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An Analysis of Self Concept in Two Elementary Schools in Relationship to Sex, Grade Level, and Teacher

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AN ANALYSIS OF SELF CONCEPT IN TWO ELEMENTARY SCHOOLS
IN RELATIONSHIP TO SEX, GRADE LEVEL, AND TEACHER

by

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Bachelor of Science, St. Cloud State College, 1963
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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

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This dissertation submitted by Carl E. Edeburn in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota is hereby approved by the Faculty Advisory Committee under whom the work has been done.

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Permission

AN ANALYSIS OF SELF CONCEPT IN TWO ELEMENTARY SCHOOLS IN
Title RELATIONSHIP TO SEX, GRADE LEVEL, AND TEACHER

Department Center for Teaching and Learning

Degree Doctor of Philosophy

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Carl E. Edburn

Date

June 21, 1973

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ABSTRACT

Problem

This study investigated selected aspects of self concept in elementary school students and their teachers as measured by self report instruments in an initial and retesting situation. Attention was given to determining whether changes in the children's levels of self concept had taken place during the school year, whether differences in self concept were evidenced when compared by sex and grade level, and whether a relationship existed between the self concept of the students and the self concept of their teachers.

Procedure

The research was conducted in two Grand Forks Public Schools during the 1971-72 school year, and the sample investigated included students in grades three through eight, attending their respective school for the entire year and completing all of the pre and post-tests and the teachers assigned to these students.

The following three hypotheses were proposed and tested:

1. The children's levels of self concept will not change significantly during the school year.
2. The children's levels of self concept will not be significantly different when compared by sex, across elementary school grade level, and on the interaction of these two variables.

3. No significant relationship will exist between the levels of self concept of the students and the levels of self concept of their teachers.

The subjects included in the analysis of data consisted of 528 elementary school students and their 32 teachers.

Self concept and attitude toward school in grades three, four and five were measured on a pre and post basis by the primary form of the Self Appraisal Inventory (SAI), the primary form of the School Sentiment Index (SSI), and the Class Play (TCP). Self concept and attitude toward school in grades six, seven and eight were measured on the same basis using the intermediate forms of the SAI, the intermediate form of the SSI, and What Would You Do? (WWYD). These self report instruments were developed and distributed by the Instructional Objectives Exchange (IOX).

Teacher self concept was measured on a pre and post basis by the Index of Adjustment and Values (IAV). This instrument yields three possible indices of self concept. The first is an index of self in general, the second an index of self-acceptance, and the third, which is computed by subtracting the first index from an ideal self score, is described as the self-ideal self discrepancy index. The third index was used in this study.

The statistical procedures used included the related t test, two way analysis of variance of retest scores and a two way analysis of variance of residual gain scores. The .05 and .01 significant levels were used in the interpretation and evaluation of the findings.

Conclusions

In summary, the following major conclusions emerged from this investigation:

1. A general pattern of attrition of self concept and attitude toward school seemed to be in evidence when the initial and retest scores were investigated independently within individual grade levels at third and fifth grade. The greatest number of significant negative changes was evidenced by girls and all students.

2. No clear cut pattern of growth or attrition could be discerned between grades in the primary group. While significant growth was evidenced in several of the dimensions, significant attrition was evidenced in others.

3. While no significant differences between grades were noted in the intermediate self concept instrumentation, two significant decreases were noted in school sentiment.

4. The girls' levels of self concept and attitude toward school were higher than those of the boys in most of the nonsignificant and all of the significant dimensions of this investigation.

5. The self concept of primary students was significantly related to the self concept of their teachers in the primary group. Students who had spent the year with teachers who reported higher levels of self concept evidenced significantly higher residual gain scores than did students who were assigned to teachers who reported medium or lower levels of self concept.

CHAPTER I

INTRODUCTION

The elementary school experience may be considered to be one of the most important factors in the process of becoming a self-actualizing person. It may also become a frightening, frustrating and anxiety-producing experience for the young child.

As children grow and develop they learn and interact, not only in the arena of the world, but also within the arena of self. Each of these learning arenas is of great importance to the individual. The former deals in cognitive growth, which in turn may lead to social and economic recognition or status. The latter is intensely personal, is in a large part private, and is of vital importance to both personal happiness and public behavior. If in the elementary school cognitive growth is emphasized and affective growth ignored, the child may be subjected to a highly competitive weeding process that could seriously erode his feelings of personal adequacy. If affective growth is emphasized and cognitive growth neglected, the latter may be limited. In either case the child may be exposed to unnecessary frustrations and anxieties.

It would seem that any institution interested in enhancing human potential should be extremely concerned about facilitating continual growth in both arenas.

General Background of the Problem

In the past 50 years, the major portion of educational research has been focused upon determining how children learn to understand and interact with the external world. Wylie (1961) pointed out that the behaviorist and functionalist psychologies which dominated the American scene during the second, third and fourth decades of this century paid little attention to the study of self. This point of view was reinforced by Purkey (1970). Purkey (1970) indicated that, beginning in 1925, attention was directed toward "observable stimuli and response, (while) the inner life of the individual was labeled as beyond the scope of psychology" (p. 4).

Around the mid-century mark several theorists, Lecky (1945), Maslow (1954) and Allport (1955) aroused a renewed interest in the study of the self. Since that period of time, self theory research has been expanding in psychological research, but has failed to make major inroads into research in education.

Much work remained in the area of self concept research. Since the existing literature seemed to indicate that the self concept of a child was a significant factor in the elementary school experience, and ultimately in life, and in order to understand more thoroughly the effect existing practices have produced in children, this study was undertaken to investigate several aspects of self concept in elementary school children.

Definition of Self Concept

Forces that are exerted upon the child in the elementary school are generally reflected in his patterns of behavior and life

style. In other words, the quality of the total educational program in the elementary schools ultimately has a direct bearing on the intellectual and social capacities of persons of all ages (Ragan, 1960, p. ix).

A list of the objectives of most educational programs generally includes statements that allude to the enhancement of the total potentialities and capacities of each student. Certainly a major portion of these potentialities and capacities is affected by an individual's concept of self. In a review of literature concerning the nature of the self concept, McCandless (1967) stated:

All the relations are in the expected direction; persons with good self-concepts are less anxious, are judged to be generally better adjusted, are more effective in groups, and are more honest with themselves and less defensive (p. 263).

An amplification of this point of view was the theory that the self tends to corroborate itself. According to Combs, Avila and Purkey (1971):

Persons with positive views of self tend to behave in ways that result in experiences of success with the world and with the people in it. The feedback they get from the world in turn makes them far more likely to be happy and effective in their personal and public lives. This success serves to build a person's feelings about himself still higher. The circular effect is generally true in the opposite direction. Persons feeling inadequate behave in ways which tend to confirm their own inadequacy (pp. 147-148).

A person who thinks positively about himself should be better prepared to deal with the myriad of problems and decisions he is confronted with in the many aspects of living.

Several writers indicated that the self, or self concept, was indeed of primary importance. Combs and Snygg (1959) referred to it as "the individual's basic frame of reference, the central core around

which the remainder of the perceptual field is organized" (p. 146). Purkey (1970) affirmed: "The maintenance and enhancement of the perceived self is the motive behind all behavior" (p. 12). Rogers (1951) theorized: "Most of the ways of behaving which are adopted by the organism are those which are consistent with the concept of self" (p. 507).

This writer defined the self concept as a person's view of himself in relation to a milieu of situations which relate to his field of experience or his perception of his potentialities in unknown arenas of either a social or personal nature.

For the purpose of establishing an operationally definable referent for this study, the following definitions were used. Purkey (1970) defined the self as "a complex and dynamic system of beliefs which an individual holds true about himself, each belief with a corresponding value" (p. 7). Sherif, in the International Encyclopedia of the Social Sciences, (1968, Vol. 14) defined the self as follows:

Self is a developmental formation in the psychological make up of the individual, consisting of interrelated attitudes that the individual has acquired in relation to his own body and its parts, to his capacities and to objects, persons, family groups, social values, goals, and institutions, which define and regulate his relatedness to them in concrete situations and activities (p. 153).

All applications, references and treatments of the self concept were confined to these definitions throughout this study.

Definition of Other Terms

Attrition of Self Concept.--The breaking down, wearing away or weakening of the self concept and/or constant diminution of the self by personal and environmental influences.

Significant Others.--Persons who are significant forces in the life of a child. By general definition they may include parents, teachers, and members of the child's peer group. In this study, the term related to a child's teacher.

Residual Gain.--The score of a dependent variate less that portion predicted by means of a regression equation with one or more predictor variates.

Review of the Literature

In order to put the present research in context, a survey of research and related literature was undertaken to determine what had been theorized and investigated in the area of self concept. Specific consideration was given to the following areas:

1. Historical Perspectives of the Self Concept.
2. Contemporary Definitions of the Self Concept.
3. Formation, Development, and Stability of the Self Concept.
4. How the Self Concept Relates to Behavior.
5. Generalized Theory of Self Concept in the School Environment.
6. Research in Self Concept as it Relates to the School Environment.

Since this area of study is somewhat subject to different interpretations and descriptions of the self, the writings may at times appear to lack consistency in their treatment of self theory. This researcher has attempted to limit the review to selections that approach the area in a manner that is generally consistent with the operational referents previously specified. Also, it should be noted that research and theory differed in quality; hence, the same degree of confidence

could not be placed on all assertions and findings. An attempt was made to take this fact into consideration in the selection of material used in this review. Further, this writer attempted to delineate theoretical writings from research findings.

Historical Perspectives of Self Concept

The broad domain of the self or the concept of self as it is termed by contemporary psychologists and educators was, historically, a major area of concern of theologians, philosophers, essayists, playwrights and novelists.

The early writers such as Plato and Aristotle often described man's nonphysical psychological self in terms of spirit, psyche, or soul. In the fifteenth century, Martin Luther projected a concern for the secular as well as the spiritual well being of the self when he admonished parents to guard against the attrition of a child's self-reliance (Eby, 1931). Rousseau spoke of the need to enhance and maintain the natural emanation of a child's positive love of self, "amour de soi," and to protect it from the socially induced, competitive self pride, "amour propre."

Emerson stressed the importance of the development of the individuality of each child and warned against "tampering and thwarting and too much governing" which may hinder the child "from his end . . ."

Thoreau reflected a similar view when he stated:

If a man does not keep pace with his companions, perhaps it is because he hears a different drummer. Let him step to the music that he hears, however measured or far away. It is not important that he matures as an apple tree or an oak (Thoreau, 1942, p. 216).

The first discussion of the self as a legitimate topic for scientific study was presented by William James (1890) in his Principles of Psychology in which he devoted a substantial chapter to the "Consciousness of Self."

Shortly after the publication of James' work, American psychologists were confronted with several strongly held positions and theories concerning the manner in which this primary psychological unit was to be viewed. The Freudians emphasized the study of unconscious motivation, the introspectionists focused their attention on the process of introspection, the Gestaltists emphasized the value of insight and the study of the selective perceiver, while the behaviorists maintained that only concrete, observable behavior was suited to scientific research (Purkey, 1970).

After a period of disagreement and heated controversy, the behaviorism of Watson (1925) became the accepted theory of most psychologists and educational theorists.

The study of the self declined as an accepted concern of American psychologists for a period of approximately 20 years. During this interim, a few theorists expounded views concerning the significance of a person's concept of self relative to socio-environmental influences (Mead, 1934), personality (Lewin, 1935), and self-actualization (Goldstein, 1939).

A rebirth of concern for the self in the area of psychology was noted in Lecky's (1945) theory of self-consistency, which was described as a primary motivating force in the establishment of all human behavior. Lecky's theory was strengthened in 1949 by Combs

and Snygg (1959) when they identified the maintenance and enhancement of the self as the basic drive of the individual.

Rogers (1951) similarly presented a system of psychotherapy which focused upon the view that the self was of primary importance in the establishment of the individual's personality. This view was widely accepted by practitioners as the nondirective approach to personality adjustment. Purkey (1970) reported that "Roger's system went far toward linking together earlier notions about the self" (p. 6).

The effect of the self in relationship to self-actualization as identified by Goldstein (1939) was greatly enhanced by the work of Maslow (1954, 1956) in the mid-fifties. Allport (1955) emphasized the importance of the self in the psychological construct of the individual, and identified the need for self awareness.

As was evidenced by the aforementioned contributions to the rebirth of the study of self, the research was primarily in the areas of sociology, psychology and personality development. In the later years of the 1950's, several writers began investigating the effect of the self concept in the teaching-learning process. Some of the major contributions were made by Brookover, Patterson and Thomas (1962, 1964), Combs (1962, 1965, 1969, 1970), Coopersmith (1959, 1967) and Sears (1963, 1964).

A more complete discussion of the psychological antecedents and educational applications are described later in this chapter.

Contemporary Definitions of Self Concept

This writer determined that a survey of the various contemporary definitions of the self concept be undertaken to provide the

researcher with an adequate frame of reference in this review of the literature. For the most part, the definitions found were theoretical in nature, evolving out of the writings of leading authorities in the area. In a limited number of instances, this researcher has attempted to identify research studies that to some degree substantiate the theories.

Prescott Lecky (1945), in his theory of self-consistency, maintained that a person's personality was comprised of a structured, organized pattern of the universe that to him must at all times be complete and unified. If at any point the pattern is broken and the individual can not relate a consistency to a particular situation, he becomes for a variable period of time inconsistent and neurotic. He further indicated that the healthy self is able to begin immediately to structure an ambiguity and make it meaningful and acceptable to that individual's circle of consistency.

Newcomb (1950) described the self concept as "the individual as perceived by that individual in a socially determined frame of reference" (p. 328).

Bills (1951) theorized that the self is comprised of three factors:

Behavior is consistent with a behavior's perceptions about the world in which he lives. His perceptions are influenced by several variables including: his needs and values, the presence or absence of threat, opportunities for experience with stimuli, the perceivers' physiological state, and his beliefs about himself and other people. These later beliefs include factors such as the self concept, concept of the ideal self, and acceptance of self . . . (p. 3).

Rogers (1951) stressed the important role of the self concept in determining an individual's behavior: "Most of the ways of behaving

which are adopted by the organism are those which are consistent with the concept of self" (p. 507).

Combs and Snygg (1959) maintained that the self was a product of extrinsic as well as intrinsic stimuli:

The self is the individual's basic frame of reference, the central core around which the remainder of the perceptual field is organized. In this sense, the phenomenal self is both product of the individual's experience and the producer of whatever new experience he is capable of (p. 146).

S. I. Hayakawa (1963) indicated that "the basic purpose of all human activity is the protection, the maintenance and the enhancement not of the self, but of the self concept or ideal self" (p. 37). This point of view was reinforced in a study conducted by Stotland, Thorley Thomas, Cohen and Zander (1957). The participants were subjected to an experimentally induced success or failure on a puzzle task. Self evaluation of task performance was correlated with those who were made to fail, but not among those allowed to succeed. The conclusion was that people with high self esteem tended to protect themselves better than those with low self esteem.

Arthur Combs (1965) theorized: "The individual's self is the center of his world, the point of origin for all behavior. What he believes about himself affects every aspect of his life . . ." (p. 14).

Snyder (1965) maintained that the self concept is influenced to a great degree by social situations:

1. Behavior is directly influenced by the self concept.
2. The self concept emerges from the many social situations in which the individual is a participant; home, school, church, community, and peer group activities.
3. The self concept is modified as the individual participates in situations with varying expectations.
 - a. The individual self concept reflects the actual or perceived expectations of others (parents, teachers, peer groups, other adults) in the situation.

- b. The self concept is either enhanced and modified positively when supported by the group's expectations of the individual or threatened and modified negatively when threatened by the group's expectations (p. 242).

In a study of 298 college students Berger (1968) found that the above was more true for females than for males. Berger's study suggested that the self evaluation of the female college students "is more contingent on their certainty about others liking them. This relationship did not appear for males" (p. 442).

One writer described the self concept as a set of learned expectancies (McCandless, 1967). The view that the self concept is learned was substantiated to some degree by the research of Engel (1959). He investigated the stability of self concept in lower middle and middle class adolescent school children over a period of two years. The study was conducted with 104 eighth graders and 68 tenth graders using Q sorted items pre-judged for positive or negative tone. Both grades and both sexes increased in positiveness over the two year period, and significantly so at the grade interval ten-twelve.

Sherif, in The International Encyclopedia of the Social Sciences (1968, Vol. 14), defined the self as follows:

Self is a developmental formation in the psychological make up of the individual consisting of interrelated attitudes that the individual has acquired in relation to his own body and its parts, to his capacities and to objects, persons, family groups, social values, goals, and institutions, which define and regulate his relatedness to them in concrete situations and activities (p. 153).

Moustakas (1969) described the self as being made up of values and resources:

The self values are the interests, meanings and desires that get their initial impetus from the uniqueness of the individual, from the movements of his body, from his growing

awareness of life, from his wish to explore life on his own terms, from his knowing of what is personally satisfying and meaningful and what is not (p. 4).

Purkey (1970) defined the self as "a complex and dynamic system of beliefs which an individual holds true about himself, each belief with a corresponding value" (p. 7).

In another source (Combs, Avila, and Purkey, 1971), the self concept was defined as follows:

By the self concept is meant all those aspects of the perceptual field to which we refer when we say "I" or "me." It is that organization of perceptions about self which seems to the individual to be who he is. It is composed of thousands of perceptions varying in clarity, precision and importance in the person's peculiar economy (p. 39).

Although slight variations and differences emerged in the course of the survey, it was evident that most of the theorists were in general agreement concerning the definition of the self, or self concept. Perhaps of greatest significance was that all agreed that the self is organized, dynamic and a singularly important factor affecting all human behavior, which is in turn affected by internal as well as external stimuli.

Formation, Development and Stability of the Self Concept

Several writers have dealt with the formation, development and stability of the self concept. In the area of formation of the self concept, no empirical research findings were evidenced. The conclusions described or reported below should therefore be treated as theoretical and subject to the evaluation of the reader. The area of development of the self concept seemed also to be limited. Although two of the studies mentioned below dealt with the area,

the research conclusions were clearly peripheral and subject to interpretation. The studies dealing with stability of self concept seemed to be substantive.

Formation of the Self Concept. When the child learns to differentiate his thumb from other objects that are placed in his mouth, he begins to separate self from other. This activity was described by Sullivan (1953) and identified as the child's first anchorage point in the discovery of self. The second anchorage point was described as the awareness of other objects and persons from outside the child. Recognition of this type of awareness was reported to be in evidence when the infant at three months begins to engage in social smiles (Spitz, 1965).

Ira Gordon (1969) theorized that awareness of self "is both affective and cognitive" in that the discovery of one's own body "becomes both distinct and pleasurable" (p. 375). Gordon further maintained that the formation of self was a product of both extrinsic and intrinsic stimuli:

The child's view of himself is not simply a mirror image of the external events which surround his early life. From the very beginning it includes his own organism as it senses, feels, learns and assigns meaning to these external stimuli. The child learns who he is from what happens to him, from people who are dear to him, from the opportunities to deal with the objects and events in his immediate world, and from his own responses to the welter of stimuli. His self-esteem represents his unique organization of his own biological make up, the evaluation made of him by significant adults, and his own learning from trial and manipulation and feedback from his world. Cognitive development is inseparable from personality development (p. 376).

