manual was used. However, the reliability of the scoring was questionable. The protocols were blindly re-scored by the examiner three days after the original scoring in order to check rater reliability. A score was
considered reliable if the second score obtained was \( \pm 2 \) points from the original. A list of criteria used for the scoring of elaboration is in the Appendix (C). In scoring for fluency, any response using more than one circle for an object (e.g., using two circles for a pair of glasses or a car) was given a fluency score of 1.

**Implications for further research**

Although the study may have been restricted because of the above mentioned weaknesses, it did yield some important implications. The results of this study suggest that teacher perceptions are influenced by IQ, fluency, and elaboration. The intelligent, creative child is viewed as a competent and sociable student, yet does not conform to the traditional classroom as well as the low intelligence, more elaborate child. The low intelligence, elaborate child requires the structure that the more traditional classroom offers and would probably function well within such an environment. Finally, the average intelligence child may possible by ignored as he/she is neither extremely bright nor dull. He/she tends to conform to the traditional classroom, yet might also profit from an opportunity to learn creatively.

Previous research (Myers & Torrance, 1961) has suggested that teachers tend not to reinforce and encourage creative capabilities in their students if their own values did not support creativity. Also, Torrance (1962,a) reported that some creative and low creative children learned more
in an atmosphere where creative thinking/learning was encouraged. Based on the findings of past research and this study, it is suggested that the highly intelligent and creative children be identified and placed in a classroom where they are allowed to learn creatively and with a teacher who encourages such a style. Those children of average intelligence showing creative tendencies may also prefer such a classroom. These children, however, may require a bit more structure. It is doubtful that average intelligence children would require as much structure as that provided in the traditional classroom. The low intelligence, elaborate child may well profit from the highly structured classroom. Thus, he/she should remain in such an atmosphere. By "matching" pupils and teachers, teacher frustration with children whose learning styles differ from their teaching styles would be minimized. In addition, it is highly probable that children who are encouraged to use their preferred style will make greater educational gains. In sum, it would be beneficial to both the children and the teachers for students to be placed in classrooms with teachers who encourage them to learn in their preferred manner. Identification of stylistic tendencies, then, would be required before assigning students to specific teachers/classrooms.

Stephens (1967), in a related approach, advocates a spontaneous approach to teaching where teachers adopt teaching styles which fit them, their personality, and own personal
style or those of their students. Teachers should not feel pressured into teaching in a specific mode because research has stated that this is "the best" or "most effective." Stephens stated that many teaching approaches have been found to be equally effective. Thus, the spontaneous schooling approach has been developed which advocates that teachers select teaching styles which best suit them and/or their pupils.

Because of the small number of subjects, caution should be exercised in interpreting the results of this study. Trends, however, were identified which are worthy of further investigation. In replicating this study the following suggestions should be considered:

1) A larger number of subjects should be used so that generalizations can be made about the findings. In addition, a greater number of teachers should also participate in the study in order to obtain a more global view of teacher perceptions.

2) It would appear that a child's locus of control does not influence teacher perceptions. Based upon these findings it might be more valuable to investigate the effect of another variable upon teacher perceptions.

3) As previously mentioned, the scoring of elaboration on the Circles Test is a subjective process. It is recommended that if this task is used again, rater reliability be statistically determined over a period of time. In this study the reliability was not statistically determined. Rather, a rough estimate was used.
4) A verbal form of fluency and elaboration should be administered. This form could yield additional information which might confirm the findings of this study or provide new data.

5) The effect of student self-concept may be a variable to investigate. It is assumed that children with high and low IQs have different self-images. This may influence the way teachers perceive the students. Also of interest would be the interaction of IQ, fluency, elaboration, and self-concept.

There are other implications for further research in the general area of teacher perceptions, as this appears to be a relatively unexplored subject.

1) Creativity has been found to influence how teachers view students, yet some facets of creativity may affect their perceptions more than others. Investigating the effect of all four facets (flexibility, originality, fluency, and elaboration) may provide valuable information by identifying those creative tendencies that are viewed as desirable and undesirable by the classroom teacher.

2) Teacher perceptions have been a difficult concept to measure. The development of the TPSRP has allowed for a relatively quick estimate which provides scores on three factors of teacher perceptions. One limitation of the TPSRP is the small number of total test items and the even fewer number of items associated with each factor. In order to
allow for more accurate statements concerning those factors, it would seem that additional test items would be necessary. In addition, techniques for behavioral observations might be considered. If researchers could behaviorally observe how teachers responded to/interacted with pupils, more information would be acquired. Questionnaires as the only source of information are limited in what is stated on an inventory and what occurs in a classroom may vary.

3) Additional information in this area could be obtained by interviewing the parents of the children. Parents' perceptions of certain characteristics of the child could be compared with those of the teacher. It may be that a child exhibits creative behavior at home, but those behaviors may be stifled at school. In examining parents' perceptions, creative characteristics may appear that did not appear in the perceptions of the teacher, thus a clearer picture of the child's learning style may be obtained.

Obtaining information about teacher perceptions and what student characteristics have the greatest influence can yield important information to be used in an educational setting. Prior research has indicated that teachers do, in fact, prefer certain characteristics in pupils and dislike others. It appears that many of these preferred traits are also ones that society deems desirable or undesirable. By better understanding what influences a teacher's perception of a child, information will be obtained which will
help teachers be aware of what behaviors they are or are not attending to in children. In addition, it is feasible that children could be placed in classrooms with teachers who could provide them with the environment in which they could most adequately function. Although the above is ideal, at the least, investigating what pupil characteristics influence teacher perceptions will yield information that will be useful in assisting the teachers to help the children function more effectively within the classroom environment.
Appendix A

Directions for the Nowicki-Strickland I-E Scale for Children:

"I am going to read you these questions. Please follow along while I read them aloud. If you agree with the question and that is how you really feel, I want you to circle "yes" over here (point). If you don't agree with the question and this is not how you really feel, I want you to circle "no" right here (point). There is no right or wrong answer for a question. This is not a test. What I want to know is how you really feel, so please answer your own questions without looking at your neighbor's. Remember, I am interested in how you really feel. Any questions?"
Appendix B

Directions for the Circles Test:

"In 15 minutes see how many objects or pictures you can make from the circles below. The circles should be the main part of whatever you make. With pencil add lines to the circles to complete your picture. You can place marks inside the circles, outside the circles, or both inside and outside the circles - wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures as you can and put as many ideas as you can in each. Make them tell as complete and as interesting a story as you can. Add names of titles below the objects. I have more sheets of circles if you need more."
Appendix C

Scoring for elaboration on the Circles Test:

1) A relevant response is defined as a response which contains the circles as an integral part.

2) A response in which the circle is used as a frame is considered relevant only if the response is presented as a picture and the circle is used as a "picture frame".

3) If the object in the "frame" uses the circle as the main element and it appears that the subject misunderstood or interpreted the instructions differently, a credit is used.

4) It is important to determine the number of ideas communicated by each object in addition to the minimum basic idea.

5) Each essential detail of the entire response is scored. Once that class of detail is scored, further evidence of the same class is not counted. In other words, each additional idea that contributes to the story the picture tells is credited with one point, but the repetition of the idea does not count.

6) Deliberate shading - not just going over the lines again is scorable.

7) Decoration that is meant as such is scorable.

8) Each major variation (not of quantity) of the design which is meaningful with reference to the total response (e.g., each circle serving as a new frame of a continuous story) is scorable.
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Raw Data
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