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Harper, Kenneth Leon, Ed.D.

The University of North Carolina at Greensboro, 1989

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AN INVESTIGATION OF INFERRED AND PROFESSED SELF-CONCEPT-AS-LEARNER OF GIFTED AND AVERAGE MIDDLE SCHOOL STUDENTS

by

Kenneth Leon Harper

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

Greensboro
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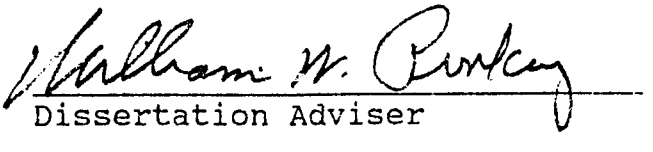

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HARPER, KENNETH LEON, Ed.D. An Investigation of Inferred and Professed Self-Concept-as-Learner of Gifted and Average Middle School Students (1989). Directed by Dr. William W. Purkey. 163 pp.

This study investigated the inferred (teacher report) and professed (self report) self-concept-as-learner scores of 400 sixth, seventh and eighth grade gifted and average students in two middle schools in North Carolina. Data were collected from randomly selected classes of average and gifted students by using two forms of The Florida Key, (Purkey, Cage and Graves, 1973) an instrument designed to measure student self-concept-as-learner. Five hypotheses and twelve corollary hypotheses were tested.

Results of the study indicated significantly and progressively lower combined scores for 7th and 8th grade students when compared with those of 6th grade students. The same results were found when inferred and professed scores were considered separately.

The study showed significantly higher group scores at all three grade levels for academically gifted (AG) students when compared with average (AV) students. The results were the same when inferred and professed SCAL measures were combined and considered separately.

Other results of the study indicated significant differences in group scores between male and female students across 6th, 7th and 8th grade levels. Females scored higher than males at all three grade levels when inferred and

professed scores were considered separately and when they were combined.

Significant changes were discovered in professed scores from Fall to Spring with Spring scores being significantly lower. There were no significant differences in inferred scores from Fall to Spring.

No significant differences were found between inferred and professed scores for the Fall testing. However, gifted students' inferred and professed scores for Spring were significantly different, with professed scores being lower than inferred scores.

The major conclusion of this study is that there is a significant and progressive decline of self-concept-as-learner of students from 6th to 8th grade and over a five-month period. This finding holds true for both gifted and average students, male and female, and is based on both professed and inferred measures.

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CHAPTER I

INTRODUCTION

Throughout epistemological history humans have searched for meaning and significance in their existence. This perpetual search has led individuals to extensive thought about who they are and how they fit into the world. The need for identification and meaning has manifested itself in almost every segment of human experience. Much of this search has centered around self awareness. Awareness of self permeates studies from psychology, sociology, theology, education and numerous other disciplines.

Over time, various theories have arisen regarding why and how self awareness operates within the individual. Gradually these theories have focused on self concept. However, attention to self concept has fluctuated, rising to prominence due to the works of authorities such as William James (1890) and waning on occasions because of various counter movements, such as the behaviorism of J. B. Watson in the 1920's.

During the last half century the concept of self has become an accepted part of numerous theories dealing with human personality. Many researchers, for example, Arancibia

and Maltes, 1988; Chapman, 1988; Combs and Snygg, 1959; Purkey and Novak, 1984; and others, now consider self concept a central ingredient in understanding the individual.

Since the development of the self concept is a life-long process, all of the variables encountered by the individual affect this development. As children enter school, they are immersed in a new set of experiences which have a profound impact on the image of self. These images are brought face-to-face with opportunities for change. Each school experience holds the potential for either modifying or confirming self perceptions. It would be satisfying for educators to believe that every activity in school causes students to form a more positive self-image. Unfortunately, this is not the case. Research indicates that for some students, the self concept is enhanced during the school years. For others it becomes more negative (Silvernail, 1987).