He further stated that a child can structure a self concept when he has "organized a portion of his world so that it is orderly and predictable--

and therefore manageable" (p. 376). Murphy (1962) indicated that such a structure is fairly well integrated by age three.

Purkey (1970) reported that the "self is enhanced by treatment which tells [the child] that he is wanted, liked, valued, and healthy" (p. 31). He also describes the first years of life as being critical in forming the child's self concept:

The self is formed from the experience woven in everyday life, concealed in everyday occurrences, hidden in the deep communications of unspoken feelings and affection. The child becomes the way he is treated (p. 34).

And, further, concerning the effectiveness of negative experience:

When respect and warmth are missing, where the child's questions go unanswered, where his offers of help are rejected, where his discipline is based on failure and punishment, where he is excluded from his parent's emotional life, and where his basic rights are abused, there his self is undermined (Purkey, 1970, p. 33).

Development of the Self Concept. Hawkes (1968), in describing a successful pre-school program, reported that a healthy self image is developed in an atmosphere that teaches:

"I like me because I am worthy of being liked and I can do things." "I like teachers because they like me and they help me." "I find pleasure in relationships with other children because I can trust them and I am safe with them" (p. 336).

This point of view was enhanced by Torrance (1970) who also described some of the negative consequences:

The fully human person will resist attempts to change him that threaten his self perception, but he will respond to situations that permit him to express and explore his potentialities. The person who gives in to these pressures loses touch with his own real feelings and becomes unable to experience in a genuine way. Finally, he is cut off from his own real interests and potentialities and loses his humaneness (p. 9).

A time-honored notion that children outgrow personality and behavior problems recognized in nursery school was contradicted in a study conducted by Westman (1967). In a follow up study of 130 nursery school students, he found that children who had problems tended to have problems of the same order in later life.

Long, Henderson and Ziller (1967) attempted to relate developmental theory to self esteem. After examining 373 elementary school students in grades one through six, they reported that grade in school was significantly related to individuation (uniqueness), self esteem, and social dependency.

Stability of the Self Concept. Engel (1959) investigated the stability of the self concept in 172 eighth and tenth grade students. Using a Q sort, he found that there was no significant difference between the older and younger groups with respect to self-self correlations over a two year period. This confirmed the author's hypothesis which was based on the assumption that "crystallization of the self concept is achieved earlier in development" (p. 212).

From such investigations, it was concluded that the self-concept is probably formed rather early in life, is a product of internal feelings interacting with external stimuli, develops subtly and overtly in a positive or negative manner, and is relatively resistant to change.

The Relationship of Self Concept to Behavior

Theories projected by recognized authorities in the area of education and personality development indicated that self concept was

related to the general behavior of a person. That such a relationship existed was generally reflected in research investigations dealing with personal and social relationships.

The Relationships of the Self Concept to Personal Behavior. The relationship of the self concept and personal behavior was evidenced in studies of uniqueness, creativity, threat, anxiety and emotional stability.

An overview of the general effects of the self concept relative to a child's behavior patterns was theorized by Moustakas (1956):

It is within the nature of the individual to actualize himself and become whatever he is meant to be, to explore his individual potential as fully as possible. He will resist all attempts to change him that threaten his perception of self, and will respond favorably to situations which permit him to express and explore his potentials. The individual will not respond to stimuli which are inadequate to him. The person is driven into a catastrophic situation not only because he is unable to react adequately, but because he is shocked and disturbed, sometimes so severely he is unable to react at all (p. 8).

A similar reflection was evidenced in a contemporary instructional guide (Ego Development Guide for Primary Grade Teachers, K-3 Project, Beacon, 1965):

Each individual must have some sense of adequacy, no matter how minimal, or he cannot cope with his own existence. The needs associated with a person's idea and appraisal of himself include both desires for enhancing his self-esteem and also striving to preserve the integrity or consistency of self (p. 2).

Purkey (1970) restated this theory in simpler terms when he wrote that the individual "is constantly striving to maintain, protect, and enhance the self of which he is aware" (p. 10).

Coopersmith (1967) reported that a child who was able to relate his perception of self to the arena of experience he encountered was more

capable of resisting pressures that affected his feelings of personal worth. He reported that experimental studies had found a relationship between self-esteem and uniqueness and that a person with high self-esteem maintained a fairly constant image of his capabilities and his uniqueness as a person. He reported that a similar relationship existed in the area of creativity:

Studies of creative persons show that they rank quite high in self-esteem. Presumably belief in one's perceptions and the conviction that one can force or impose order upon a segment of the universe is a basic prerequisite for major creativity (p. 4).

A similar relationship appeared to exist in the area of threat. Taylor and Combs (1952) in a study of 205 sixth grade students reported that students with higher levels of self acceptance demonstrated a greater ability to accept threatening statements. The inference for the obverse situation was evident. An amplification of the distance between students with high and low levels of self-acceptance reflected in the above was evidenced by Coopersmith (1967). He reported that persons with low levels of self esteem were less able to perceive threatening stimuli.

Another aspect of the relatedness of the self concept to personal adjustment was reflected in several studies of anxiety and general stability.

The work of Bruce (1958) indicated that a relationship existed between the self concept and anxiety. In a study of a program designed to enhance the self concept of 184 sixth grade students in eight different elementary schools, Bruce reported that a significant relationship (.05) existed between self acceptance and anxiety scores. Lipsett (1958)

arrived at a similar conclusion. After investigating the self concepts of 300 fourth, fifth and sixth graders, Lipsett reported that children with poor self concepts demonstrated significantly higher levels of anxiety than did those children with good self concepts. Using the same anxiety scale with a different measure of self concept, Coopersmith (1959) found that children who had high self-esteem were significantly less anxious than those with low self-esteem. Kowitz (1967) examined the relationship between test anxiety and self concept. He found that children seemed to learn and develop best in an atmosphere that is characterized by much challenge and little threat, and that evaluation may be perceived by the child as a "vicious" assault upon his self concept.

Engel (1959) investigated the stability of the self concept over a two year period. To establish levels of self concept, he administered a Q sort to 104 eighth and 68 tenth graders. The evidence indicated that those students who demonstrated negative self concepts were significantly less stable as measured by the Minnesota Multiphasic Personality Inventory (MMPI), than those who demonstrated positive self concepts. Further, at the end of the second year, subjects with negative self concepts on the second test were significantly more maladjusted (MMPI) than they were at the beginning of the study, while students with positive self concepts were significantly more adjusted (MMPI).

The research seemed to indicate that those students who possess healthy, positive perceptions of self were more unique, more creative, less threatened, less anxious and more stable than those with negative self views. As stated by Coopersmith (1967):

Less troubled by fears and ambivalence, less burdened by self-doubt and minor personality disturbances, the person with high self esteem apparently moves more directly and realistically toward his personal goals (p. 4).

The Relationship of Self Concept to Social Behavior. The rela-

tionship of self concept to social behavior was evidenced in studies that dealt with popularity, adaptability, social class and acceptance of self and others.

Coopersmith (1959) in a study of 102 fifth and sixth grade students reported that children who possessed high levels of self-esteem were significantly more popular than those with low levels of self-esteem. In a later report, the same investigator (1967) indicated that there was no clear-cut definite pattern of relationship between social class and view of self, but that high self-esteem led to greater adaptability to social roles in all group situations because individuals were better able to establish good social relationships with non-familiar peers.

The self as it related to the peer and ethnic peer group acceptance was the subject of an investigation conducted by Trent (1957). He studied the relationship among Negro children between expressed self-acceptance and expressed attitudes towards both Negroes and whites. A check list was used to estimate attitudes of 202 Negro children (ages nine to 18). A sentence completion test was utilized to estimate the degree of self acceptance. The study found:

1. Children who were most self-accepting expressed significantly more positive attitudes toward both Negroes and whites than did children who were least self-accepting.
2. Children who were ambivalent in self-acceptance expressed significantly more positive attitudes toward both Negroes and whites than did children who were less self-accepting.

3. There was no significant difference between ambivalent and most self-accepting children in attitude toward Negroes and whites (p. 30).

In a study of 507 fourth, fifth and sixth graders Reese (1961) reached a similar conclusion. He found that acceptance by best friends was curvilinearly related to self concept scores with highest acceptance in the group with moderate self concept scores and lowest in the group with low self concept scores. A further conclusion of this study was that acceptance by others was more strongly related to self concept than was acceptance by best friends.

The research indicated that a relationship existed between positive views of self and social acceptance, mobility and peer relationships.

Self Concept and the School Environment

A substantial body of generalized theoretical writings by leading authorities in the area of education and educational psychology concerning the relationships of a child's self concept to the environment of the school was evidenced in the literature. To establish a substantive frame of reference from which to examine and interpret specific or detailed research findings, as they relate particularly to the present study, this writer chose to include a report of such theoretical writings in this review.

Many writers theorized that the elementary school experience was crucial in the overall development of the person (Ragan, 1960). Of major importance to the young child was his initial and continuing encounter with the environment of the school. Sears (1963) maintained:

The elementary school represents two important aspects of the child's life. First it is his work--a serious business which provides opportunity for development of personal feelings of competence and self-esteem. Secondly, it represents an expansion of his world beyond the narrow confines of his family and home. The peer group of class mates, generally close to his own age, becomes an important agent in the socialization process (p. 6).

Positive experience was considered to be one of the most important factors in the process of becoming a self-actualizing person. Negative experience was characterized with frustration and anxiety and a hampering of the child's potential for intellectual and personal growth (Coopersmith, 1959). Educators concerned about the development of the capacities of the total child were admonished to be concerned about all possible influences the child may encounter in the school environment (Purkey, 1970).

Sears (1963) maintained that educational outcomes could be grouped into three categories. They included learning of academic subject material, the learning of skills which facilitate further learning, and learning of attitudes toward self and others.

McCandless (1967) spoke of two basic learning arenas. They included the arena of the world and the arena of the self. Others (Bloom, Engelhart, Furst, Hill and Krathwohl, 1956) have identified these arenas as the cognitive and the affective domain. Cognitive growth was described as a means to social and economic recognition and status, while growth in the affective domain (the area of the self) was described as being intensely personal, in a large part private, and of vital importance to both private happiness and public behavior (McCandless, 1967).

Many writers have theorized that the arenas complemented each other, and that if either was neglected, growth in the other would be limited.

McKim, Hansen and Carter (1959) maintained that children must be given the opportunity to make decisions, plan, make errors, and learn to accept their errors in order to feel secure in themselves.

Gordon (1969) compared negative self views to physical illness and physical handicap, and suggested that the present concern with providing for physical well-being be accompanied by a similar concern for enhancing positive self concepts.

Anne Long (1971) referred to the affective domain in terms of the students' identity. She stated: "Until children have established their identity they cannot and will not become genuinely involved in the pursuit of any academic discipline" (p. 295).

Paul Goodman (1971) theorized that all meaningful learning was probably generated from intrinsic motivation. He stated: "Nothing can be efficiently learned, or indeed learned at all . . . unless there is a reaching from within . . ." (p. 12).

Most educational programs have included statements that allude to the enhancement of the affective domain, or the students' self experience. And further, Krathwohl, Bloom and Masia (1964) indicated that it was not entirely fair to assume or imply that a concern for the affective domain was missing in most instructional activities. However, they went on to suggest that in the absence of systematic efforts to evaluate growth in the affective domain, implementation of recognized and acceptable techniques in the area of evaluating cognitive growth may well have overshadowed and diminished such concerns.

Many writers have been deeply critical of the school's treatment and/or avoidance of concern in the area of the affective domain. Purkey (1970) maintained that whereas the school should be prepared to enhance the potential of each child, the converse was generally true in that children were for the most part expected to adjust to the school's expectations or suffer the consequences of social and personal failure. Henry (1971) expressed a similar point of view when he indicated that the mind and spirit of the child was controlled rather than made free by the existing educational process. A student organization (Montgomery County Student Alliance, 1971) maintained that the school system in which the students were enrolled was based on fear, in that a major portion of the collective intellectual effort was expended learning to avoid punishment, humiliation, ostracism, ridicule, bad grades, and failure. John Holt (1971) generalized: "School is a place where children learn to be stupid--Children come to school curious; within a few years most of that curiosity is dead or at least silent" (p. 75).

Moustakas (1969) theorized that such an environment seriously jeopardizes a child's self values:

Self values are in jeopardy in any climate where freedom and choice are denied, in any situation where the individual rejects his own senses and substitutes for his own perceptions the standards and expectations of others (pp. 4-5).

He further projected the potentiality of self-alienation as a residual effect of these practices.

Martin Deutsch (1963) indicated that negative attitudes toward self and learning probably evolve in the school itself. Gordon (1969) indicated that the process may begin quite early in the child's educational career and thus set the stage for continuously poorer levels of

performance. If these assumptions were true, what elements in the school experience were projected as the causal factors of such alienation?

The importance of the teacher's role was emphasized by one theorist. Moustakas (1969) characterized the teacher as the living agent in the school with the responsibility of helping each child maintain "respect for his own individuality, a recognition of his particular interests, needs, and directions, and growth in self-identity" (p. 268). This view was reinforced by Todd and Heffernan (1970) when they characterized the teacher as "the principal agent for helping each child develop a sense of his own worth" (p. 505).

Combs (1965) indicated that alienation may have been the result of extra-school as well as intra-school humiliations. He stated that such experiences tended to "make them approach with caution new situations which held a potential for further self damage" (p. 100).

Cronbach (1963) theorized that negative influences may have been cultural in nature.

Rosenberg (1965) suggested that a certain amount of alienation was probably due to the emphasis placed on evaluation. He stated:

No educational system in the world has so many examinations, or so emphasized grades as the American school system. Children are constantly being ranked and evaluated. The superior achievement of one child tends to debase the achievement of another (p. 282).

Another element of the school environment criticized in the literature was the practice of promulgating peer group competition. Rosenberg (1965) suggested that the fierce competition that characterizes the American society and the school system may well be

generating widespread feelings of inadequacy. Another writer (Henry, 1971) maintained that peer group competition creates a constant environment of success at the expense of others, which in turn generates an inherent tendency to hate the success of others, and ultimately to hate others who are successful. Hailed as an effective means of motivation, and a characteristic of real life, competition was seen as affecting students in different ways. One writer (Yamamoto, 1972) reflected: "Some are driven strongly by a dream of success, while others are chased by a threat of failure" (p. 9). He went on to say:

The child is treated as worthless unless he is Number One and his life is nothing but a continuous test of his performance. He has no time to be a child because he must always be on the alert for another critical challenge and another and another. He knows of only one way to gain some semblance of love from others, but, alas this is to compete against them and beat them, precisely the worst imaginable way of endearment (p. 10).

Several critics, Cronbach (1963), Moustakas (1969) and Purkey (1970), theorized that alienation of the self in the school environment was probably due to a variety of causes. Purkey (1970) indicated that the causes of failure are indeed varied and complex, "but a continuous and central factor in both cause and effect is the way in which the student views himself" (p. 20).

Research in Self Concept as It Relates to the School Environment

It was obvious that serious charges had been leveled against the quality of the contributions schools purported to make in the area of enhancing the students' self concept. Did these charges hold substance? A review of the research literature indicated that studies had been conducted dealing with the attrition of self-concept and attitudes toward

school, the relationship between self concept and sex of the student, the relationship of self concept and acceptance by significant others, and relationship of self concept and achievement in school.

Attrition of Self Concept in the School Environment. Morse

(1964) indicated that the school was generally a secure and supporting place during the early years. He also indicated that as the child grows older his "confidence diminishes and school self-regard decreases" (p. 198). After administering a semantic differential to over 600 students in alternate grades, from 3 to 11, in an urban school system, Morse found a gradual decrease in professed self regard with age. Eighty-four percent of the third graders were proud of their work in school compared to only 53 percent of the eleventh graders. He concluded: "The school-self seems to grow less positive with time. Whatever else we have done, we have communicated a sense of personal failure to many of our pupils" (p. 198).

The research of Neale and Proshek (1967) tended to reinforce this finding. They reported that, among 350 children in fourth, fifth and sixth grades, a systematic change in school-related attitudes occurred so as to make their evaluations increasingly negative as grade in school increases; the same was true for an evaluation of self. In interpreting the data, they concluded:

One hypothesis that must be considered is that children learn to like school less as they progress through the grades. If so, it suggests the schools are falling down on one of the most proximate objectives of education, the cultivation of a positive attitude toward schooling (p. 243).

Similar findings were reported by Yamamoto, Thomas and Karnes (1969). These investigators examined school related perceptions of

middle-school children. Their sample consisted of 800 randomly selected sixth through ninth grade public school children in a North Central state. After administering a semantic differential they determined that evaluation of school related phrases was increasingly negative as grade in school increased. The same was true for an evaluation of self. In fact, on every factor there was a monotonic decrease in rating as the grade level increased.

Katz and Zeigler (1967) investigated the disparity between the real and ideal self as reported by 120 randomly selected students in grades 5, 8 and 11. They reported that the disparity increased with the age in all students. They further noted that the disparity was larger in the older and brighter children, and "was accounted for by both decreased self-evaluations and increased ideal-self image" (p. 94).

The implication made by the research of Carter (1968) established a need for further investigation. This study inferred that the attrition evidenced in the other research might have been the result of a self-removal process. Using a semantic differential to analyze general aspects of the self concept in 190 Mexican-American and 98 Anglo ninth graders in southern California, Carter found: "Little or no difference, in self view as assumed to be measured by the instrument, was found to exist between the groups" (p. 218). Since this result was far from the expected outcome, the Mexican-American students were then interviewed; and he determined that although they did not necessarily feel secure in the school situation, their home and peer relationships provided a secure environment. Carter concluded: "The Mexican-American child may remove himself subjectively from the environment that depreciates him, and place himself in a valid community that supports and

maintains the individual" (p. 218). Perkins (1958b) arrived at a similar conclusion. After determining that self-ideal self congruency had little or no relationship to school achievement in a study of fourth, fifth and sixth grade students, he reported: "Children who may not achieve well in academic skills can and do achieve in other areas of self-development" (p. 229).

The Relationship of Self Concept to Sex. Several of the studies in this survey were concerned with determining whether or not self concept levels were related to the child's sex.

General research in the area of social interaction (Sexton, 1969) indicated that men became social misfits much more often than women. Although these findings may or may not have been due to inadequately prepared statistics, based on cultural influences, Sexton reported that males outnumber females in mental institutions for children (3-1 ratio), successful suicide (70%), juvenile delinquency (5-1 ratio) and adult felony (97% male). A further inference of Sexton was that these proportions may well have been a result of institutional influences:

Often institutions that rear them [boys]--especially the home and school--do not help them become men, but on the contrary feminize them, keeping them dependents and minors. Thus many males are stunted in normal masculine growth, and rebelling against the conspiracy become outsiders and misfits (p. 10).

Bledsoe (1961) reported that the sex ratio in school rooms for the mentally retarded is often as high as two boys to one girl. After investigating the sex differences in mental health scores of a group of elementary school children, he reported that elementary school girls felt more adequate, behaved more maturely, had more personal relations, and maintained significantly better mental health than boys.

Fisher and Waentgen (1966) investigated the relationship between sex, English achievement and self concept in eighth grade students. In conclusion they reported that the boys constituted a higher percentage of discipline cases, received lower grades, progressed less well in school, dropped out of school earlier, and perceived themselves more negatively than did the girls. A further conclusion of the Fisher-Waentgen study was that teachers changed their behavior for boys in that they were less permissive than they were for girls and mixed groups.

A report by Gordon (1969) indicated that the sex role determines the child's reaction to the school environment. After describing several longitudinal studies he concluded:

In both the cognitive and affective aspects of the self, boys and girls tend to use different learning styles, tend to evaluate different aspects of self and world as important. The origins lie both in biology and in differential treatment (p. 377).

Sexton (1969) cited a study of ten cities which indicated that three out of four students regarded as problem cases by teachers were boys (Williams, 1949).

McCandless (1967) reported a study by Hill and Sarasen (1966) as finding that young boys are significantly more defensive than girls of the same age. Bentzen (1966) reported that teachers were more likely to fail boys and that two out of three students who fail were male.

Investigations of the relationship between sex and self concept and attitude toward school were found to be somewhat controversial. Yamamoto, Thomas and Karnes (1969) in concluding their investigation of school related attitudes reported:

Indeed, on every factor in both people and curriculum, there were no significant sex differences--Unfortunately, however, most of the interactions were significant and revealed many complex relationships among grade, sex, and concept which the main effects tended to obfuscate (p. 202).

One inconclusive study (Williams, 1970) revealed that girls consistently had better self concepts than boys. This investigator also projected some trends suggesting that boys who had male teachers had better self concepts than girls with male teachers. This view was reinforced in the investigation of Perkins (1958b). In the Perkins study it was concluded that: "The self-ideal self congruencies of girls generally are significantly greater than those of boys" (p. 230).

The research of Brookover, Patterson and Thomas (1962, 1965) reported conflicting viewpoints. In the former study, it was reported that seventh grade girls reported significantly higher mean self concept of ability scores than did boys. In the latter study, the investigators (Brookover et al., 1965) reported:

1. Sex differences in the relationships between self-concept of ability--appeared only in reference to parents. In this case the relationship was higher for females than for males.
2. There were no consistent sex differences in the relationships of self-concept of ability and achievement (pp. 207-208).

This view was reinforced by the research of Dyson (1967) who reported: "Boys and girls do not report significantly different patterns of acceptance of self or academic self concepts" (p. 405).

In an investigation of reading instruction and abilities, Davis and Slobodian (1967) found that teachers did not treat boys differently than girls and that boys read less adequately. The work of Yamamoto, Thomas and Karnes (1969) indicated a similar finding in the area of

all language arts. Although boys and girls reported different attitudes towards other specific curricular areas, no general differences were noted.

The Relationship of Self Concept and Significant Others. Several of the studies included in this study were concerned with determining whether self concept was related to acceptance by significant others.

One of the earliest investigations was conducted by Havighurst, Robinson and Dorr (1946). In this study of the development of the ideal self in 639 children and adolescents, ages eight to 18, he reported:

There is a great deal of evidence that the ideal self is deeply influenced by association with people who are in positions of prestige because they are older, more powerful and better able to get the desirable things of life than the child or adolescent who observes them. . . . The inference is clear that schools, churches and youth serving agencies influence the ideals of youth as much or more through the presence and behavior of teachers, clergy and youth-group leaders as through their verbal teachings (p. 257).

Although this study indicated that significant others from several areas of the child's experience may have possessed the potentialities of influencing the development of the ideal self in children, the discussion in this section was limited to the relationships established between children and parents and students and teachers.

The findings of Coopersmith (1967) indicated that self-esteem was significantly associated with early childhood experience, parental characteristics, parental attitudes and treatment.

A study conducted by a social psychologist (Kahn, 1966) indicated that problems may have been generated from role ambiguity. He stated: "Ambiguity about role expectations held by others and described

toward the self is stressful . . ." (p. 345). Relative to the role a child plays in the home, Helper (1955) reported that similarity between two parents' (mother and father) ideals for the child were found to be significantly associated with stability of the child's ideal self concept.

The major portion of the literature dealt with the role of the teacher as a significant other in the child's experience. Getzels and Jackson (1963) stressed the importance of the teacher's personality in the teaching-learning arena. They maintained that: "The personality of the teacher is a significant variable in the classroom. Indeed some would argue that it is the most significant variable" (p. 506).

The research indicated that the self concept level of children was generally related to the atmosphere of acceptance generated by the teacher, the teachers' perception of the children's levels of self acceptance and the children's perceptions of the teachers' levels of acceptance.

Spaulding (1963) reported that there was a significant relationship between an elementary student's positive self concept as reported and the degree to which teachers are calm, accepting, supporting, and facilitative, and a negative relationship between a student's self concept and teachers who are threatening, grim, and sarcastic. In a parallel study, Spaulding (1965) reported:

Superior students have better self concepts when teachers provide calm acceptant teacher-pupil transactions with private individualized instruction and concern for divergency, attention to task, and the use of task-appropriate procedures and resources (p. 117).

Purkey (1970) reported Rosenthal and Jackson (1968) as concluding that the teacher had the potentiality of modifying the child's self

concept via such subtle influences as facial expression, posture, touch, and how and when he spoke to the child.

Perkins (1958a), in a study of fourth and sixth graders, found that the teacher's perceptions of the children's self concept were in general positively and significantly related to the children's expressed self concepts. In a study of adolescent boys, Maehr, Mensing and Nafzger (1962) found that the approving and disapproving reactions of teachers were followed by corresponding increases and decreases in the subjects' evaluation of self. Purkey (1970) reported that Rosenthal and Jackson (1968) "have shown that a teacher's expectations have a significant influence on the student's performance" (p. 49).

Williams (1970) reported that elementary school children were very aware of the teacher's perceptions of their self concepts. A major investigation of 102 fifth and sixth graders conducted by Cooper-smith (1959) indicated a relationship between scores registered by teachers on a 14 item Behavior Rating Form (BRF) and the students' self ratings on the Self Esteem Inventory (SEI). He reported: "Only in a minority of cases was there a marked discrepancy between SEI ratings and the BRF scores" (p. 90).

Yamamoto, Thomas and Karnes (1969) reported Davidson and Lang (1960) as finding that during the elementary years a significant correlation existed between the child's perception of his teacher's feelings toward him and his own self image.

Another major study (Brookover et al., 1964) reported that the self concept was significantly and positively correlated with the perceived evaluations of parents, teachers and peers. In a later parallel

study (1965), Brookover et al. reported that "an increasing congruency is observed between the perceived evaluations of parents, friends and teachers . . ." (p. 208).

Some of the research dealt with programs designed to enhance the child's perception of self.

A study conducted by Bills (1952) indicated that students developed more positive attitude towards self when subjected to student-centered teaching. In a later (1956) parallel study, using the IAV, the same researcher reported: "During student-centered teaching there was an increase in the concept of self and acceptance of self, and a decrease in the difference between concept of self and concept of the ideal self" (p. 123).

A British study, conducted by Staines (1958), attempted to distinguish reliably between teachers who did or did not enhance the self of the students, and further to determine whether it was possible to teach so as to enhance the self. Using non-parametric statistical techniques he determined that both problems were substantiated positively.

An experiment conducted by Pietrofesa (1968), and designed to improve the self concepts of children by sensitizing teachers to the implications of elements of self-theory, was deemed to be successful by the author.

Moustakas (1969) conducted an experiment with 92 teachers in which he attempted to help them develop special relationships with children in order to increase self-esteem. "Sixty-seven of the teachers judged the experience to be worth while, none classed them as failures and sixteen were uncertain" (p. 224). Several writers

(Coopersmith, 1959; Trent, 1957; Reese, 1961) indicated that a relationship did exist between the self concepts of elementary school children and acceptance of others. Others (Berger, 1952; McIntyre, 1952; Omwake, 1954; Fey, 1954; and Luft, 1966) reported that a similar relationship existed between the self concept and the way adults perceived themselves and others. Combs (1965) theorized that the self concept of the teacher "is the point of origin for all behavior" (p. 14). He further stated:

This means that teacher education must be deeply concerned about developing the self of the fledgling teacher. How a teacher behaves after he leaves the portals of his college will be very largely determined by how he has learned to see himself and his relationships to his students . . . (p. 15).

Walker (1965) presented a similar view when he emphasized the importance of the teacher's self-image when he stated: "Basic in the development of the teacher-image is a realistic appraisal of self. This self appraisal includes an evaluation of both personal assets and personal liabilities" (p. 40).

Perhaps the substance of the potentiality of the existence of such a relationship was best theorized by Purkey (1970) when he stated:

Each teacher needs to view himself with respect, liking and acceptance. When teachers have essentially favorable attitudes toward themselves, they are in a much better position to build positive and realistic self concepts in their students (p. 46).

Self Concept and School Achievement. Several writers have investigated the relationship between the self concept and school achievement and in all cases surveyed a positive relationship was reported to exist.

Purkey (1970) reported:

Although the data do not provide clear-cut evidence about which comes first--a positive self concept or a scholastic success, a negative self concept or scholastic failure--it does stress a strong reciprocal relationship, and gives us reason to assume that enhancing the self concept is a vital influence in improving academic performance (p. 27).

Bruck and Bodwin (1962) studied the self concept and achievement levels of average children (I.A. 90-110) in grades 3, 6 and 11. Ten children of each sex, including five under achievers and five achievers, were randomly selected in each of the three grades. The study indicated that there was a positive relationship between educational disability and "immature self concept" (p. 182). This finding was substantiated by Farls (1967). Farls studied intermediate grade students and found that high achieving children of both sexes reported significantly higher self concept scores in general, and self concept as students, than the lower achieving children. The research of Irwin (1967) reported a positive correlation (significant at the .01 level) between self concept and academic achievement.

A study by Brookover et al. (1962) contributed a substantial amount of evidence relating self concept to school achievement. These investigators administered a scale designed to measure the general self concept of ability levels of seventh grade public school children. One of the findings of this report was that self concept of ability was significantly related (.57) to school achievement. In a similar study, Brookover et al. (1964) investigated the self concept and achievement levels of 1,000 seventh grade white students in an urban school system. Each student was given the Self Concept of Ability Scale to determine the children's self concept of ability in general and relative to specific subject areas. After factoring out I.Q., the student's reported

self concepts of ability and their grade point average were found to be significantly and positively correlated. After retrieving longitudinal data on an additional sample of 463 students in grades seven through ten (Brookover et al., 1965) and obtaining similar results, the researchers concluded that self concept of academic ability is associated with academic achievement at all levels. They also concluded:

1. The relationship of self concept to achievement is not associated with differences in school attended.
2. Socio-economic status has a low relationship to self concept of ability and achievement.
3. Self concept of ability is not merely a reflection of memory of past performance or past achievement.
4. Specific self-concepts in subject matter areas are less stable in predicting achievement than is general self concept of ability (p. 208).

Other findings of these three substantial investigations were reported elsewhere in this review.

One investigator reported that self concept was related to achievement in reading. Swaze (1966) as reported by Butler (1970) found that kindergarten and primary "children who rated high in self concept and high in social and intellectual development tended to rank high in reading achievement" (p. 108).

Dyson (1967) studied the relationship between ability grouping, acceptance of self, academic self concept and school achievement in seventh grade students. After investigating 323 children who had been grouped homogeneously and 244 children who had been grouped heterogeneously by ability, he found that high achievers reported significantly (.01) more positive academic self concept and that low achievers reported significantly (.01) less positive academic self concepts. It was concluded that: "Grouping procedures do not significantly effect either

facet of self concept, but success in school significantly influences academic self concept" (p. 405).

Summary

Although the school was described as a secure supporting place in the earliest years, many of the writers were deeply critical of the school's treatment and/or avoidance of concern in the area of the affective domain.

A number of sources theorized that the school environment was generally damaging to the self concept of students because of negative cultural influences, increased emphasis upon evaluation in the cognitive domain, the promulgation of peer group competition, and other varied and complex causes.

Several studies offered evidence of actual attrition of the self concept and attitude toward school as the students progressed from grade to grade. A few sources inferred that such attrition as generated in the school environment may well have been replaced by positive growth in self development in extra-school situations.

The research findings in this area were not entirely clear to this reviewer. Of particular concern was the seeming lack of research in the broad environmental arena of experience. The research of Perkins (1958b) and Carter (1968) inferred that if such attrition (or growth) as evidenced in the perceived self concept or attitude scores of elementary school children truly existed, it might well be due to situations, conditions and experiences in the extra-school environment. Additional research in the areas of attrition and/or growth of the perceived self and attitudes relative to family life, the peer group and other general areas seemed to be in order.

It was noted that several reports had shown that males had more difficulty in adjusting to elements in the social milieu. Studies of general factors in the school experience seemed to corroborate this assertion. The research relating such social and general aspects and differentiation to self concept and attitude toward school was controversial. The need for additional research in the area of sex differences as they related to self concept and attitude toward the elementary school experience was evident to this reviewer.

Several studies were concerned with the relationship between the self concept and interaction with significant others. It was theorized that the teacher's role was a significant variable in the development of self concept. Several reporters concluded that the degree of acceptance maintained by the teacher was related to the children's acceptance of self. Other reports included descriptions of successful programs aimed at enhancing the child's self-concept.

Some educational theorists indicated that the self concept of children was directly related to the self concepts of their teachers. Although research in this area was limited, several inferences were made concerning the potential existence of such relationships. Additional research dealing with the relationship between the self concept of teachers and students seemed to be necessary.

As mentioned previously, correlational studies indicated a positive relationship between self concept and achievement in school. It was important to note that achievement in school was not a singular concern in the area of enhancing the self concept of school children. As was indicated by previously mentioned studies (Perkins, 1958b, Carter, 1968, and Dyson, 1967) general self concept may have been

enhanced and developed in non-academic school settings and/or in the extra-school environment of the child. This writer felt that it may well have been necessary to identify and investigate the potentialities such learning arenas may have had for individual children in the unique individuality of their experiential base. As stated by Graham (1970);

Each student has to find for himself his unique essence, his own self-identity. When adults in the school are concerned only with judging his academic achievement, they cannot help him understand himself or his own niche in life. They have forgotten Whiteheads dictum: "the function of reason is to promote the art of life" (p. 243).

CHAPTER II

SCOPE OF THE STUDY

Traditionally, the schools have been recognized as agencies that have been designed to contribute to, rather than detract from, the total development of the child. Such contributions should be reflected in an improvement of the collective self concept in progressive grade levels within the structure of the present graded systems. However, serious charges have been leveled concerning the quality of the contributions schools purported to make.

Several writers (Cronbach, 1963; Goodman, 1971; Henry, 1971; Herndon, 1971; Holt, 1971; Moustakas, 1969; and Yamamoto, 1972) agreed that the schools as they presently exist were promulgating conditions that tended to detract from the total development of the child.

Did these charges hold any substance? Were the schools promulgating conditions that hamper the potential development of the children? It was hoped that this study might provide to some degree indications of the accuracy of these allegations. And, further, that these indications should help to clarify the implications as they affect the total picture of public education.

Statement of the Problem

The purpose of this study was to determine selected aspects of self concept in elementary school students. Specific attention was given to determining whether any noticeable growth or attrition in

self concept was evidenced in relation to the children's role as students, whether significant differences in self concept existed between school children of different sexes, and whether a relationship existed between the self concept of the students and the self concept of their teachers. Specifically, the following general problem areas were considered:

1. Determine whether growth or attrition of self concept exists within and between the several grade levels of the elementary school students.
2. Ascertain whether there is a significant difference between the self concepts of boys and girls.
3. Determine whether the levels of self concept of students was related to the levels of self concept of their teachers.

Definition of the Problem

The self concept of a person is a direct reflection of how he perceives himself in relation to a myriad of environmental situations. It was an assumption of this study that the school environment is a major contributory factor in the formation of a young child's concept of self.

In Grand Forks, North Dakota, where this research was conducted, two elementary schools were funded by the United States Office of Education for a pilot project in the development of self concept. This project was entitled Human Awareness Through Self Enhancing Education (HATSEE), and followed the 12 general processes (see Appendix) outlined by Randolph and Howe (1966) in their book Self Enhancing

Education; A Program to Motivate Learners (SEE). Project emphasis was directed at enhancing the self concepts of the school children via inservice training of the professional staff. One of the authors (Randolph) was present during the opening session to introduce the SEE program to a group of selected educators and to assist the project directors in organizing the remainder of the program.

In order to assess certain aspects of the project, this study was undertaken to ascertain existing levels of self concept as measured in a pre and posttesting situation. The specific research hypotheses were:

1. The children's levels of self concept will not change significantly during the school year.
2. The children's levels of self concept will not be significantly different when compared by sex, across elementary school grade level, and on the interaction of these two variables.
3. No significant relationship will exist between the levels of self concept of the students and the levels of self concept of their teachers.

Assumptions of the Study

The findings, conclusions and recommendations from this study were limited to situations similar to those which existed during the study. The use of two testing periods, one at the beginning of the school year and the other near the conclusion of school in the spring, limited the conclusions specifically to that period of time.

This study was delimited to elementary school students, in grades three through eight, and their teachers at Grand Forks, North Dakota, in the Carl Ben Eielson and Nathan B. Twining Elementary Schools during the 1971-1972 school year.

Since the study was limited to the children of military personnel living on or around a military establishment, the findings might not necessarily apply to children of a civilian population.

Another limitation of the study was that two different schools were used in the permutation of grade levels. Since alternate grades were chosen in each building, continuity was obstructed to some degree.

A further limitation of the study was established by the instrumentation. The significance of the findings depended largely upon how well the instruments measured what they purported to measure. Existing levels of positive self concept were limited to those levels established by the instruments.

CHAPTER III

DESIGN AND PROCEDURES

Research Population

The research population was selected from students attending and staff employed by two elementary schools in Grand Forks, North Dakota, during the 1971-72 school year. These schools were chosen to participate in a pilot project designed to enhance self concept and attitudes of students and staff. At the time of this study the project was in its second year of operation and was funded during 1971-72 by the United States Office of Education under the Elementary and Secondary Education Act, Title III, P.L. 89-10, as amended. The name of this project was Human Awareness Through Self Enhancing Education (HATSEE).

The project objectives for the 1971-72 school year were as follows:

1. The Trainees (staff members who participated in a 30 hour workshop with Norma Randolph) will increase their understanding of self-insight and/or personal change, as measured by the Self Enhancing Education Trainee Scale.
2. The Trainees will increase their skills in understanding other's feelings and ideas and in dealing with interpersonal conflict and misunderstanding as measured by the Self Enhancing Education Trainee Scale.