A vital part of the global self concept is that of self-concept-as-learner. Most authorities now agree that there is a profound relationship between how students feel about themselves and their level of academic achievement (Burns, 1982; Byrne, 1986; Coleman, 1985; Covington, 1984; Dweck, 1986; Eshel and Klein, 1981; Johnson, 1981; Marsh, Smith and Burns, 1985; Purkey, 1970, 1978; Purkey and Novak, 1984; and others). These and other authorities have

recognized the constant interaction between the self and the learning environment.

Studies indicate that self-perception influences achievement in schools and that success in school influences self concept (Beane and Lipka, 1984; Purkey, 1970). Many authors view self-concepts-as-learner as a prime influence on school achievement because of its effect on motivation (Chapman, 1988; Deci and Chandler, 1986; Harter, 1983). According to Chapman (1988) students who have positive self-concepts-as-learner persist longer in school endeavors and try harder when faced with difficult tasks. The opposite is true of students who perceive themselves ineffectual as learners. These students tend to give up easily and to reduce their efforts when faced with challenges (Covington, 1984).

Studies by Brookover, Thomas and Patterson (1965) and Silvernail (1987) emphasize the importance of self-concept-as-learner, especially at adolescence. Because of the intense upheaval experienced during this development period, the self-concept emerges as an important variable in determining achievement in school. The early adolescent attempts to answer a number of fundamental "self" questions. Such questions as "How do teacher, classmates and parents see me? Can I do this work and if I can't, will my friends call me dumb? If I fail, will my family be ashamed of me?"

and countless others regarding one's personal existence are posed by the early adolescent.

It appears that all middle level learners seek answers to these questions regarding themselves. Some receive positive responses, while others are stunned by the negative aspects of their existence. In an informal survey by the author, both undergraduate and graduate students described the middle level years as the most unpleasant and stressful period of their lives.

In view of the evidence that self-concept-as-learner is an important variable associated with early adolescent development, and because of its importance to educators who seek to understand and promote positive self concepts in students, self-concept-as-learner becomes a vital issue.

Statement of the Problem

There is evidence that the decline in self-concept-as-learner continues throughout the schooling process, even into the upper grades. For example, an early survey of over six hundred students in alternate grades from 3-11, revealed a decline in self esteem with each successive grade level (Morse, 1964). Eighty-four percent of third graders in the Morse study were proud of their work while only 53 percent of the eleventh graders were proud of their work. However, studies dealing specifically with changes in self-concept-as-learner among middle grade students could not be found. Therefore, there is a need to know if self-concept-as-

learner scores are different among 6th, 7th, and 8th grade students and how these scores change over time.

Additionally, research with middle level learners that addresses self-concept-as-learner in specific academic groups is limited. Questions exist, for example, as to differences among homogeneously grouped and heterogeneously grouped students (Chapman, 1988; Johnson, 1950). It is possible that there are differences in self-concept-as-learner among average (heterogeneously grouped) students and students grouped according to academic giftedness (homogeneously grouped students) and that these differences change over time.

Studies such as those by Radd (1988) have dealt with a variety of grade levels and have looked at a multitude of factors. It is difficult to compare data at each grade level since studies using the same instruments and methodology are limited. Much of the research has been with elementary school children while others have examined self concept as it relates to specific situations (Helmke, 1987). Other studies have merged grade levels using samples from a number of grades.

Also, there is great diversity among instruments used to measure self concept. Many studies have used self report instruments only; others have employed inferred techniques. The author could find no studies where both <u>inferred</u> (teacher observation) and <u>professed</u> (self report)

instruments were used with the same middle level populations.

In summary, there is a need for an up-to-date study which examines self-concept-as-learner of middle school students. There is also a need for research which measures the differences between average and gifted students and changes in their self-concept-as-learner over time. Studies using both inferred and professed instruments are also needed. This study attempted to respond to these needs.

Purpose of the Study

The purpose of this study was to measure differences in inferred and professed self-concept-as-learner among groups of 6th, 7th and 8th grade students and to measure these differences over time. Specifically, this study examined the differences in student self-concept-as-learner over grade levels, differences between average and gifted students, differences between male and female students, differences over time and differences between inferred and professed measure of self-concept-as-learner in each of these categories. Five basic research questions and twelve subcategory questions, all centered on self-concept-as-learners, were developed:

1. When inferred and professed measures are combined, are there significant differences in self-concept-as-learner among groups of 6th, 7th and 8th grade students?