3. The staff of Eielson and Twining Schools will learn the self enhancing education philosophy and technique for nurturing self enhancement in students as measured by the Self Enhancing Education In-service Reaction Scale.
4. The Staff will implement communicative techniques and processes as measured by The Self Enhancing Education Implementation Inventory.
5. The Learner (student) will demonstrate changes in self concept, motivation, aggression, and learning as measured by pre and post administration of the AML Behavior Rating Scale.
6. The classroom teachers will demonstrate their competencies of conditioning the learner for developing self concept as measured by interaction analysis.
7. The classroom teacher will, through pre and post assessment, demonstrate an improvement in skill attainment for diagnosing and removing pupil learning and developmental disabilities.
8. The learner will demonstrate improved success as measured by accepted scales of attainment.
9. The learner will demonstrate improved self concept as revealed by measurable data from attitude inventories through group and individual assessment.

These were of course the behavioral objectives which were stated on the proposed application. These behavioral objectives were changed; this was not to say that the general goals had in any way been changed; but rather, that the changes were made by the evaluator to better measure

aspects of the HATSEE program. It was felt that the instruments actually used yielded significantly more useful information than those instruments that were originally proposed. The newly stated behavioral objectives were:

1. (Proposal objective a.) Educators receiving formal SEE training (Randolph - 30 hours) will develop an increased appreciation of the relationship between their feelings and behavior as measured by the Index of Adjustment and Values.
2. (Proposal objective b.) Educators receiving formal SEE training will further develop their appreciation of others' feelings and ideas as measured by the Philosophy of Human Nature and the Ideal Child Checklist.
3. (Proposal objective d.) The staff will implement communicative techniques and processes as measured by The Self Enhancing Education Implementation Inventory.
4. Educators' ability to implement the self-enhancing philosophy will be reflected in these four ways:
 - a. (Proposal objectives f. and i.) Increased student self-concept as measured by the What Would You Do? and the Class Play.
 - b. (Proposal objective c.) Increased student appreciation of the several dimensions of school as measured by the School Sentiment Index.
 - c. (Proposal objective e.) The several dimensions of the Self Appraisal Inventory.

- d. (Proposal objectives g. and h.) Increased student learning as measured by the ITBS.

The above objectives were designed and implemented by officials designated by the Grand Forks Board of Education.

This study was designed as part of a team effort and is therefore an integral portion of the overall project evaluation (Williams, Beebe, Buzahora, Edeburn, Koller, and O'Shea, 1972). Its purpose was to establish baseline data in the area of the affective domain and was limited to the evaluation of objectives A, D₁, D₂, and D₃. The evaluation of the remaining objectives was undertaken by other members of the team. Those persons interested in the design, implementation and evaluation of the HATSEE program (objectives B, C, and D) are directed to read Koller (1972), while persons interested in the relationship between cognitive and affective domain growth can read Beebe (1972) for a general evaluation of objectives B and D, or Buzahora (1973) for an indepth study of objective D. The overall project evaluation was reported in Williams et al. (1972).

The two schools involved in the project were the Carl Ben Eielson and Nathan B. Twining Elementary Schools. These schools were located adjacent to the Grand Forks Air Base and served the children of those military personnel living on or near this establishment. As of the beginning of school in September, 1971, enrollment and staffing populations were as follows:

1. Twining Elementary - 1209 students in grades kindergarten through eight.
2. Eielson Elementary - 822 students in grades kindergarten through eight.

3. Twining Elementary - 52 professional educators.

4. Eielson Elementary - 45 professional educators.

The research population for the HATSEE evaluation was chosen by the project officials and included all members of the professional staff. Complete data were available for 83 professional educators. Students in grades three through eight were selected for initial and retesting in the following manner:

1. Twining Elementary - all students in grade three (N=119).

2. Eielson Elementary - all students in grade four (N=73).

3. Twining Elementary - all students in grade five (N=103).

4. Eielson Elementary - all students in grade six (N=58).

5. Both Schools - all students in grade seven (N=95).

6. Both Schools - all students in grade eight (N=80).

Staff and students in the research population were tested initially in the fall and retested, using the same instruments, near the close of the school year (in April, 1972). The tests were administered by the project officials, except for the ITBS which was administered by the classroom teachers. Between the initial testing and retesting some students withdrew from the project schools reducing the size of the research population.

Sources of Data

The sources of the data used in this study were the following:

1. Students selected by the project officials for initial testing and retesting during the 1971-72 school year.

2. Administration of the Self Appraisal Inventory to the selected students early in the fall and late in the spring of the 1971-72 school year.

3. Administration of the School Sentiment Index to the selected students early in the fall and late in the spring of the 1971-72 school year.
4. Administration of the Class Play or the What Would You Do? to the selected students early in the fall and late in the spring of the 1971-72 school year.
5. All the professional educators employed during the 1971-72 school year.
6. Administration of the Index of Adjustment and Values to the professional educators early in the fall and late in the spring of the 1971-72 school year.

Instruments

The instruments used in this study were the Self Appraisal Inventory (SAI), the School Sentiment Index (SSI), the Class Play (CP), the What Would You Do? (WWYD), and the Index of Adjustment and Values (IAV).

Four of the instruments used in this study were developed by the Instructional Objectives Exchange (1970a, b). The Instructional Objectives Exchange (IOX) was established in 1968 by the University of California, Los Angeles Center for the Study of Evaluation to:

1. Serve as a clearinghouse through which the nation's schools could exchange instructional objectives.
2. Collect and develop measuring techniques suitable for assessing the attainment of the objectives available through the Exchange.
3. Develop properly formulated instructional objectives in important areas where none currently exist.

Development of the IOX instruments, used in the evaluation of the HATSEE project, was supported by the combined efforts of a number of state Title III programs. The Title III officials of these state programs, recognizing the lack of affective objectives and measures which might be used in connection with educational needs assessment and evaluation enterprises in their state, cooperated to support development of objectives and measuring devices by the IOX (1970a, b).

In January, 1970, representatives of the Title III programs in approximately 40 states gathered for a meeting in Washington, D. C., to discuss the availability of objectives and measuring devices which might be used for their educational needs assessments and evaluations, particularly in the affective domain. Representatives of the IOX (1970a, b) joined with those educators on that occasion to indicate that after approximately 18 months of nationwide searching only a few affective objectives and measures had been located by the Exchange. It became apparent that if rapid progress toward development of affective objectives and measures was to be made, some individual or agency would systematically have to undertake the development work.

The Title III representatives decided to pool certain of their financial resources and cooperatively support a development project by the IOX (1970a, b). The assignment was to produce objectives and measures which might be employed for educational needs assessment and education evaluation in specific affective areas. After considerable discussion regarding the affective dimensions most in need of assessment, two high priority affective areas were identified, namely, the

learner's (1) self concept and (2) attitude toward school. IOX was commissioned to develop a number of objectives in these two fields and to make these available, not only to the Title III projects, but to other educators in need of such measures.

Because development efforts were to focus on the preparation of objectives and measures which could be used to assess the quality of an educational program, e.g., a program intended to improve learners' self concepts and attitudes toward school, the IOX (1970a, b) had one significant advantage over predecessors who had developed similar or related measures. It did not have to defend the validity of a given self concept or attitudinal measure for an individual child. The major focus was in the area of developing measures to be used for group assessment purposes. Therefore, some aberrance in the individuals' responses to the measures could be tolerated, since for the most part, the devices would be employed with groups.

The approach used by the IOX (1970a, b) to develop objectives and measures was predominantly a criterion-referenced measurement approach in which an objective was formulated, as clearly as possible, and then measures were devised to assess the attainment of the objective. The emphasis was on the congruence between a measurable stated objective and the measuring devices based on that objective. Efforts were made during the course of this study to establish measures of reliability and stability for these instruments.

The Self Appraisal Inventory by the Instructional Objectives Exchange (1970a) is a direct self report test designed to measure positive self concept. It is available in three levels: primary, intermediate, and secondary. In this study the primary level was

used with students in grades three, four, and five of the research population. The intermediate level was used with students in grades six, seven, and eight of the research population.

The primary level SAI is a 40 item test requiring yes-no responses to a series of questions dealing with self concept along four dimensions or subscales: (1) peer, (2) family, (3) scholastic, (4) general. The intermediate level SAI is an 80 item test requiring true-untrue responses to statements dealing with the same four dimensions or subscales. These self report devices attempt to secure, in a rather straightforward fashion, a child's responses to questions or statements which pertain to the four dimensions. Three of these four dimensions (family, peer, scholastic) are viewed as arenas in which one's self concept has been or is being formed. The fourth dimension reflects a more general, global estimate of self esteem. A composite score will provide a global estimate of self concept.

The School Sentiment Index by the Instructional Objectives Exchange (1970b) is a direct self report test designed to measure attitudes toward school in general and toward several dimensions of school. Primary, intermediate, and secondary level forms were available and the primary and intermediate tests were used with the same grades as the SAI.

The primary level SSI is a 30 item test requiring yes-no responses to a series of questions dealing with attitudes along five dimensions or subscales: (1) teacher, (2) school subjects, (3) school social structure and climate, (4) peer, (5) general. The intermediate level SSI is a 75 item test requiring true-untrue responses to a series of statements which pertain to the above

five aspects of attitude toward school. On each level, a composite score will provide a global estimate of attitude toward school.

The Class Play by the Instructional Objectives Exchange (1970a) is an inferential self report in which the students will display self concepts. This instrument asks the student to pretend that children are to be selected for a play. The respondent is asked to select the roles for which his teacher and members of his family would choose him. The number of "yes" responses to favorable roles indicates the total score for the respondent. The assumption is that an individual who has a positive self concept will perceive that others would be likely to cast him in roles which carry a positive image. This instrument contains 20 questions at the primary level and was administered to students in grades three, four, and five of the research population.

The What Would You Do? by the Instructional Objectives Exchange (1970a) is an inferential self report in which students display positive self concepts by their responses to a series of hypothetical questions and alternative actions. Certain of the actions are consistent with behavior of one who has a positive self concept, while others are associated with behavior of someone who has a negative self concept. The 20 item inventory presents a series of fictitious situations, each followed by four actions or interpretations. The person completing the inventory is asked to choose one of the four alternatives that is most like what he would think or do. Two of the four choices are designed to reflect the behavior or thoughts of one who possesses a positive self concept, two choices to reflect a negative self concept. The number of positive alternatives selected by an individual constitutes his score. The situations posed in the instrument were drawn from

the literature regarding self concept, principally the writings of Coopersmith and Wylie, and deal with the following situations: (1) the need to accommodate, (2) expectations of acceptance, (3) courage to express opinions, (4) willingness to participate, (5) expectation of success. This inventory was administered to grades six, seven and eight of the research population.

Psychometric data on the IOX instruments were reported recently by Popham (1972). This information was presented in Table 1. It was recognized that the reliability coefficients as reported were relatively high for instruments dealing with evaluation in the affective domain. As Popham (1972) stated:

Those educators who have been accustomed to expect reliability coefficients of approximately .80 to .90 must recall that one might anticipate more stability and perhaps more internal consistency from a measure of mathematical competency or intellectual aptitude than from a measure of one's more vacillating self-esteem or attitude toward school (p. 11).

Equivalent internal consistency indexes were evidenced in the analysis of the HATSEE data. These coefficients were reported in Table 2.

The Index of Adjustment and Values was chosen by the program officials to measure the levels of self concept of the professional staff. It was decided that of the self report devices available, this instrument had the content validity to best fit the evaluation requirements of the study. Although only the first half of the test was administered, it was not felt that this would affect the validity unduly as Bills (1957) noted:

It is, therefore, not too surprising to find that the "self" and "others" forms of the IAV are significantly correlated but the low correlations . . . show that the forms are, in a large part, independent measures (p. 15).

TABLE 1

INTERNAL CONSISTENCY AND STABILITY COEFFICIENTS OF THE IOX
INSTRUMENTS AS REPORTED BY POPHAM (1972)

Instruments	Internal Consistency Index (r_{ic})	Test-Retest Stability Index (r_s)
Self Appraisal Inventory		
Primary		
Peer	.60	.29
Family	.61	.50
Scholastic	.62	.58
General	.50	.43
Composite	.37	.73
Intermediate		
Peer	.82	.85
Family	.70	.83
Scholastic	.81	.78
General	.80	.75
Composite	.84	.88
School Sentiment Index		
Primary		
Teacher	.62	.61
Subject	.49	.68
Structure	.48	.55
Peer	.42	.35
General	.70	.85
Composite	.72	.87
Intermediate		
Teacher	.71	.77
Learning	.71	.63
Structure	.47	.70
Peer	.54	.73
General	.73	.90
Composite	.80	.83
The Class Play	.60	.75
What Would You Do?	.58	.64

TABLE 2

INTERNAL CONSISTENCY COEFFICIENTS AS DETERMINED IN THE ANALYSIS
OF HATSEE DATA

Instruments	Internal Consistency Index (r_{ic}) Grade					
	3	4	5	6	7	8
Self Appraisal Inventory						
Peer	.47	.48	.59	.79	.80	.85
Family	.09	.10	.11	.89	.89	.87
Scholastic	.56	.68	.69	.81	.81	.83
General	.76	.77	.82	.74	.78	.80
Composite	.78	.83	.86	.93	.94	.94
School Sentiment Index						
Teacher	.72	.67	.70	.92	.89	.87
Subject-Learning	.54	.64	.65	.04	.19	.23
Structure	.41	.60	.63	.69	.69	.61
Peer	.49	.55	.60	.76	.73	.79
General	.61	.63	.64	.72	.67	.67
Composite	.85	.88	.89	.94	.93	.91

The second half of the test was omitted because as Bills (1957) found: "The effects of changing the reference group is a question purely for speculation at the present time" (p. 11). Since the sample included supervisors, team leaders, teachers and teacher aides, it was felt that the use of the "other" portion of this instrument would invalidate the results.

Bills (1957, p. 12) found the "self" form of the IAV to be reliable at .86 level in Column I, .90 level in Column II, and at the .94 level in Column III as determined by the split-half method. Column III (self-ideal self discrepancy) was used in this investigation.

Statistical Treatment

The statistical procedures used in this study included the related t test, a two way analysis of variance of retest scores and a two way analysis of variance of residual gain scores.

To test Hypothesis 1, related t tests were performed between the initial and retest means of the boys, the girls and all students on all of the IOX variables. The data for each of the six grades was analyzed and interpreted independently.

To test Hypothesis 2, a two way analysis of variance was employed to compare the scores of the third, fourth and fifth graders (primary group) as measured by the primary form of the IOX instruments. This treatment was repeated with the scores of the students in grades six, seven and eight (intermediate group) as measured by the intermediate form of the instruments. This analysis was performed on the retest data.

To test Hypothesis 3, a two way analysis of variance was employed to compare the residual gain scores of primary students grouped according to high, medium and low levels of teacher self-ideal self discrepancy scores as measured by the Index of Adjustment and Values. This treatment was repeated with the residual gain scores of the intermediate students.

CHAPTER IV

ANALYSIS OF THE DATA

This study was undertaken to investigate the levels of self concept in elementary school students. Attention was focused upon growth or attrition of self concept as measured in an initial and retesting program using self report instruments. Attention was also given to determining whether significant differences existed between children of different sexes, grade levels and on the interaction of these two variables. Finally, attention was directed toward determining whether the self concepts of the students was significantly related to the self concepts of their teachers.

The findings were presented in the order of the research hypotheses presented in Chapter II. To facilitate analysis of the data, these hypotheses were restated in this chapter. To further facilitate the analysis, a table presenting the organization of students by sex, grade and group membership was designed (Table 3). For the purpose of testing a significance, the .05 alpha was chosen a priori. The researcher also reported .01 significance levels.

Analysis of the Relationship Between Pretesting and Posttesting by Sex and Within Individual Grades

The levels of self concept of boys, girls and all students, as measured by the Instructional Objectives Exchange (IOX) instruments were analyzed to determine whether changes had occurred during the

TABLE 3
TABLE OF STUDENTS BY SEX AND GRADE LEVEL

Grade	Boys	Girls	All
<u>Primary</u>			
3	60	59	119
4	38	35	73
5	46	57	103
Total	144	151	295
<u>Intermediate</u>			
6	28	30	58
7	52	43	95
8	47	33	80
Total	127	106	233

school year. The IOX instrumentation included the four subscales and a composite score for the Self Appraisal Inventory (SAI), five subscales and a composite score for the School Sentiment Index (SSI), the Class Play (CP) and What Would You Do? (WWYD).

Null Hypothesis 1:--The children's levels of self concept will not change significantly during the school year.

Primary Group

The results of the findings for grade 3 were presented in Table 4. The difference between the means of the boys for all subscales of the SAI was negative and significant for the composite score. Negative values indicated lower means on the posttest.

TABLE 4

PRETEST AND POSTTEST MEANS, STANDARD DEVIATIONS AND t VALUES BY SEX AND BY TOTAL
GROUP FOR GRADE 3

Variable	Boys		Pretest Girls		All		Boys		Posttest Girls		All		t Values		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	Boys	Girls	All
SAI															
Peer	7.1	2.5	7.9	2.4	7.5	2.5	6.7	2.6	6.8	2.8	6.8	2.7	-1.03	-3.09 ^a	-2.78 ^a
Family	3.3	1.4	3.8	1.0	3.5	1.3	2.9	1.3	3.2	1.4	3.0	1.3	-1.86	-4.28 ^a	-4.05 ^a
Scholastic	6.6	2.7	8.0	1.8	7.3	2.4	6.2	2.6	6.5	2.4	6.3	2.5	-1.12	-4.58 ^a	-3.93 ^a
General	6.6	1.9	7.2	1.5	6.9	1.7	6.2	2.1	6.5	1.7	6.3	1.9	-1.40	-2.73 ^a	-2.85 ^a
Composite	23.5	6.4	26.9	5.0	25.2	6.0	21.9	5.5	22.9	6.3	22.4	5.9	-2.09 ^b	-5.45 ^a	-5.15 ^a
SSI															
Teacher	4.1	1.3	4.2	1.3	4.1	1.3	4.1	1.5	4.1	1.5	4.1	1.5	0.41	-0.27	0.12
Subject	4.5	1.6	5.0	1.3	4.7	1.5	4.5	1.7	4.6	1.4	4.6	1.6	0.14	-2.05 ^b	-1.10
Structure	3.1	1.3	3.2	1.2	3.1	1.3	2.9	1.2	3.0	1.4	3.0	1.3	-0.89	-0.88	-1.25
Peer	3.0	1.2	3.8	1.0	3.4	1.2	3.2	1.2	2.8	1.3	3.0	1.2	0.86	-6.55 ^a	-3.03 ^a
General	3.3	1.9	4.1	1.5	3.7	1.8	3.1	1.7	3.8	1.7	3.4	1.7	-1.16	-1.43	-1.84
Composite	17.9	5.2	20.3	4.2	19.1	4.8	17.9	5.4	18.4	5.3	18.1	5.4	-0.08	-3.27 ^a	-2.14 ^b
Projections															
The Class															
Play	7.1	2.5	7.8	1.9	7.4	2.3	6.9	2.7	7.0	2.4	7.0	2.5	0.46	-2.81 ^a	-2.15 ^b

^aSignificant at .01 level

^bSignificant at .05 level

The differences between the means of the girls on this instrument were all negative and significant. The differences between the means for all students paralleled that of the girls.

No significant differences were noted between the initial and retest means of the boys on the SSI. Significant negative differences were noted between the means of the girls in the subject and peer subscales, as well as in the composite score. The means for all students were significantly different in the peer subscale and in the composite score.

A significant negative difference was noted between the initial and retest means of the girls and all students for the Class Play.

The findings for grade 4 were reported in Table 5. Although mostly negative, the differences between the means were nonsignificant except for the SAI scholastic subscale for all students and the SSI subject subscale for girls.

The findings for grade 5 were reported in Table 6. It was noted that a significant negative difference was evidenced between the means for the boys in the SAI peer subscale. A similar difference was evidenced for the girls in the peer subscale and in the composite score. The difference between the means for all students was significant and negative for the peer subscale and composite score and significant and positive for the family subscale.

It was noted that a significant positive difference was evidenced between the means for the boys in the teacher subscale of the SSI. A significant negative difference was noted in both the subject subscale and composite score for girls. The significant negative

TABLE 5

PRETEST AND POSTTEST MEANS, STANDARD DEVIATIONS AND t VALUES BY SEX AND BY TOTAL
GROUP FOR GRADE 4

Variable	Boys		Pretest Girls		All		Boys		Posttest Girls		All		t Values		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	Boys	Girls	All
SAI															
Peer	8.2	2.3	8.1	1.9	8.2	2.1	7.9	2.4	7.5	2.8	7.7	2.6	-0.73	-1.21	-1.37
Family	2.8	1.3	3.5	1.6	3.1	1.5	2.7	1.2	3.7	1.3	3.2	1.3	-0.44	0.68	0.27
Scholastic	6.9	2.3	7.6	2.6	7.2	2.5	6.2	2.7	6.7	2.4	6.5	2.6	-1.47	-2.01	-2.41 ^a
General	6.8	1.4	6.9	1.4	6.8	1.4	6.9	1.4	6.5	1.8	6.7	1.6	-0.28	-1.93	-0.89
Composite	24.6	5.2	26.1	5.8	25.3	5.5	23.7	6.0	24.4	6.3	24.0	6.1	-0.89	-1.74	-1.79
SSI															
Teacher	4.3	1.3	4.3	1.2	4.3	1.2	3.9	1.0	4.0	1.2	4.0	1.1	-1.55	-1.13	-1.91
Subject	5.1	3.9	5.0	1.5	5.1	3.0	4.4	1.5	4.5	1.7	4.5	1.6	-0.91	-2.25 ^a	-1.58
Structure	3.3	1.3	3.8	1.1	3.6	1.2	3.3	1.3	3.7	1.1	3.5	1.2	-0.09	-0.75	-0.54
Peer	3.2	1.0	3.1	1.1	3.1	1.0	3.1	1.0	3.3	1.3	3.2	1.2	-0.53	0.80	0.32
General	3.1	1.9	3.9	2.0	3.5	1.9	2.8	1.8	3.9	1.6	3.3	1.8	-0.88	0.08	-0.57
Composite	18.5	4.1	20.1	4.5	19.2	4.3	17.6	4.3	19.3	4.5	18.4	4.4	-1.10	-0.91	-1.43
Projections															
The Class															
Play	6.6	2.0	6.7	2.6	6.6	2.3	6.2	2.7	6.6	2.5	6.4	2.6	-0.99	-0.13	-0.69

^aSignificant at .05 level

TABLE 6

PRETEST AND POSTTEST MEANS, STANDARD DEVIATIONS AND t VALUES BY SEX AND BY TOTAL GROUP FOR GRADE 5

Variable	Boys		Pretest Girls		All		Boys		Posttest Girls		All		t Values		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	Boys	Girls	All
SAI															
Peer	7.9	2.3	7.9	2.3	7.9	2.3	6.5	1.9	6.3	1.8	6.4	1.9	-4.60 ^a	-5.93 ^a	-7.50 ^a
Family	3.5	1.3	3.3	1.4	3.4	1.4	3.9	1.6	3.6	2.0	3.8	1.8	1.43	1.59	2.15 ^b
Scholastic	6.4	2.5	6.9	2.2	6.7	2.3	6.9	2.1	7.0	2.2	7.0	2.1	1.54	0.17	1.09
General	7.1	1.7	6.9	1.5	7.0	1.6	6.9	1.2	6.4	1.5	6.7	1.4	-0.45	-1.89	-1.68
Composite	25.0	5.5	25.0	5.7	25.0	5.6	24.2	4.4	23.1	5.8	23.6	5.2	-1.07	-2.54 ^b	-2.66 ^a
SSI															
Teacher	4.4	1.4	4.5	1.2	4.5	1.3	5.0	1.0	4.3	1.3	4.6	1.2	2.12 ^b	-1.39	0.58
Subject	4.1	1.9	4.9	1.4	4.5	1.7	3.8	1.7	4.2	1.5	4.0	1.6	-1.08	-3.22 ^a	-3.16 ^a
Structure	3.7	1.2	3.6	1.2	3.7	1.2	3.9	1.0	3.6	1.3	3.7	1.2	0.70	-0.29	0.22
Peer	3.7	1.0	3.9	0.9	3.8	1.0	3.8	1.1	3.5	1.3	3.7	1.2	0.46	-1.82	-1.16
General	3.2	1.8	3.6	1.6	3.4	1.7	3.1	1.7	3.5	1.7	3.3	1.7	-0.24	-0.50	-0.54
Composite	19.2	5.1	20.6	3.8	20.0	4.5	19.6	4.4	19.0	5.1	19.3	4.8	0.51	-2.27 ^b	-1.38
Projections															
The Class															
Play	6.4	2.1	7.0	2.0	6.7	2.1	6.3	2.2	6.2	2.5	6.2	2.3	-0.17	-2.91 ^a	-2.43 ^a

^aSignificant at .01 level

^bSignificant at .05 level

TABLE 6

PRETEST AND POSTTEST MEANS, STANDARD DEVIATIONS AND t VALUES BY SEX AND BY TOTAL GROUP FOR GRADE 5

Variable	Boys		Pretest Girls		All		Boys		Posttest Girls		All		t Values		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	Boys	Girls	All
SAI															
Peer	7.9	2.3	7.9	2.3	7.9	2.3	6.5	1.9	6.3	1.8	6.4	1.9	-4.60 ^a	-5.93 ^a	-7.50 ^a
Family	3.5	1.3	3.3	1.4	3.4	1.4	3.9	1.6	3.6	2.0	3.8	1.8	1.43	1.59	2.15 ^b
Scholastic	6.4	2.5	6.9	2.2	6.7	2.3	6.9	2.1	7.0	2.2	7.0	2.1	1.54	0.17	1.09
General	7.1	1.7	6.9	1.5	7.0	1.6	6.9	1.2	6.4	1.5	6.7	1.4	-0.45	-1.89	-1.68
Composite	25.0	5.5	25.0	5.7	25.0	5.6	24.2	4.4	23.1	5.8	23.6	5.2	-1.07	-2.54 ^b	-2.66 ^a
SSI															
Teacher	4.4	1.4	4.5	1.2	4.5	1.3	5.0	1.0	4.3	1.3	4.6	1.2	2.12 ^b	-1.39	0.58
Subject	4.1	1.9	4.9	1.4	4.5	1.7	3.8	1.7	4.2	1.5	4.0	1.6	-1.08	-3.22 ^a	-3.16 ^a
Structure	3.7	1.2	3.6	1.2	3.7	1.2	3.9	1.0	3.6	1.3	3.7	1.2	0.70	-0.29	0.22
Peer	3.7	1.0	3.9	0.9	3.8	1.0	3.8	1.1	3.5	1.3	3.7	1.2	0.46	-1.82	-1.16
General	3.2	1.8	3.6	1.6	3.4	1.7	3.1	1.7	3.5	1.7	3.3	1.7	-0.24	-0.50	-0.54
Composite	19.2	5.1	20.6	3.8	20.0	4.5	19.6	4.4	19.0	5.1	19.3	4.8	0.51	-2.27 ^b	-1.38
Projections															
The Class															
Play	6.4	2.1	7.0	2.0	6.7	2.1	6.3	2.2	6.2	2.5	6.2	2.3	-0.17	-2.91 ^a	-2.43 ^a

^aSignificant at .01 level

^bSignificant at .05 level

difference was also noted in the t value for all students in the subject subscale.

A significant negative difference was evidenced between the initial and retest means of the girls and all students for the Class Play.

Intermediate Group

The findings for grade 6 were reported in Table 7. Although mostly negative, the differences between the means were all nonsignificant, except for the boys and all students for the learning subscale on the SSI.

The findings for grade 7 were reported in Table 8. While t values for grade 7 were mostly negative, it was noted that only three were significant. These included the SSI learning and peer subscale for girls and the SSI structure subscale for all students.

The findings for grade 8 were presented in Table 9. A significant negative difference between the initial and retest means was noted in the SAI general subscale for boys, while significant positive differences were noted in SSI structure subscale for girls and all students.

Analysis of Variance Between Students by Sex, Grade and Interaction

To test Hypothesis 2, a two way analysis of variance was employed to compare the scores of the primary group (grades three, four and five) as measured by the primary forms of the IOX instruments. This treatment was repeated with the scores of the students in the intermediate group (grades six, seven and eight) as measured by the intermediate forms of the instruments. These analyses

TABLE 7

PRETEST AND POSTTEST MEANS, STANDARD DEVIATIONS AND t VALUES BY SEX AND BY TOTAL
GROUP FOR GRADE 6

Variable	Boys		Pretest Girls		All		Boys		Posttest Girls		All		t Values		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	Boys	Girls	All
SAI															
Peer	12.8	4.4	13.0	3.6	12.9	3.9	12.0	4.2	12.4	4.2	12.2	4.2	-1.12	-1.09	-1.58
Family	14.7	3.1	15.4	3.1	15.1	3.1	13.9	3.7	14.3	4.1	14.1	3.9	-1.12	-1.56	-1.92
Scholastic	13.7	3.9	13.5	3.9	13.6	3.9	12.8	4.4	12.8	3.0	12.8	3.7	-1.28	-0.90	-1.54
General	13.9	3.4	13.6	3.1	13.7	3.3	13.1	3.4	12.9	3.5	13.0	3.4	-1.18	-1.10	-1.62
Composite	55.0	11.8	55.5	11.0	55.3	11.3	51.8	13.4	53.0	11.7	52.4	12.5	-1.60	-1.14	-1.92
SSI															
Teacher	23.0	6.7	24.2	7.3	23.6	7.0	21.7	7.2	22.3	7.6	22.0	7.3	-0.91	-1.40	-1.64
Learning	3.6	1.3	3.2	1.2	3.4	1.2	3.0	1.3	2.9	1.2	2.9	1.2	-2.15 ^a	-1.46	-2.55 ^a
Structure	9.3	2.8	10.5	3.6	9.9	3.3	9.8	2.8	10.6	2.7	10.2	2.8	1.03	0.12	0.74
Peer	6.5	2.1	7.1	2.2	6.8	2.1	6.0	2.2	7.4	2.0	6.7	2.1	-1.17	0.71	-0.26
General	5.7	2.2	6.2	2.3	5.9	2.2	5.5	2.4	6.3	1.7	5.9	2.1	-0.37	0.37	0.00
Composite	48.1	12.3	51.3	14.3	49.7	13.3	46.1	13.4	50.1	12.1	48.2	12.8	-0.87	-0.55	-1.00
Projections															
The Class															
Play	16.7	15.2	14.4	3.7	15.5	10.9	13.8	2.6	15.1	2.1	14.5	2.4	-1.02	1.16	-0.70

^aSignificant at .05 level

TABLE 8

PRETEST AND POSTTEST MEANS, STANDARD DEVIATIONS AND t VALUES BY SEX AND BY TOTAL GROUP FOR GRADE 7

Variable	Pretest						Posttest						t Values		
	Boys		Girls		All		Boys		Girls		All		Boys	Girls	All
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD			
SAI															
Peer	11.7	3.9	13.4	3.9	12.4	4.0	11.8	3.8	13.4	4.3	12.5	4.1	0.35	.04	.27
Family	14.0	3.9	15.1	4.6	14.5	4.2	13.7	3.9	14.5	4.6	14.0	4.3	-.37	-1.28	-1.41
Scholastic	11.7	4.1	14.5	3.6	13.0	4.1	11.1	3.9	13.7	4.4	12.3	4.3	-.92	-1.74	-1.75
General	13.2	3.8	13.0	3.6	13.1	3.7	13.8	2.9	13.1	4.0	13.5	3.4	1.44	.09	1.12
Composite	50.5	12.9	56.0	12.8	53.0	13.1	50.4	11.2	54.6	14.1	52.3	12.7	-.04	-.89	-.63
SSI															
Teacher	19.4	7.8	22.7	6.0	21.0	7.2	19.3	6.2	22.1	7.1	20.6	6.7	-.10	-.63	-.46
Learning	3.0	1.3	3.1	1.2	3.0	1.2	2.8	1.5	2.6	1.4	2.8	1.4	-.55	-2.12 ^a	-1.77
Structure	8.4	2.9	10.4	2.6	9.3	2.9	7.6	2.3	10.0	2.3	8.7	2.6	-1.87	-1.16	-2.20 ^a
Peer	6.4	1.8	7.5	1.7	6.9	1.8	6.3	2.0	6.9	1.8	6.6	2.0	-.24	-2.34 ^a	-1.50
General	5.1	2.3	6.3	1.9	5.7	2.2	4.9	2.3	5.8	2.2	5.3	2.3	-.73	-1.87	-1.66
Composite	42.5	13.6	50.0	9.8	45.9	12.6	40.8	10.4	47.2	11.4	43.7	11.3	-.93	-1.97	-1.85
Projections															
WWYD	13.5	2.8	14.3	3.0	13.9	2.9	12.8	3.1	14.5	2.9	13.6	3.1	-1.71	.41	-1.06

^aSignificant at .05 level

TABLE 9

PRETEST AND POSTTEST MEANS, STANDARD DEVIATIONS AND t VALUES BY SEX AND BY TOTAL GROUP FOR GRADE 8

Variable	Boys		Pretest Girls		All		Boys		Posttest Girls		All		t Values		
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	Boys	Girls	All
SAI															
Peer	13.5	3.6	12.5	5.1	13.1	4.3	13.3	4.4	12.4	5.6	12.9	4.9	-.52	-.13	-.45
Family	15.0	3.0	14.5	3.9	14.8	3.4	14.5	3.9	14.2	4.7	14.4	4.2	-1.00	-.51	-1.10
Scholastic	12.7	4.6	11.8	4.4	12.3	4.5	12.7	5.0	12.3	4.5	12.6	4.8	-.04	.72	.48
General	14.5	2.6	12.4	3.2	13.6	3.0	13.3	3.7	12.4	4.0	12.9	3.8	-2.51 ^a	-.05	-1.89
Composite	55.8	9.9	51.1	12.4	53.8	11.2	53.8	14.2	51.2	14.9	52.8	14.4	-1.33	.09	-.90
SSI															
Teacher	20.7	6.6	21.9	63.2	21.2	6.4	21.2	6.7	22.8	6.6	21.9	6.7	.64	.75	.97
Learning	2.7	1.4	2.8	1.5	2.7	1.5	2.5	1.3	2.9	12.9	2.7	1.3	-.89	.17	-.65
Structure	8.6	2.8	8.9	2.4	8.7	2.6	9.1	2.8	10.2	3.1	9.6	3.0	-1.60	2.47 ^a	2.90 ^b
Peer	7.1	1.5	7.5	1.8	7.3	1.6	7.3	1.7	7.5	1.8	7.4	1.8	.84	-.07	.49
General	5.2	2.1	5.6	2.2	5.3	2.1	5.0	2.3	5.8	2.2	5.4	2.2	-.48	.64	.11
Composite	44.2	11.0	46.8	9.8	45.3	10.5	45.3	11.7	49.2	12.6	46.9	12.1	.93	1.19	1.52
Projections															
WWYD	13.5	3.1	13.9	3.0	13.7	3.1	13.4	2.9	14.4	28.6	13.8	2.9	-.27	.97	.44

^aSignificant at .05 level

^bSignificant at .01 level

compared the students by sex, by grade and on the interaction of these two variables on the posttest scores. The organization of student groupings by sex by grade and by group membership was reported in Table 3.

The subscale and composite means for boys and girls in each grade and in each group, as well as the means for all students in each grade, were determined and reported in Tables 10 through 15. Included in each table were the F values for the main effects sex, grade and interaction effect.

Null Hypothesis 2:--The children's levels of self concept will not be significantly different when compared by sex, across elementary school grade level, and on the interaction of these two variables.

Primary Group

The results of the analysis of posttest primary SAI scores were reported in Table 10. No significant differences between the sexes was evidenced.

A significant difference was noted for the effect grade in the peer and family dimensions. Examination of the means indicated that the levels of self concept decreased between grades three and five, in the peer subscale and increased in the family dimension. None of the other dimensions were significantly different for this effect.

A significant interaction was noted in the family subscale. This interaction was presented in Figure 1. None of the other dimensions evidenced significant interactions.