1A. Are there significant differences among these grade levels when inferred measures are used?

1B. Are there significant differences among these grade levels when professed measures alone are used?

2. When inferred and professed measures are combined, is self-concept-as-learner of academically gifted 6th, 7th and 8th grade students significantly different from that of average 6th, 7th and 8th grade students?

2A. Is self-concept-as-learner of academically gifted 6th, 7th and 8th grade students significantly different from that of average 6th, 7th and 8th grade students when inferred measures alone are used?

2B. Is self-concept-as-learner of academically gifted 6th, 7th and 8th grade students significantly different from that of average 6th, 7th and 8th grade students when professed measures alone are used?

3. When inferred and professed measures are combined, are there significant differences among self-concept-as-learner of male 6th, 7th and 8th

grade students and those of female 6th, 7th and 8th grade students?

3A. Are there significant differences among self-concept-as-learner of male 6th, 7th and 8th grade students and those of female 6th, 7th and 8th grade students when inferred measures alone are used?

3B. Are there significant differences between self-concept-as-learner of male 6th, 7th and 8th grade students and those of female 6th, 7th and 8th grade students when professed measures alone are used?

4. When inferred and professed measures are combined, does self-concept-as-learner of 6th, 7th and 8th grade students change over a five-month period?

4A. Does inferred self-concept-as-learner of 6th, 7th and 8th grade students change over a five-month period?

4B. Does professed self-concept-as-learner of 6th, 7th and 8th grade students change over a five-month period?

5. When inferred and professed measures are combined, are there significant differences between inferred and professed self-concept-as-learner scores across grade levels of 6th, 7th and 8th grade students?

5A. Are there significant differences between inferred and professed self concept scores of average students across grade levels of 6th, 7th and 8th grade students?

5B. Are there significant differences between inferred and professed self-concept-as-learner scores of gifted students across grade levels of 6th, 7th and 8th grade students?

5C. Are there significant differences between inferred and professed self-concept-as-learner scores of male students across grade levels of 6th, 7th and 8th grade students?

5D. Are there significant differences between inferred and professed self-concept-as-learner scores of female students across grade levels of 6th, 7th and 8th grade students?

These research questions served as a basis for the development of five hypotheses and twelve corollary hypotheses presented in Chapter III.

Significance of the Study

While many studies in education, psychology and sociology have investigated the relationship between self

concept and school achievement (Helmke, 1987; Linski, 1983; Purkey and Novak, 1984), relatively few have focused on specific areas such as self concept and scholastic competence or self concept and social acceptance (Harter, 1985; Silvernail, 1987). For example, Andreas Helmke (1987) examined the relationship between children's self concept of ability and mathematics. These and other studies have ranged from general concept theories to specific subject-related self concept.

Although a number of studies have included self concept of early adolescents, studies concentrating on the change in self-concept-as-learner in the middle school are non-existent. Because early adolescence appears to be a time of trauma and turmoil, self-concept-as-learner is an especially important factor in the development of this age group. Research by Purkey (1970), Purkey and Novak (1984), Van Hoose and Strahan (1987) and others indicates that the school is a major variable in the development of the early adolescent self concept, especially self-concept-as-learner. Research also indicates that self concept correlates with success or failure in school (Purkey, Raheim and Cage, 1983).

If self-concept-as-learner is an important developmental variable, then there is a need to know if self-concept-as-learner does change significantly in each successive year in grades 6, 7, and 8, and in what

direction. Whether or not there is a significant change through the school year is also a concern. If change does occur, it is also important to know if the change takes place at the same rate for all middle level students and if it varies depending on grade level and student groupings. For this purpose, the study examined self-concept-as-learner by grade level and by sub-groups: average and academically gifted students and male and female students.

A factor which could affect outcomes of self concept studies is the use of self-report instruments. Some researchers have expressed concern over students' ability or willingness to report how they actually perceive themselves. If this be a valid concern, an accompanying inferred (teacher observation) instrument would indicate differences between self-concept-as-learner scores as reported by students and those reported by their teachers. In order to examine possible relationships and differences between these two variables, both <u>inferred</u> and <u>professed</u> instruments were employed. The author could find no studies involving middle level students which used both inferred and professed measures of self-concept-as-learner.