The results of the analysis of posttest primary SSI scores were reported in Table 11. A significant difference for the effect

TABLE 10

POSTTEST MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF
PRIMARY SELF APPRAISAL INVENTORY SCORES, BY SEX AND GRADE LEVEL

Subscale	Grade	Boys	Girls	All	Effect	F
Peer						
	3	6.700	6.847	6.773	Sex	<1.0
	4	7.921	7.514	7.260	Grade	6.56 ^a
	5	6.500	6.333	6.407	Interaction	<1.0
	Total	6.958	6.808			
Family						
	3	2.883	3.186	3.034	Sex	3.36
	4	2.658	3.714	3.164	Grade	7.28 ^a
	5	3.935	3.632	3.767	Interaction	4.08 ^b
	Total	3.160	3.477			
Scholastic						
	3	6.217	6.458	6.336	Sex	1.19
	4	6.184	6.743	6.452	Grade	1.95
	5	6.891	6.999	6.951	Interaction	1.0
	Total	6.424	6.728			
General						
	3	6.167	6.492	6.328	Sex	1.0
	4	6.895	6.457	6.685	Grade	1.49
	5	6.935	6.439	6.660	Interaction	2.04
	Total	6.604	6.464			
Composite						
	3	21.917	22.949	22.429	Sex	1.0
	4	23.658	24.429	24.027	Grade	2.08
	5	24.217	23.123	23.612	Interaction	1.04
	Total	23.111	23.358			

^aSignificant at .01 level

^bSignificant at .05 level

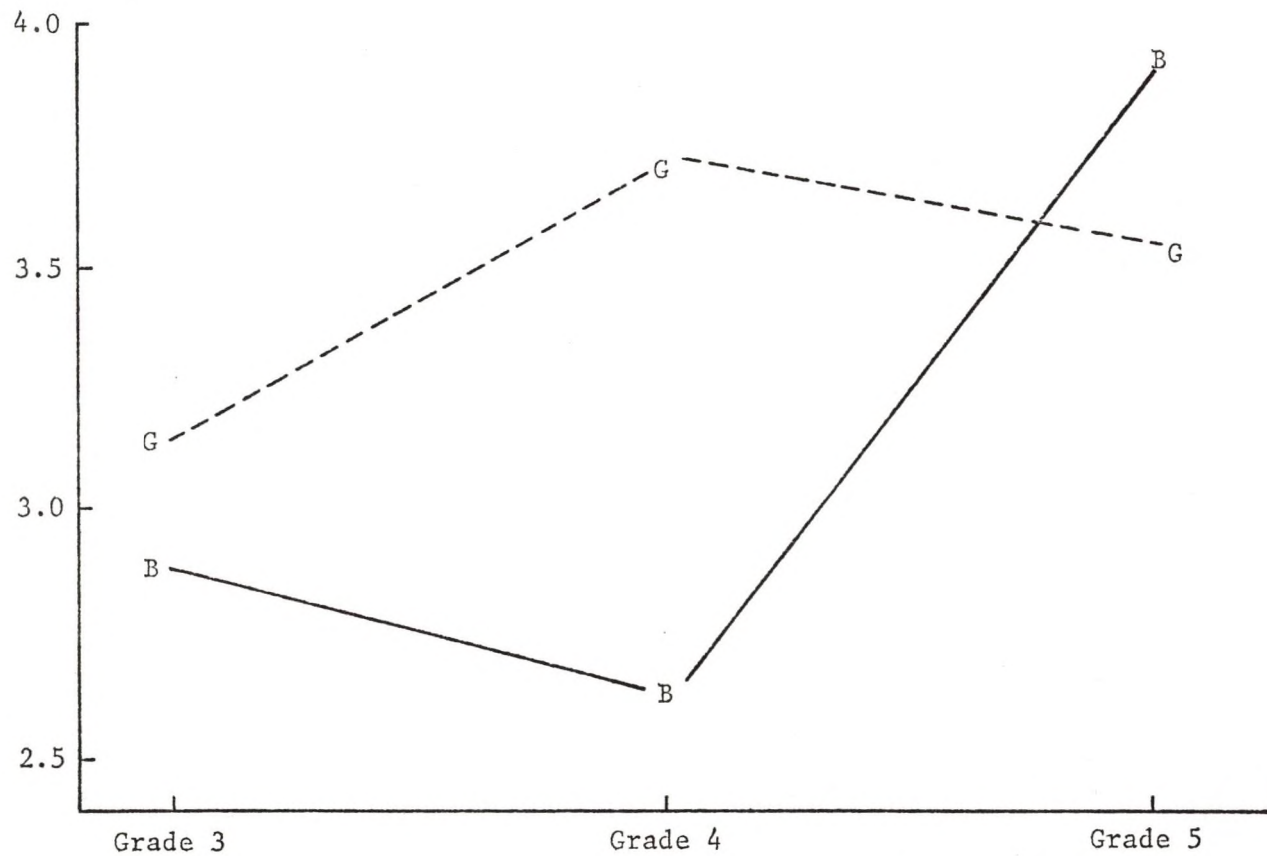


Fig. 1.--Interaction Effect Sex by Grade, Primary Self Appraisal Inventory, Posttest, Family Subscale.

TABLE 11

POSTTEST MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF
PRIMARY SCHOOL SENTIMENT INDEX SCORES, BY SEX AND GRADE LEVEL

Subscale	Grade	Boys	Girls	All	Effect	F
Teacher	3	4.133	4.119	4.126	Sex	<1.49
	4	4.029	3.959	3.959	Grade	5.56 ^a
	5	4.263	4.582	4.582	Interaction	3.08 ^b
	Total	4.340	4.152			
Subject	3	4.499	4.644	4.571	Sex	<1.0
	4	4.447	4.457	4.452	Grade	3.57 ^b
	5	3.848	4.158	4.019	Interaction	<1.0
	Total	4.278	4.417			
Structure	3	2.933	3.000	2.966	Sex	<1.0
	4	3.289	3.657	3.466	Grade	9.94 ^a
	5	3.870	3.544	3.689	Interaction	1.71
	Total	3.326	3.358			
Peer	3	3.200	2.814	3.008	Sex	1.58
	4	3.105	3.286	3.192	Grade	8.10 ^a
	5	3.804	3.526	3.650	Interaction	1.63
	Total	3.368	3.192			
General	3	3.050	3.814	3.429	Sex	12.94 ^a
	4	2.816	3.886	3.329	Grade	< 1.0
	5	3.109	3.526	3.340	Interaction	< 1.0
	Total	3.007	3.722			
Composite	3	17.883	18.390	18.134	Sex	<1.0
	4	17.553	19.314	18.397	Grade	1.54
	5	19.609	18.999	19.272	Interaction	1.15
	Total	18.347	18.834			

^aSignificant at .01 level

^bSignificant at .05 level

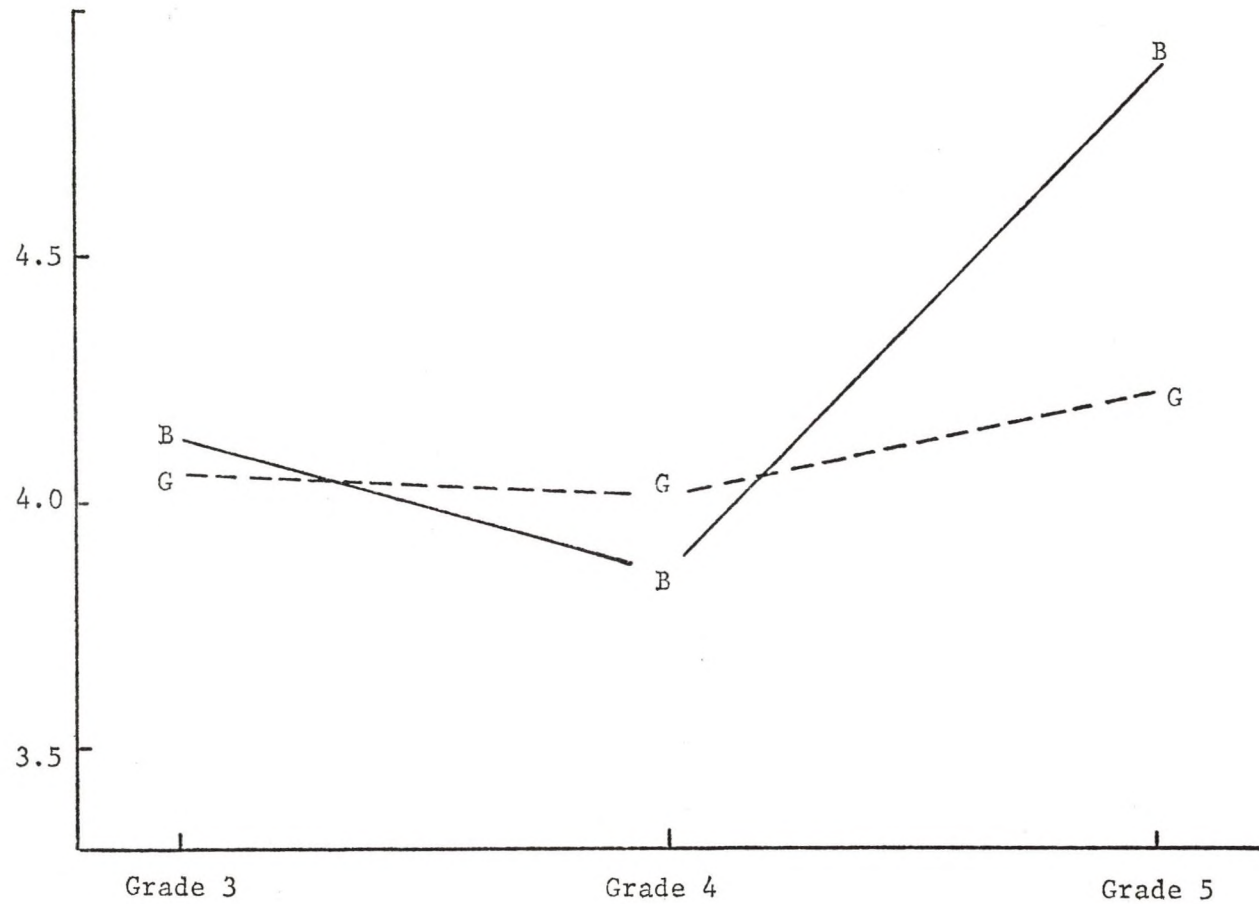


Fig. 2.--Interaction Effect Sex by Grade, Primary School Sentiment Index, Posttest, Teacher Subscale.

sex was noted in the general subscale. Examination of the means indicated that the girls professed higher attitude levels than did the boys toward school in general. None of the other dimensions were significantly different for this effect.

Significant differences were noted for the effect grade in the teacher, subject, structure and peer subscales. Examination of the means indicated that the levels in attitude toward school subjects decreased between grades three and five and increased in the teacher, structure and peer dimensions. The general subscale and composite of scores dimension did not evidence significant differences for this effect.

A significant interaction was noted in the teacher subscale. This interaction was presented in Figure 2. None of the other dimensions evidenced significant interactions.

The results of the posttest administration of the Class Play were presented in Table 12. No significant differences were noted for any of the effects tested.

TABLE 12

MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF POSTTEST SCORES FOR THE CLASS PLAY BY SEX AND GRADE LEVEL

Grade	Boys	Girls	All	Effect	F
3	6.933	6.966	6.950	Sex	<1.0
4	6.158	6.629	6.384	Grade	2.48
5	6.326	6.175	6.243	Interaction	<1.0
Total	6.535	6.589			

Intermediate Group

The results of the analysis of posttest intermediate SAI scores were reported in Table 13. No significant differences were noted for any of the effects tested.

The results of the analysis of posttest intermediate SSI scores were presented in Table 14. Significant differences were noted for the effect sex in the teacher, structure, peer, and general subscales, as well as in the composite of scores. Examination of the means indicated that the girls professed higher levels of attitude than did the boys in all significant dimensions. The learning subscale did not evidence a significant difference for the effect sex.

Significant differences were noted for the effect grade in the structure and peer subscales. Examination of the means indicated that the levels of attitude toward school social structure decreased between grades six and eight, and increased in the peer subscale. None of the other dimensions evidenced significant differences for the effect grade.

No significant interactions were evidenced in this analysis.

The results of the analysis of post-test administration of What Would You Do? were presented in Table 15. A significant difference between sexes was noted. Examination of the means indicated that the girls projected higher levels of self concept than did the boys. None of the other effects tested were significant.

Analysis of Variance of Residual Gain Scores by Sex and by Teacher Self Concept

To test hypothesis 3, a two way analysis of variance was employed to compare the residual gain scores of the primary group

TABLE 13

POSTTEST MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF
INTERMEDIATE SELF APPRAISAL INVENTORY SCORES, BY SEX
AND GRADE LEVEL

Subscale	Grade	Boys	Girls	All	Effect	F
Peer						
	6	11.999	12.400	12.207	Sex	<1.0
	7	11.827	13.419	12.547	Grade	<1.0
	8	13.167	12.364	12.840	Interaction	1.63
	Total	12.367	12.802			
Family						
	6	13.929	14.333	14.138	Sex	<1.0
	7	13.654	14.465	14.021	Grade	<1.0
	8	14.333	14.182	14.272	Interaction	<1.0
	Total	13.969	14.340			
Scholastic						
	6	12.750	12.767	12.759	Sex	3.06
	7	11.115	13.651	12.263	Grade	<1.0
	8	12.521	12.333	12.444	Interaction	2.56
	Total	12.000	12.991			
General						
	6	13.071	12.867	12.966	Sex	1.84
	7	13.808	13.070	13.474	Grade	<1.0
	8	13.229	12.364	12.877	Interaction	<1.0
	Total	13.430	12.792			
Composite						
	6	51.750	53.033	52.414	Sex	<1.0
	7	50.404	54.605	52.305	Grade	<1.0
	8	53.229	51.243	52.420	Interaction	1.14
	Total	51.758	53.113			

TABLE 14

POSTTEST MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF
INTERMEDIATE SCHOOL SENTIMENT INDEX SCORES, BY SEX
AND GRADE LEVEL

Subscale	Grade	Boys	Girls	All	Effect	F
Teacher	6	21.679	22.267	21.983	Sex	4.39 ^a
	7	19.327	22.116	20.589	Grade	<1.0
	8	21.021	22.758	21.728	Interaction	<1.0
	Total	20.477	22.358			
Learning	6	3.036	2.867	2.948	Sex	<1.0
	7	2.846	2.628	2.747	Grade	1.02
	8	2.438	2.879	2.617	Interaction	1.45
	Total	2.734	2.774			
Structure	6	9.786	10.600	10.207	Sex	22.04 ^b
	7	7.596	10.000	8.684	Grade	6.15 ^b
	8	9.000	10.212	9.494	Interaction	1.39
	Total	8.602	10.236			
Peer	6	6.036	7.400	6.741	Sex	6.18 ^a
	7	6.288	6.884	6.558	Grade	3.92 ^a
	8	7.250	7.515	7.358	Interaction	1.79
	Total	6.594	7.226			
General	6	5.536	6.300	5.931	Sex	9.22 ^b
	7	4.904	5.814	5.316	Grade	1.67
	8	5.000	5.818	5.333	Interaction	<1.0
	Total	5.078	5.953			
Composite	6	46.143	50.067	48.172	Sex	11.01 ^b
	7	40.788	47.209	43.695	Grade	2.84
	8	44.792	49.151	46.568	Interaction	< 1.0
	Total	43.461	48.623			

^aSignificant at .05 level

^bSignificant at .01 level

TABLE 15

MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF POSTTEST SCORES FOR WHAT WOULD YOU DO? BY SEX AND GRADE LEVEL

Grade	Boys	Girls	All	Effect	F
6	13.786	15.133	14.482	Sex	14.94 ^a
7	12.808	14.465	13.558	Grade	2.01
8	13.313	14.424	13.765	Interaction	<1.0
Total	13.211	14.642			

^aSignificant at .01 level

(grades three, four and five) as measured in a pretest-posttest residual gain analysis. This treatment was repeated with the residual gain scores of the students in the intermediate group (grades six, seven and eight). The analysis compared the students by sex, and by the level of their teachers' self concept as measured by the self-ideal self discrepancy score on the Index of Adjustment and Values (IAV). The organization of student groupings by sex and teacher level was reported in Table 16.

TABLE 16

NUMBER OF STUDENTS IN THREE CLASSIFICATIONS OF TEACHER SELF CONCEPT

Teacher Group	Primary			Intermediate		
	Boys	Girls	All	Boys	Girls	All
High	49	44	93	37	33	70
Medium	57	62	119	57	47	104
Low	38	45	83	33	26	59
Total	144	151	295	127	106	233

Residual Gain Scores

The research indicated that one of the most difficult tasks in psycho-educational investigations has been the measurement of change (Harris, 1963). When pre and posttesting have been implemented, the most prevalent application in most analyses was the use of raw gain scores. Due to the inadequacies of this approach (Ruch, 1936), several different solutions, including residual gain analysis, have been proposed. Essentially the residual gain method of comparing scores can be conceived as a partial correlation between the group membership variable and the residuals in the posttest data using the pretest data as a predictor. Others, Dubois (1957, 1970), Carver (1970), Bakan (1970), Williams and Maresh (1972), and Buzahora (1973) all dealt with the application of residual gain analysis in more detail than was feasible in the present study.

Teacher Groups

The IAV yields three possible alternate indices of self concept. The first, recorded by the subject in column I of the scoring sheet, is an index of self in general. The second, recorded in column II is an index of self acceptance, or how the subject feels about the self rating given in column I. Column III contains an index of the ideal self, or how "I should be." By subtracting the self score (Column III), one arrives at the self-ideal self discrepancy score. This researcher chose to use this index in his analysis of student-teacher self concept.

The self-ideal self discrepancy scores of the 16 primary teachers were ranked and then divided into high, medium and low

groups. The children assigned to these teachers were then placed in the appropriate group (see Table 16) for analysis. The same procedure was repeated in the case of the 16 intermediate teachers and the children assigned to their home rooms. One important difference was noted. Whereas the primary students were assigned to one particular teacher for the major portion of the day's work, the intermediate students who were involved in a departmentalized colony were assigned to home room teachers who did not, necessarily, spend the majority of the day with identified students.

The subscale and composite means of the residual gain scores (pretest predicting) as measured by the SAI, SSI, TCP, and WWYD instruments for boys and girls in each teacher group and in total, as well as the means for all students in each teacher group, were determined and reported in Tables 17 through 22. Included in each table were the F values for the main effects sex, and teacher self concept group, as well as the interaction effect.

Null Hypothesis 3:--No significant relationship will exist between the levels of self concept of the students and the levels of self concept of their teachers.

Primary Group

The results of the analysis of primary SAI residual gain scores was presented in Table 17. No significant differences between sexes was evidenced.

Significant differences were noted for the effect group placement in the family and general subscales as well as in the composite of scores. Examination of the means indicated that the residual gain

TABLE 17

MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF RESIDUAL
GAIN FOR THE PRIMARY SELF APPRAISAL INVENTORY, BY SEX AND
TEACHER SELF CONCEPT

Subscale	Teacher Group	Boys	Girls	All	Source	F
Peer						
	High	.3225	.1022	.2183	Sex	1.08
	Medium	-.1488	-.3961	-.2777	Teacher	1.60
	Low	.3243	.0093	.1535	Interaction	<1.0
	Total	.1362	-.1301			
Family						
	High	.1482	.4344	.2836	Sex	1.31 ^a
	Medium	.0228	.1621	.0954	Teacher	6.43 ^a
	Low	-.5913	-.3390	-.4545	Interaction	<1.0
	Total	-.0966	.0921			
Scholastic						
	High	.1792	.6491	.4015	Sex	<1.0
	Medium	-.0122	-.1578	-.0881	Teacher	2.59
	Low	-.0973	-.5148	-.3236	Interaction	<1.0
	Total	.0305	-.0291			
General						
	High	.3128	.0667	.1963	Sex	1.29
	Medium	.1925	.0109	.0979	Teacher	3.03 ^b
	Low	-.2851	-.4236	-.3602	Interaction	<1.0
	Total	.1074	-.1024			
Composite						
	High	.9907	1.1548	1.0683	Sex	1.09
	Medium	.1910	-.6297	-.2366	Teacher	3.52 ^b
	Low	-.3918	-1.2512	-.8577	Interaction	<1.0
	Total	.3093	-.2949			

^aSignificant at .01 level

^bSignificant at .05 level

scores diminished in concert with teacher self concept, in the non-significant scholastic subscale as well as in all of the significant dimensions. Also, it was noted that the sharpest decline was evidenced by the girls in the family subscale and in the composite of scores, while boys declined more sharply in the general subscale.

None of the dimensions evidenced significant interactions.

The results of the analysis of primary SSI residual gain scores were reported in Table 18. A significant difference for the effect sex was evidenced in the general subscale. Examination of the means indicated that the girls professed higher residual gains in attitude than did the boys toward school in general. None of the other dimensions were significantly different for this effect.

A significant difference for the effect group placement was noted in the teacher subscale. Examination of the means indicated that the residual gain scores diminished in concert with teacher self concept for this dimension. None of the other subscales were significantly different for the group placement effect and none of the dimensions evidenced significant interactions.

The results of the analysis of primary TCP residual gain scores was presented in Table 19. No significant differences were noted for any of the effects tested.

Intermediate Group

The results of the analysis of intermediate SAI residual gain scores were presented in Table 20. No significant differences were noted in any of the dimensions for the main effects, sex and group placement. A significant interaction was evidenced in the general

TABLE 18

MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF RESIDUAL GAIN
FOR THE PRIMARY SCHOOL SENTIMENT INDEX BY SEX AND TEACHER
SELF CONCEPT

Subscale	Teacher Group	Boys	Girls	All	Source	F
Teacher						
	High	.5222	.0684	.3075	Sex	2.17
	Medium	.0782	-.0055	.0346	Teacher	6.62 ^a
	Low	-.3636	-.4199	-.3941	Interaction	<1.0
	Total	.1127	-.1075			
Subject						
	High	-.1572	-.0663	-.1142	Sex	<1.0
	Medium	-.0154	-.0813	-.0497	Teacher	1.03
	Low	.1667	.2267	.1992	Interaction	<1.0
	Total	-.0156	.0149			
Structure						
	High	-.0559	.3001	.1125	Sex	<1.0
	Medium	.1390	-.2046	.0538	Teacher	1.73
	Low	-.1208	-.2727	-.2032	Interaction	1.47
	Total	.0041	-.0039			
Peer						
	High	.2778	-.1472	.0767	Sex	3.77
	Medium	.2635	-.1576	.0441	Teacher	<1.0
	Low	-.2293	-.0815	-.1492	Interaction	1.69
	Total	.1383	-.1319			
General						
	High	-.3472	.1096	-.1311	Sex	5.30 ^b
	Medium	.0004	.2246	.1172	Teacher	<1.0
	Low	-.3436	.2513	.0211	Interaction	<1.0
	Total	-.2086	.1990			
Composite						
	High	.4309	.1790	.3117	Sex	<1.0
	Medium	.7097	-.4467	.1072	Teacher	<1.0
	Low	-.8059	-.2472	-.5030	Interaction	<1.0
	Total	.2149	-.2050			

^aSignificant at .01 level

^bSignificant at .05 level

TABLE 19

MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF RESIDUAL GAIN
FOR THE CLASS PLAY BY SEX AND TEACHER SELF CONCEPT

Teacher Group	Boys	Girls	All	Effect	F
High	.62283	.03344	.34398	Sex	<1.0
Medium	-.22761	.16265	-.19376	Teacher	1.65
Low	-.07246	.13739	-.10766	Interaction	<1.0
Total	.10272	.09798			

subscale. This interaction was reported in Figure 3. None of the other interactions were significant.

The results of the analysis of intermediate SSI residual gain scores were reported in Table 21. A significant difference for the effect sex was noted in the peer and general subscales. Examination of the means indicated that the girls professed higher residual gains in attitude toward school in both of these dimensions. None of the other subscales were significantly different for the main effect sex.

No significant differences were noted in any of the dimensions for the main effect group placement, or the interaction effect.

The results of the analysis of intermediate WWYD residual gain scores were presented in Table 22. No significant differences were noted for the main effects sex and group placement, while a significant interaction was evidenced. This interaction was reported in Figure 4.

TABLE 20

MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF RESIDUAL GAIN
FOR THE INTERMEDIATE SELF APPRAISAL INVENTORY BY SEX AND
TEACHER SELF CONCEPT

Subscale	Teacher Group	Boys	Girls	All	Source	F
Peer						
	High	-.2279	-.1395	-.1862	Sex	2.73
	Medium	1.8239	-.6424	.7093	Teacher	<1.0
	Low	.2911	-2.7054	-1.0294	Interaction	<1.0
	Total	.8278	-.9919			
Family						
	High	-1.2933	.7244	-.3208	Sex	1.41
	Medium	.8397	1.7681	1.2593	Teacher	1.50
	Low	-3.0273	-.2739	-1.8139	Interaction	<1.0
	Total	.7865	.9423			
Scholastic						
	High	-.1543	.8674	.3479	Sex	1.55
	Medium	-1.4940	-.0230	-.8292	Teacher	1.20
	Low	.4830	1.7673	1.0490	Interaction	<1.0
	Total	-.5786	.6933			
General						
	High	-3.1413	3.1150	-.1919	Sex	<1.0
	Medium	.7760	-.4846	.2063	Teacher	<1.0
	Low	.5194	-.9680	-.1360	Interaction	4.74 ^a
	Total	-.4319	.5175			
Composite						
	High	-3.9338	.2799	-1.9474	Sex	2.81
	Medium	-.3293	1.4929	.4942	Teacher	2.37
	Low	1.3745	1.5215	1.4393	Interaction	<1.0
	Total	-.9367	1.1223			

^aSignificant at .01 level

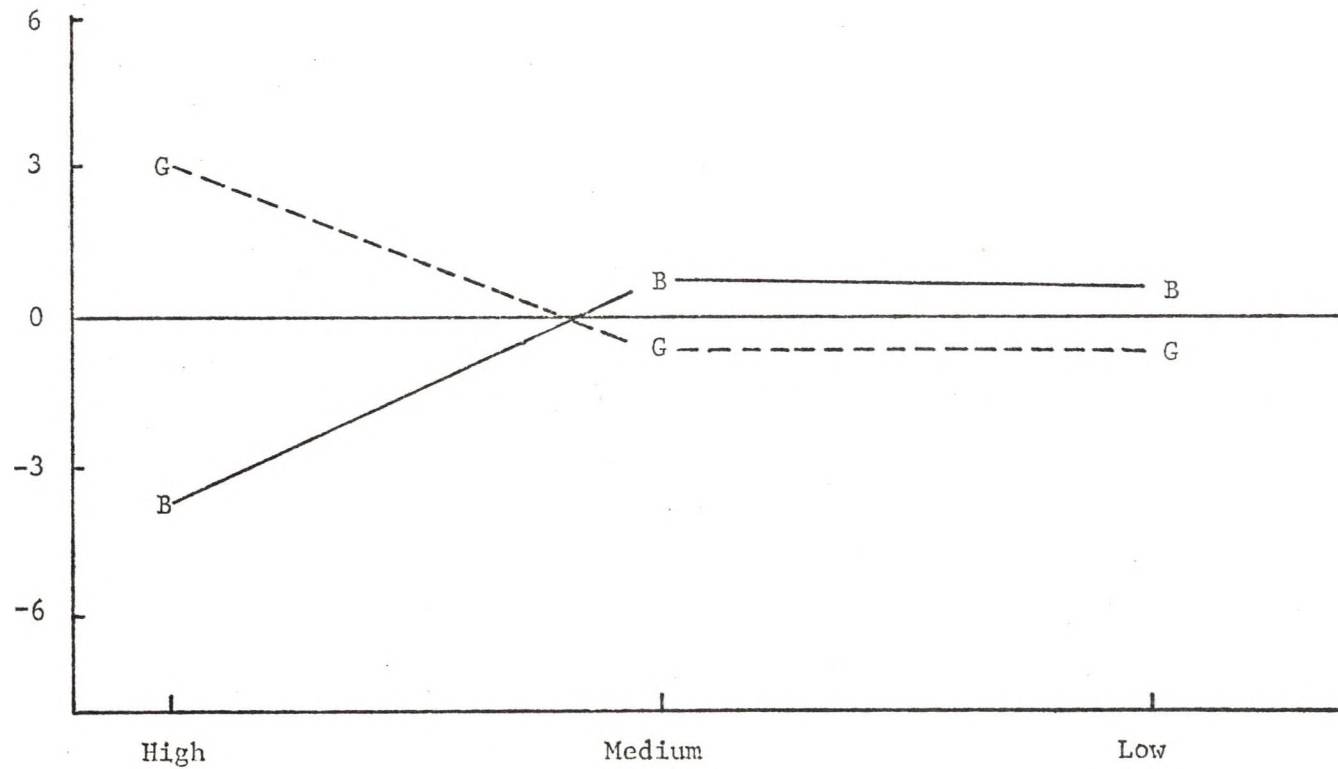


Fig. 3.--Interaction Effect Sex by Teacher, Residual Gain, Intermediate Self Appraisal Inventory, General Subscale.

TABLE 21

MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF RESIDUAL GAIN
FOR THE INTERMEDIATE SCHOOL SENTIMENT INDEX, BY SEX AND
TEACHER SELF CONCEPT

Subscale	Teacher Group	Boys	Girls		Source	F
Teacher	High	-1.5367	2.2626	.2544	Sex	2.43
	Medium	-.1719	.2517	.0196	Teacher	<1.0
	Low	-.2108	-.4953	-.3362	Interaction	2.14
	Total	-.5787	.6954			
Learning	High	-2.5220	.6838	-1.0107	Sex	2.19
	Medium	-.5415	-.1718	-.3744	Teacher	1.61
	Low	.5275	3.5491	1.8590	Interaction	<1.0
	Total	-.8407	1.0073			
Structure	High	2.4913	-.5428	1.0609	Sex	<1.0
	Medium	-1.8149	-.1576	-1.0660	Teacher	<1.0
	Low	-1.8406	3.7437	.6203	Interaction	1.63
	Total	-.5670	.6794			
Peer	High	-2.2525	3.3580	.3924	Sex	3.93 ^a
	Medium	-1.3599	-.9896	-1.1925	Teacher	1.02
	Low	-.8092	4.7406	1.6365	Interaction	1.25
	Total	-1.4769	1.7694			
General	High	-3.3018	1.8862	-.8560	Sex	7.30 ^b
	Medium	-2.7826	4.1571	.3536	Teacher	<1.0
	Low	.3311	1.3096	.3924	Interaction	<1.0
	Total	-2.2967	2.7517			
Composite	High	-1.1491	-1.0182	-1.0874	Sex	<1.0
	Medium	.4436	-.3250	.0962	Teacher	<1.0
	Low	.6495	1.7182	1.1204	Interaction	<1.0
	Total	.0331	-.0396			

^aSignificant at .05 level

^bSignificant at .01 level

TABLE 22

MEANS AND F VALUES FOR TWO WAY ANALYSIS OF VARIANCE OF RESIDUAL GAIN
FOR WHAT WOULD YOU DO BY SEX AND TEACHER SELF CONCEPT

Teacher Group	Boys	Girls	All	Effect	F
High	-4.65032	5.72348	0.24118	Sex	1.0
Medium	2.86141	-2.10773	0.61575	Teacher	1.0
Low	0.71671	-4.01908	-1.37025	Interaction	6.89 ^a
Total	0.11567	-0.13854			

^aSignificant at .01 level

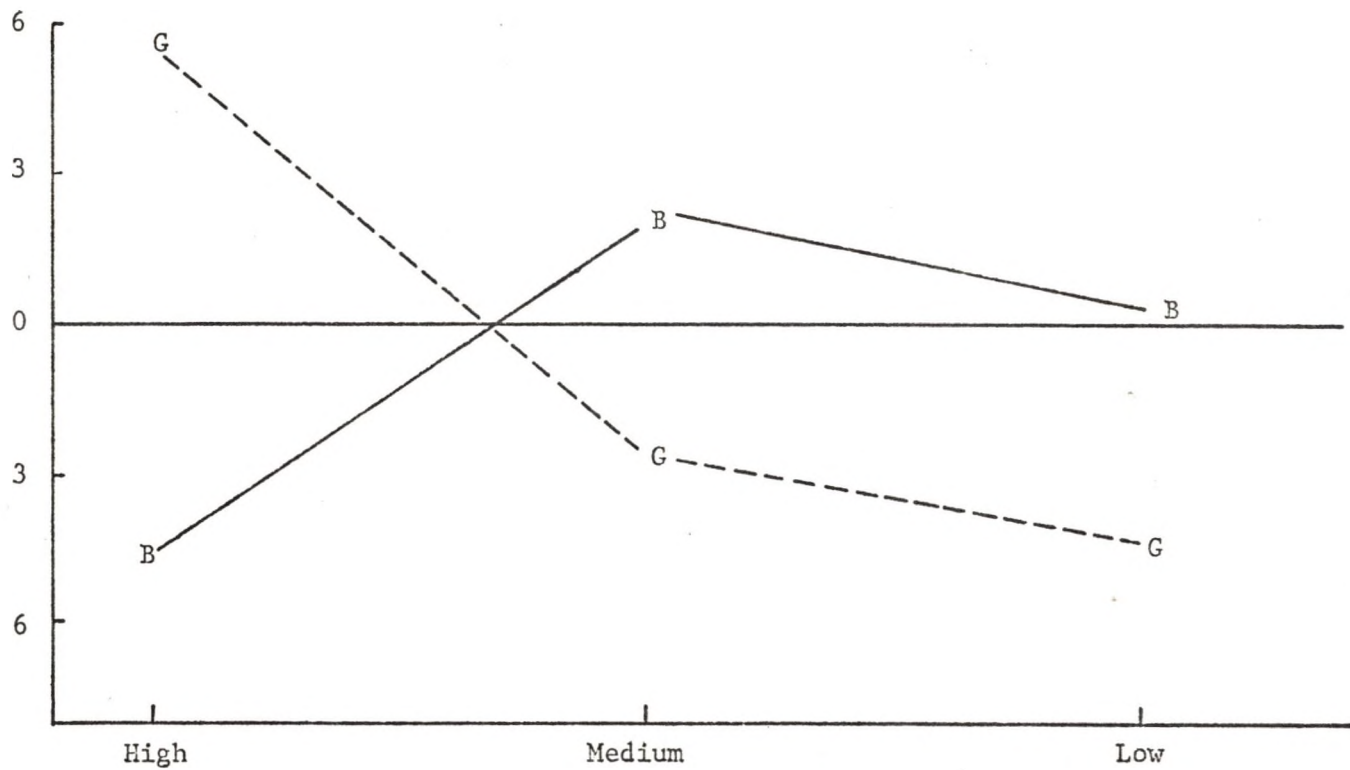


Fig. 4.--Interaction Effect Sex by Teacher, Residual Gain, Intermediate What Would You Do?

CHAPTER V

SUMMARY, SYNTHESIS, AND RECOMMENDATIONS

Summary

The purpose of this study was to investigate selected aspects of self concept in elementary school students and their teachers as measured by self report instruments in an initial and retesting situation. Attention was given to determining whether changes in the children's levels of self concept had taken place during the school year, whether differences in self concept were evidenced when compared by sex and grade level, and whether a relationship existed between the self concept of the students and the self concept of their teachers.

The study was conducted in two Grand Forks Public Schools during the 1971-72 school year. The sample investigated in this study included students in grades three through eight, attending their respective school for the entire year and completing all of the pre and posttests and the teachers assigned to these students.

The following three hypotheses were proposed and tested in this study:

1. The children's levels of self concept will not change significantly during the school year.
2. The children's levels of self concept will not be significantly different when compared by sex, across elementary school grade level, and on the interaction of these two variables.

3. No significant relationship will exist between the levels of self concept of the students and the levels of self concept of their teachers.

The subjects included in the analysis of data consisted of 528 elementary school students and their 32 teachers.

Self concept and attitude toward school in grades three, four and five were measured on a pre and post basis by the primary form of the Self Appraisal Inventory (SAI), the primary form of the School Sentiment Index (SSI), and the Class Play (CP). Self concept and attitude toward school in grades six, seven and eight were measured on the same basis using the intermediate forms of the SAI, the intermediate form of the SSI and What Would You Do? (WWYD). These self report instruments were developed and distributed by the Instructional Objectives Exchange (IOX).

The SAI is a direct self report test measuring self concept along four scales or dimensions: (1) peer, (2) family, (3) scholastic, (4) general. The SSI is a direct self report test dealing with attitudes toward school along five scales or dimensions: (1) teacher, (2) school subject or learning, (3) school social structure and climate, (4) peer group, (5) general. Composite scores on the SAI and SSI provide an additional dimension for analysis.

The Class Play and What Would You Do? are inferential self reports with a single score.

Teacher self concept was measured on a pre and post basis by the Index of Adjustment and Values (IAV). This instrument yields three possible indices of self concept. The first is an index of self in general, the second an index of self-acceptance, and the

third, which is computed by subtracting the first index from an ideal self score, is described as the self-ideal self discrepancy index. The third index was used in this study.

The statistical procedures used in this study included the related t test, two way analysis of variance of retest scores and a two way analysis of variance of residual gain scores. The .05 and .01 significant levels were used in the interpretation and evaluation of the findings.

1. To test Hypothesis 1, self concept and attitude toward school as reported on the pre and posttest by the Instructional Objectives Exchange (IOX) instruments were compared by performing related t tests on the variables independently for boys, girls, and all students at each grade level. A summary of the results was reported in Table 23.

- a. Although the third grade students taken as a whole reported significantly lower and less positive self concepts at the end of the year, it was noted that the most significant attrition was evidenced by the girls.
- b. Little or no change in self concept or attitude toward school was evidenced by the fourth grade students.
- c. All of the significant differences at fifth grade were negative except for the teacher subscale for boys and the family subscale for all students. While significant growth in self concept and attitude toward school was reported for these variables, significant attrition was noted in the self concept of fifth graders as related to

TABLE 23

SUMMARY OF SIGNIFICANT t VALUES AS REPORTED FOR BOYS, GIRLS, AND ALL STUDENTS

	Self Appraisal Inventory					School Sentiment Index					Class Play
	Peer	Family	Scho- lastic	Gen- eral	Compos- ite	Teacher	Sub- ject	Struc- ture	Peer	Gen- eral	
Primary											
Grade 3											
Boys					.05						
Girls	.01	.01	.01	.01	.01	.05		.01		.01	.01
All	.01	.01	.01	.01	.01			.01		.05	.05
Grade 4											
Boys											
Girls						.05					
All		.05									
Grade 5											
Boys	.01					.05				.05	.01
Girls	.01				.05		.01				.05
All	.01		.05		.01		.01				
Intermediate											
Grade 6											
Boys							.05				
Girls											
All							.05				
Grade 7											
Boys											
Girls							.05	.05			
All								.05			
Grade 8											
Boys				.05							
Girls								.05			
All								.01			

their peers, their families, and their projected selves, and in their attitude toward school subjects.

- d. Although the sixth grade students reported generally lower and less positive views of self at the end of the year, only one dimension was significant.
- e. Although the seventh grade students reported generally lower and less positive views of self at the end of the year, little of the change was significant.
- f. Although little change was evidenced at eighth grade, significant attrition of a general view of self was noted for the boys, while growth in attitude toward the school's organization structure was evidenced by the girls and all students.

2. To test Hypothesis 2, self concept and attitude toward school scores as reported by the posttest IOX instruments for the primary group (grades three, four and five) and the intermediate group (grades six, seven, and eight) were subjected to a two way analysis of variance. The students were compared by sex, by grade and on the interaction of these two main effects. A summary of the results of the analyses was presented in Table 24.