The relationship between self concept and achievement in schools has been explored extensively. There is general agreement that there is a relationship between the school environment and how students perceive themselves. But even if this relationship did not exist, there still remains the

question: "Does self-concept-as-learner change, for whatever reason, during early adolescence?" Researchers such as Morse (1964) and Purkey (1978), have proposed that it declines, not only during this period, but throughout the school years. If there are changes in self-concept-as-learner of middle level students, it is important to know what the changes are and at what point they come about. Such insight into the development of early adolescents' self-concept-as-learner would be significant for educators who seek to understand the early adolescent and to enhance the middle level school environment.

Definitions of Terms

For the purposes of this study, selected terms are defined to provide clarity. These terms are defined as follows:

Self Concept

Self concept is defined as "the perceptions individuals hold regarding their own personal existence--their view of who they are and how they fit into the world" (Purkey and Schmidt, 1987).

Global Self

Global self as defined by Purkey and Schmidt (1987) is an organized unity of personal awareness which is balanced and organized, but which contains smaller units, called "sub-selves."

Sub-Selves

The smaller units which are enclosed in the global self are sub-selves. These smaller units of personal attributes and categories all have specific individual significance to individuals but at different levels of importance and significance. Examples of these sub-selves are "student, athlete, bright, tall," and so on.

Self Esteem

Self esteem is often used interchangeably with self concept. However, for purposes of this study self esteem is defined as "the valuative dimension of self concept" (Silvernail, 1987).

The Florida Key

The Florida Key (Key) is a self concept instrument designed by Purkey, Cage and Graves (1973) to measure self-concept-as-learner. It is designed to be used by teachers to infer student self-concept-as-learner. For purposes of this study a professed version of The Florida Key was also used, which relies on student self report. (Copies of The Florida Key, inferred and professed forms, are in Appendix A and Appendix B.)

Self-Concept-as-Learner (SCAL)

Self-concept-as-learner is one sub-self aspect of an individual's global self. All of the perceptions which a student holds to be true about himself/herself that relate

to school learning and achievement are considered self-concept-as-learner.

Average (AV) Students

Average students are defined in this study as those students who are heterogeneously grouped academically. The only apparent grouping criteria is grade level. Students who are classified as either "learning disabled (LD)" or "academically gifted (AG)" are not included in this group.

Academically Gifted (AG) Students

Academically gifted students are defined as those students who have been homogeneously grouped according to criteria for selection of AG students in the State of North Carolina. A point system is used and points are awarded based on previous grades, scores on various achievement tests such as the California Achievement Test (CAT) and the Comprehensive Test of Basic Skills, grouped I.Q. test scores, aptitude test scores and teacher recommendations.

Early Adolescent

The early adolescent is defined as a male or female individual between the ages of 11 and 15 years old.

Middle Level Learner

The middle level learner is defined as a male or female early adolescent enrolled in grades 6, 7 or 8.

Significance

The term "significance" is defined as significance at

the .05 level as tested by the Tukey's Studentized Range Test.

Limitations of the Study

This study addressed the self-concept-as-learner of early adolescents. No attempt was made to determine the cause of self-concept-as-learner outcomes, nor did it deal with implications for the school as it may attempt to modify self-concept-as-learner. Rather, it was the purpose of this study to measure and compare the nature of self-concept-as-learner which exist within the perceptions of early adolescents and to determine the changes which may occur over a five-month period.

Because the self is an abstract concept, any research which examines self concept, in whatever form, has certain limitations. However, the variety of descriptions of self agree in that they all focus on an awareness of one's personal existence of himself/herself and beliefs about his/her self worth. To form a useful definition for purposes of this study a "standard" definition was stated which most closely represents a consensus of definitions found in the literature review.

A further limitation of this study is that self concept is a hypothetical construct. There is a realization that the self is abstract and therefore more difficult to measure than a tangible object (Laing, 1988). As a result of this

limitation, there arises the question of measurement instruments and methods.