- a. In the analysis of the primary posttest SAI scores, no significant differences between sexes were noted. Significant differences between grade levels were noted for the main effect grade level in the peer and family subscales (.01). Attrition of self concept with advancement in grade level was evidenced in the peer variable while growth with grade level advancement was evidenced

TABLE 24

SUMMARY OF SIGNIFICANT F VALUES AS DETERMINED BY THE ANALYSES OF VARIANCE

	Self Appraisal Inventory			Teacher	School Sentiment Index			Class Play		
	Peer	Family	Scho- lastic		Gen- eral	Compos- ite	Sub- ject		Struc- ture	Gen- eral
Primary Posttest										
Sex								.01 ^a		
Grade	.01 ^b	.01 ^c		.01 ^c	.01 ^b	.01 ^c	.01 ^c			
Interaction	.05			.05						
Residual Gain										
Sex								.05 ^a		
Group		.05 ^d		.05 ^d	.05 ^d					
Interaction										
Intermediate Posttest						Learning			WWYD	
Sex				.05 ^a			.01 ^a	.05 ^a	.01 ^a	.01 ^a
Grade							.01 ^c	.05 ^c		
Interaction										
Residual Gain										
Sex										
Group								.05 ^a	.01 ^a	
Interaction										.01

^aGirls reported higher means than boys.

^bGrowth between grade levels.

^cAttrition between grade levels.

^dRelated to teacher self concept.

in the family subscale. A significant interaction (.05) was noted for the family subscale.

- b. In the analysis of the primary group posttest SSI scores, a significant difference between sexes was noted in the general subscale (.01). The mean for girls was higher than the mean for boys. It appears that at the time of the posttest the girls possessed significantly higher levels of attitude toward school in general than did the boys. Significant differences between grade levels were noted in the teacher (.01), subject (.05), structure (.01) and peer (.01) subscales. The attitude levels of the students improved with grade advancement in all of the significant dimensions except for the subject subscale where an attrition in attitude toward school subjects was noted. A significant interaction was noted in the teacher subscale (.05).
- c. In the analysis of the primary group posttest scores on the Class Play, no significant differences were noted.
- d. In the analysis of intermediate group posttest scores on the SAI, no significant differences were noted.
- e. In the analysis of intermediate group posttest scores on the SSI, significant differences between sexes were noted in the teacher (.05), structure (.01), peer (.05), and general (.01) subscales, and in the composite of scores (.01). In all of the significant dimensions, as well as on the one nonsignificant subscale, the mean of the girls was higher than that of the boys. Significant

differences between grade levels were noted in the structure (.01) and peer (.05) subscales. Attrition in attitude toward the school social structure was evidenced, while growth in attitude toward the peer group was reported with grade level advancement.

- f. In the analysis of the intermediate group posttest scores on What Would You Do? a significant difference between sexes (.01) was noted. It appears that the girls were projecting higher levels of self concept than were the boys at the time of the posttest.

3. To test Hypothesis 3, residual gains as determined from predicted gains on scores of the IOX instruments for both groups (primary and intermediate) were subjected to a two way analysis of variance. The students were grouped according to their teacher's level of self concept as determined by the teacher's self-ideal self discrepancy score on the Index of Adjustment and Values (IAV). The students were compared by sex, by group (high, medium and low), and on the interaction of these two main effects.

- a. In the analysis of the primary group SAI residual gain scores, no significant differences between sexes was noted. Apparently when viewed from the standpoint of changes in self concept level during the year there was little difference between the gains of the boys and the gains of the girls. A significant difference was noted between the groups in the family (.01) and general (.05) subscales, as well as in the composite score (.05). Attrition of self concept was noted, in that the residual

gain means decreased in concert with the level of teacher self concept in all three of these dimensions. It appeared that the self concept levels of these students as measured by the SAI for these dimensions were significantly related to the self concept of their teachers as measured by the self-ideal self discrepancy index of the IAV. It was assumed therefore that the teacher's level of self concept had a direct influence upon the child's level of self concept in the arena of family experience, in general, and in other dimensions of the test when viewed from the composite of scores.

- b. In the analysis of the primary group SSI residual gain scores, a significant difference between the sexes was noted in the general subscale (.05). Apparently the girls made greater gains in this particular dimension than did the boys, with the greatest divergence being noted in the low group. A significant difference between groups was noted in the teacher subscale (.01). Attrition of attitude toward teacher was noted in that the residual gain means decreased in concert with the level of teacher self concept in this dimension. It was assumed therefore that the teacher's level of self concept had a direct influence upon the child's level of attitude toward that teacher.
- c. In the analysis of the primary group residual gain scores for the Class Play, no significant differences were noted. Apparently sex and group membership had little or no effect upon gains in projected self concept.

- d. In the analysis of intermediate group SAI residual gain scores, no significant differences were noted for the main effects sex and group placement. A significant interaction was noted in the general subscale (.01). Apparently sex and group placement had little or no effect upon gains in self concept except for the effect elements each contributed to the interaction effect in the level of general self concept.
- e. In the analysis of intermediate group SSI residual gain scores, a significant difference between the sexes was noted in the peer (.05) and general (.01) subscales. Apparently the girls made greater gains in these dimensions than did the boys. No significant differences between groups were noted.
- f. In the analysis of intermediate group What Would You Do? residual gain scores, no significant differences were noted for the main effects sex and group placement. However, a significant interaction (.01) was noted. Apparently sex and group placement had little or no effect upon gains in projected self concept except for the effect elements each contributed to the interaction.

Relationship of the Present Study to Related Research

Attrition of Self Concept to the School Environment. A large body of theoretical writing was concerned with characterizing the school environment as being detrimental to the self concept levels of students. General criticism had focused upon negative cultural

influences, increased emphasis upon evaluation in the cognitive domain, the promulgation of peer group competition and other varied and complex causes. Several research studies (Morse, 1964; Neale and Proshek, 1967; Katz and Zeigler; and Yamamoto, Thomas and Karnes, 1969) offered evidence of actual attrition of self concept and/or attitude toward school.

The findings of the present study seemed to be in concert with the research conclusions when investigated independently within grade levels. In testing Hypothesis 1, 36 of the 40 significant t values were negative, indicating that the levels of self concept and attitude toward school decreased during the school year in 90 percent of the significant dimensions.

When investigated within groups (primary and intermediate), in testing Hypothesis 2, the proportions of significant growth or attrition variable were equal. Fifty percent (4) of the significantly different dimensions evidenced attrition of self concept or attitude toward school with grade level advancement while the other 50 percent indicated growth. While no clear patterns were evidenced, it was noted that the major proportion (about three-fourths) of significant differences were in the area of attitude change (SSI) rather than in the area of self concept.

The research of Perkins (1958b) and Carter (1968) inferred that attrition of self concept generated in the school environment may have been replaced by positive self growth in the nonacademic environment. The findings of the group analysis do not clearly answer the questions projected by these inferences. In the analysis of primary retest growth and/or attrition patterns growth was

indicated to be in concert with grade level advancement in the SAI family subscale, SSI social structure subscale and SSI peer subscale, all nonacademic arenas, as well as in the academic teacher subscale. Attrition with grade level advancement was noted in the nonacademic peer subscale as well as in the SSI school subject subscale. Although several of the nonacademic areas evidenced growth, the growth was not clearly identified as replacing attrition in other dimensions.

In the analysis of intermediate group growth or attrition patterns, only attrition was evidenced. The attrition was evidenced in a nonacademic as well as an academic dimension. The inferences made by the Perkins (1958b) and Carter (1968) research were not clarified in the present study.

Attrition of self concept in concert with the teacher's level of self concept was evidenced in four subscales in the primary residual gain analysis used to test Hypothesis 3. These findings will be interpreted in more detail later in this chapter.

The Relationship of Self Concept to Sex. Several of the studies in the review of related literature were concerned with determining whether or not self concept levels were related to the child's sex. General research in the area of social interaction (Sexton, 1969) indicated that men became misfits more often than women, and that the disproportion may well have been a result of institutional influences. Investigations of the relationship between sex and self concept were found to be controversial. Several studies (Perkins, 1958; Fisher and Waentgen, 1966; and Williams, 1970); reported that the self concept levels of the

girls was significantly higher than that of the boys. An early investigation of Brookover, Patterson and Thomas (1962) researched a similar conclusion; but in a later study (Brookover et al., 1965), the researchers reported that there were no consistent sex differences. The latter view was reinforced by the research of Dyson (1967).

The findings of the present study were in concert with the findings of Perkins (1958b), Fisher and Waentgen (1966), and Williams (1970). In all instances where a significant difference between sexes was indicated, the girls reported higher levels of self concept and attitude toward school than did the boys.

The Relationship of Self Concept and Significant Others. Several studies were concerned with the relationship of self concept and interaction with significant others. Several reporters concluded that the degree of acceptance was related to the children's acceptance of self. Others (Combs, 1965; Walker, 1965; and Purkey, 1970) theorized that the self concept of children was directly related to the self concept of their teachers. The latter theory was investigated in this study.

Indications of a relationship between student and teacher self concept were evidenced in the residual gain analysis of primary students in the SAI dimensions of family and general (global view of self). The indication was also evident in the composite score of this instrument, inferring an even more general relationship. Indications of a relationship between student attitude toward school and teacher self concept was evidenced in the residual gain analysis of primary students on the SSI dimension "teacher." No significant relationships were

evidenced in the analysis of the intermediate group. Perhaps the design problem mentioned in Chapter IV accounted for this inconsistency.

Synthesis

Essentially, this study directly or peripherally examined three general putative theories. The first, as evidenced in the contemporary journalistic literature, indicated that the school is often an alien environment which contributes to an attrition of self concept and general attitude toward learning among school children. The second point dealt with the general assumption that girls tend to respond more favorably in the school environment than do boys. The third theory this study examined was the relationship between the levels of self concept of the teachers (significant others) and the school children. Although this theory was either propounded or inferred in several sources, an exhaustive review of the literature failed to locate a single study which reported empirical evidence of such a relationship.

The Theory of Attrition

As mentioned above, putative generalizations concerning the effect of the school environment upon young children were supported in the present study when investigated independently within grade levels, at grades three and five. If not confined to the singular or unique responses of these particular students, it could perhaps be theorized that children in these grades are either: (1) confronted with a milieu of environmental experiences to which they are unable to relate; (2) less adequately prepared to cope with the existing school environment at this point in the elementary school

experience than children of other grade levels; (3) the familial, social, curricular, and methodological practices as promulgated at these grade levels do not enhance or maintain the students' self concepts and/or attitudes; or (4) a combination of the above.

In the case of the first point, evidence of a developmental plateau at ages eight and ten might be theorized. In the case of the second point, inadequacies in the design of scope and sequence of experiences relative to the total picture of elementary education might be in evidence. In the case of point three, practices promulgated and/or experienced in the home, the peer group, discipline areas, and in the teaching strategies might have accounted for the evidenced attrition. Finally, a combination of the above might have contributed to the evidence as reported.

This writer theorized that a combination of two and three of the above had contributed to the evidenced attrition with the chief cause lying in grouping patterns and other extrinsic practices generated in the general environment of the student.

Grouping patterns in the typical elementary school have traditionally combined grades one to three into a primary segment and grades four to six as the intermediate segment. Contemporary patterns, the present situation included, have maintained this procedure in the case of the former, while the establishment of departmentalized sixth, seventh, and eighth grades has re-established the intermediate segment to include only grades four and five. It is this writer's premise that the latter part of third and fifth grade have thus become transitional time periods which may have contributed to general instability on the part of the children. Recognizing that

the posttests, from which the differences were noted, were administered late in the school year, the data retrieved may well have been affected by such instability.

That the practices generated in the students' environment could have been attributed to all areas of this field of experience was evidenced by the lack of any clearcut differences between familial, peer group, curricular, or methodological attrition of self concept and/or attitude toward school.

It was theorized that a lack of similar attrition patterns in the presently departmentalized sixth, seventh, and eighth grade scores tended to support the assumptions maintained concerning the possible period of instability suggested near the end of grades three and five. If this theory is valid, it would seem wise for school officials, teachers, and parents to de-emphasize the connotative labels and procedural implementations contained in the practice of delineating such groups. Such machinations may well be reflected by the peer group and may perhaps promulgate unnecessary fears and insecurities.

The findings as reported for the analysis by groups was inconsistent and, therefore, difficult to interpret. Attrition in some areas was offset by growth in others, with no clearcut patterns emerging in the general picture of change. In the case of the primary group, the scores as reported by fourth graders seemed to eliminate the statistical differences (attrition) evidenced in the by-grade analysis of grades three and five. Perhaps stability at grade four accounted for this lack of differentiation.

The analysis of sixth, seventh, and eighth grade scores by group projected the same generally stable patterns as were indicated

in the analysis by grades. Since no theory of attrition could be posited, this writer assumed that the absence of such evidence lent credence to the theory that self concept and/or attitude toward school tend to stabilize at some time during grade six.

The Theory of Difference by Sex

The putative generalization that girls respond more favorably in the school environment as reflected in the self concept and/or attitude toward school scores was supported throughout this study. In all significant and most of the nonsignificant analyses, the girls manifested higher mean levels than did the boys.

This writer theorized that further in-depth research would identify causative factors of a biological as well as an environmental nature as contributing to these findings. In the case of the former, much evidence has been established concerning the earlier development and maturation of female children. Such developmental characteristics must certainly enhance a girl's ability to more adequately cope with pressures generated in the school environment. In the case of the latter, the disproportionality between the number of male and female teachers at the elementary level is generally well known. The biological lag between the developmental adequacies of the different sexes is certainly enhanced by the effects of such disproportionality.

Since cultural factors tend to hinder any practices concerning an age-grade adjustment, school officials should probably encourage and promulgate the practice of eliminating the disproportion between male and female teachers in the elementary school in an attempt to ameliorate this problem.

The Theory of the Significant Other

As mentioned above, the review of literature failed to reveal a single study which reported empirical evidence of such a relationship.

To this researcher, the most significant finding of this study was the establishment of such evidence. This writer has long embraced such a theory, and has long subscribed to its existence in fact.

A person is either rooted in the existence of his being or is wearing a mask. The latter position deals in roles, fabrications, or status symbols, and tends to elicit insecurities on the part of the teacher, which are in turn reflected by the student, while the former generates authenticity and an aura of genuineness.

The particular instrument used in this study measured the difference between the self and ideal self of the teachers. Those teachers who reported low self-ideal self discrepancy scores were probably more aware of and at peace with their humanity. Those teachers who reported wide divergence in the self-ideal self index were probably less secure and more subject to role playing.

No one is more aware of facades than young children. They soon learn that a much more secure relationship can be established with a genuine person than with one who is playing a role.

It is therefore theorized by this writer that the self concept of a teacher is genuinely related to and involved with the development of healthy self concepts in elementary school children.

Recommendations

The following recommendations were presented in the hope that further research would be undertaken to provide for a better understanding of:

1. The relationship between growth and attrition of self concept and the school environment.
2. The divergence between boys and girls in levels of self concept and attitude toward school.
3. The relationship between the self concept levels of elementary school students and their teachers.

A further objective of these recommendations was to provide the administration and staff of the Grand Forks School District with suggestions for the improvement of the existing educational program:

1. A pattern of attrition seemed evident within the grade level during the school year, especially within grades three and five. It was recommended that further research be implemented to determine whether this was a consistent pattern or due to some extraneous factor within this particular sample or within the design of the present study.
2. The analysis of self report scores for the primary group to determine whether a general pattern of growth or attrition across grade level was inconclusive. While significant growth was evidenced in several of the dimensions, significant attrition was evidenced in others. It was recommended that further research in the form of a longitudinal study be initiated to obtain a more accurate view of this problem area.
3. The analysis of self report scores for the intermediate group, investigating growth and/or attrition evidenced several significant decreases in attitude toward school. It was recommended that further research be implemented to determine whether this was a consistent pattern at these grade levels or due to some extraneous

factor within this particular sample or within the design of the present study. A longitudinal study of these particular students might provide a more realistic view of this dimension. Further, it was recommended that school officials continue to maintain and enlarge the practices established by the HATSEE program.

4. In most nonsignificant and in all significant dimensions of this study, the girls' levels of self concept and attitude toward school were higher than those of the boys. It was recommended that immediate steps be taken to implement research designed to investigate the causes of such variation. Further, it was recommended that school officials investigate the possibility of securing the aid of a consultant to work with the teachers in dealing with this apparent divergence between sexes.

5. In the residual gains analysis it was apparent that the self concept of the primary children was significantly related to the self concept of their teachers in several dimensions of the SAI and the teacher dimension of the SSI. This was, in the eyes of this writer, the most significant finding of this research. Although no such significant relationships were evidenced in the case of the intermediate students, the writer felt that the lack of such a relationship was due, at least in part, to the student-teacher relationship as established by the departmentalized instructional organization to which these students were subjected. It was recommended that additional research be implemented to determine the consistency of these findings.

6. Significant interactions between sex and grade level and sex and teacher self concept group membership were noted throughout

this study. Although difficult to interpret, these effects presented this writer with an awareness of the multi-faceted nature of criterion analysis. As Cronbach (1967) maintained, no situation or response is unidimensional; hence, researchers should seek to deal simultaneously with as many facets of persons and treatments as is feasible. The design of this study did not include other possible significant variables in multivariate analysis. It was, therefore, recommended that such a feature be incorporated into the overall design of any ensuing study of this nature.

APPENDIX
THE RANDOLPH PROGRAM

The Randolph Program

Randolph and Howe (1966) contend that involving the student in his own educational developments is vital if self enhancement is to occur. They have listed twelve processes by which children are guided to become totally involved with their own development. These twelve self-enhancing processes are:

1. Involving the student and teacher in differentiating and confronting problems, and to develop personal responsibility for carrying out solutions that will resolve conflict and increased acceptance.
2. Centering management within each individual; to overcome the effects of imposition and control; and to exercise the innate power of each individual to be in charge of self.
3. Changing negative reflections to positive images in order to overcome the perception children have of adults seeing children as unworthy, weak and inadequate.
4. Building bonds of trust by daring to risk confrontation of feelings and making communications clear and congruent.
5. Setting limits and expectation and defining specific intellectual areas within which children can feel free and safe to explore.
6. Freeing and channeling energy to work in productive directions.
7. Overcoming unproductive repetitive behavior that interferes with learning.
8. Helping children assume social responsibility and come to understand the difference between tattling and reporting.
9. Enabling children to overcome the low self esteem that results from their feelings of physical inadequacy.
10. Making success inevitable by producing feelings of adequacy in children through successive academic achievements.
11. Encouraging self evaluation that will result in self improvement rather than forcing the child to work for adult approval.

12. Breaking curriculum barriers to enable children to move through curricular experiences at a rate compatible with their own abilities.

Randolph and Howe have theorized that utilization of these processes will help children feel stronger and more confident about themselves as individuals with unique abilities. A feeling of acceptance and understanding within the peer group is seen as a result of individual realization and appreciation of personal resources. Essentially then, it is the aim of Self Enhancing Education to defeat failure by providing opportunities for each child to exercise, modify, and expand perceptions about himself and those around him.

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