The belief that self-concept-as-learner is learned is a crucial assumption in this study because of its implication for changes over time and cross sectional differences between grade levels. However, it is only an assumption. This is an important assumption because of the basic interaction which the middle school provides with the early adolescent and for the potential for change present in the middle school environment.

The study recognizes that there are many variables associated with self-concept study. These variables, some of which act to impose limitations on research dealing with self-concept-as-learner, pose additional questions which are outside the confines of this study. A number of these questions, while unanswered, are addressed in the concluding chapter.

Organization of the Study

Chapter II presents a review of related literature. It is divided into six sections: a brief history of self concept, self-concept theory, the self as a hypothetical construct, self concept and the early adolescent, self concept in the school and a summary.

Chapter III describes the methodology used in the study. It includes design of study, hypotheses, subjects, instruments, procedure, analysis of data and a summary.

Chapter IV presents results of hypotheses, including statements of all five hypotheses and the twelve corollary hypotheses tested, and a summary.

Chapter V includes conclusions and implications of the study. It consists of conclusions, implications, recommendations for further study and a summary.

CHAPTER II

REVIEW OF LITERATURE

There is an abundance of literature relevant to self-concept research. The author found information from a number of sources, including historical reviews, published experimental studies, textbooks, theory publications and professional journals. The scope of self-concept research is extremely broad. Therefore, for purposes of this study, five major areas are examined.

The first section is a brief history of self theory. This is followed by a review of self-concept theory and its controversial issues. The third section is a discussion of the self as a hypothetical construct. The fourth section discusses the self concept of early adolescents. The fifth and final section describes the relationship between the school and self-concept-as-learner.

Brief History of Self Theory

The advent of humans on this planet found them concerned chiefly with their physical survival. Their major goal was to ensure that basic needs would be met. Probably not a great deal of time and energy was expended even in this endeavor. Certainly there was no effort, probably due to the lack of evolutionary mentality, to think about any

activity beyond those necessary to respond to the immediate environment.

However, at some point during the early history of humanity our ancestors began to think about their desires, their fears and how they felt about themselves (Purkey, 1970). It was during this period that humans began to give serious thought about their psychological "self." With this thought, abstract thinking eventually was born. This significant development in awareness gave rise in written history. Later, this led to discussion about the self in terms of spirit, psyche or soul. During the middle ages, theologians further developed the concept of soul and emphasized its immortality and superiority to the body in which it existed.

1640-1875

A significant turn in man's thinking about his non-physical self came in 1644. Rene Descartes wrote his Principles of Philosophy in which he contended that doubt was a principal tool of disciplined inquiry. His position was that if one doubted he was thinking, and if he was thinking he must exist. Descartes and a number of his contemporaries contributed to the idea about man's metaphysical self. Terminology such as mind, soul, psyche and self, included in discussions of the metaphysical, were often used interchangeably. Preciseness and regard for scientific experimentation were almost non-existent. The

inexactness and confusion about self-concept have existed into the present century (Purkey, 1970).

1875-1950

A major contributor to American Psychology and to the self concept was made by James, who wrote his outstanding work, Principles of Psychology (1890). He probably gave the perceptual tradition a major push forward when he began his experimental work at Harvard in 1875 (Seeman, 1988). In 1879, Wundt's work at Leipzig also gave impetus to the self theory (Seeman, 1988). When American psychology began to take its place along side the other academic disciplines, there grew a great deal of interest in self.

A significant step in the search for understanding internal processes was taken in the 1900s through the works of Sigmund Freud. By employing the concept of ego development and functioning, Freud gave attention to the self. Yet, Freudians did not place major importance on self as a primary psychological unit nor did they give it central importance in their theory formulation (Munroe, 1955).

At the turn of the century, a period of theory building and ardent advocacy of varying theories developed. The Freudians emphasized unconscious motivation, while introspectionists supported the process of introspectum as a way of exploring consciousness. Gestaltists placed their confidence in the value of insight and the nature of the selective perceiver. The behaviorists stressed the need for

observable behavior as a basis for scientific inquiry, claiming that all the other schools of thought studied only consciousness. Two major schools of psychology, "Structuralism" and "Functionalism," were predominant at this time.

In 1925, largely due to the works of J. B. Watson, psychology was redirected as attention was turned to observable behavior directed by stimulus and response. It was at this point that the self was placed in a state of dormancy, and self concept as a psychological construct was considered to be outside the scope of psychology (Purkey, 1970; Wylie, 1961).

With the rise of "Behaviorism" in the 1920s, there followed a period during which little attention was given to the psychology of self. During these dormant years, James' writings on the self failed to convince his contemporaries that self-concept was important enough to study extensively (Seeman, 1988). With the exception of a few major contributions (Allport, 1937; Goldstein, 1939; and Lecky, 1945) and a number of significant works by persons from client-centered fields (Raimy, 1948; Rogers, 1947; Snygg and Combs, 1949), there was a curtailed interest in the study of self. In his review of early psychological bibliographic entries in Psychological Abstracts, Seeman (1988) found four entries from 1927 to 1940, no entries from 1941 to 1945 and only seven entries from 1946-1950. However, a few did

remain steadfast to the perceptual tradition. George H. Mead (1934) described the interrelated nature of the self with the environment. In 1935, Lewin viewed the self as a central structure of the personality. A study of the processes of self-actualization was conducted by Goldstein in 1939. Bertocci (1945) and Murphy (1947) both made contributions to self-concept theory during this period.

Throughout the years when Behaviorism experienced popularity, there existed reservations about Behaviorism by a number of scholars. This reservation is supported by the works of those who continued to believe in self concept thinking and to contribute to its understanding. Koch (1961) lends insight into why Behaviorism and other psychological theories, adapting the inquiry model of the natural science, remained in their popularity, when he contends that "such a model does not speak uniquely to the structure of the human sciences." This belief, plus the persisting questions not answered by scientific inquiry methods and the forbidding intellectual climate during the "silent" years, set the stage for the resurgent interest in self-concept theory in the early 1950s.

The tide began to turn in favor of pursuit of the self theory when Carl Rogers made his first major public statement about self theory in 1947. As president of the American Psychological Association, Rogers recalled his experience of feeling alone as he presented his address to

the Association in 1986 (Seeman, 1988). Although his views were unpopular with most of his contemporaries attending the meeting, his remarks set the stage for future activity in self-concept theory.

1950-Present

Seeman (1988) reports that a literature search revealed 1,225 entries under the topic self concept written from 1951-1955.

Carl Rogers presented a system of "nondirective" psychotherapy and in a series of articles in 1947, 1951, 1959 and 1965, he stressed the importance of self in human adjustment. Rogers viewed the self as phenomelogical and as a product of social relationships. His theory supported the self-actualization concept proposed by Maslow (Purkey, 1970).

Combs and Snygg, in their 1949 book Individual Behavior, contributed greatly to self theory. In this publication which was published in the 2nd edition in 1959, the authors proposed that enhancement and maintenance of the self is the basic drive of the individual (Purkey, 1970).

During the fifties and sixties, there were renewed interests in self and, as a result, larger numbers of works began to appear. Other researchers and writers such as Allport (1955), who recognized the power of self perceptions as it acts as a source of unity and maintenance for the individual personality, and Sullivan (1953) who refined the

theory of function of feedback from others helped to give rise to the self-concept movement.

Kohut (1971) contributed to self concept with his focus on the self as an "agent of others." His work on the self caused a number of changes in psychoanalytic theory and practice (Seeman, 1988). In the area of human growth and development, contributions of Wylie (1961, 1979), Gergen (1971), Coopersmith (1967), Jourard (1971), Epstein (1973) provided significant weight into the theory of self perception and its place in human growth and development (Beane and Lipka, 1984).

In the early '80s much research centered around the self as it relates to cognition. Shrauger and Osberg (1981) compared the validity of description of self and that of others in 37 studies. In their studies, they reported 27 of the 37 studies showed higher ability for self-descriptive instruments as compared with independent criteria.

In the areas of social psychology, education and counseling, the 1970s and 1980s were fruitful years in the study of self concept. Gergen (1984) concluded that self concept plays a cultural role in "guiding human conduct" (Seeman, 1988). Combs, Avila and Purkey (1978) laid the foundation for additional research in the area of helping relationships. Purkey (1970), in his Self Concept and School Achievement, linked self concept to the academic performance in school. Since the publication of Self

Concept and School Achievement, much has been written about student self concept. Silvernail (1987), in his Developing Positive Student Self Concept, deals with the impact of the school on student self concept. Beane and Lipka (1984) published Self Concept, Self Esteem and the Curriculum, a comprehensive book describing how schools affect student self concept. In his book, Inviting School Success: A Self Concept Approach to Teaching and Learning, Purkey (1978) introduced the concept of invitational learning, an approach by which teachers and others could positively affect the self concept of students. The second edition, published in 1984 and co-authored by Purkey and Novak, expands on invitational theory and presents models for tomorrow's schools encompassing the self-perception tradition. In the area of counseling, The Inviting Relationship by Purkey and Schmidt (1987), continued the self-concept tradition and applied invitational theory to the field of professional counseling.

Self-Concept Theory

Researchers generally agree to the presence of self concept. The self-concept construct has found advocates from various schools of psychological thought. Developmentalists, social educators, educational psychologists, cognitive theorists, behaviorists have all contributed to the research (Harter, 1983).

The search for self has long been recognized by researchers such as Abraham Maslow in 1956 who proposed that "self-actualization" is necessary in order for humans to view themselves as worthy individuals. He also cited a number of needs necessary for optimum human development, all of which appear to determine how individuals perceive themselves.

It is apparent that other researchers have found a profound relationship between an individual's self concept and the world around him/her (Cooley, 1902; Purkey and Novak, 1984; Rogers, 1951; Rosenberg, 1979; Snygg and Combs, 1949; and Sullivan, 1953).

There is a wide range of opinions as to the exact nature of the self and how all the basic assumptions merge to form the global self concept. This section deals with some of these issues and questions.

The Input and Outcome Controversy

Self concept development theory presents a dilemma for those who ascribe to genetic theory of self development as well as those who place confidence in behavioral models. Does self concept develop as a result of the many "conditioning factors" in the environment or is it merely the result of innate factors attaining fruition? Theorists disagree about whether the environment or the individual is more influential in the formulation of specific aspects of personality development (Beane, Lipka and Ludwig, 1980). A

disagreement among the various schools of thought centers around which comes first, the emergence of the individual's self which determines outcomes of the person in his/her environment or the many faceted environment which in turn develops the self. For example, does the excellent athlete achieve competence in athletics because of innate factors and thus develop his/her self concept because of this achievement, or does a positive self concept direct achievement as an athlete?

The Value of Self Concept

A major problem in self concept research is that it is extremely difficult to measure. It is not concrete, not an entity which can be seen or touched. Because of the once popular emphasis solely on measurable outcomes such as achievement and quantitative tests, some education institutions have denied, or at least put aside, the variables which defy exact measurement. Historical events such as Sputnik and the recent emphasis on "excellence in education" have periodically delayed considerations of affective areas of research such as self concept. Historically, educational goals have tended to fluctuate from those which emphasize cognitive outcomes to social and affective concerns (Shavelson, Hubner, and Stanton, 1976) and back again.

Although much emphasis has been placed on quantitative measurement of the various aspects of the individual, there

is a large body of contemporary literature supporting the value of affective factors. Seeman (1988) reported an increase from 40 entries under the representative topic self concept in 1951-55 to 1225 from 1981-85 totaling 5495 from 1951-85. The theories which characterized psychological studies in the 1930s and 1940s were discovered to be sterile, rigid and confining (Seeman, 1988), yet the renewed contemporary emphasis on basic education and quantitative outcomes may have diverted some attention from the affective domain.

Currently there seems to be a revived interest in social and affective scholarship. Accompanying this renewal is the increased value of self concept study. With the advent of the 1980s, the self has again become a major area of concern for researchers from a number of fields.

Such a resurgence of the value of self concept as an explanation for a number of behavior patterns and as an outcome in its own right is appropriate. Even if self concept were not so valued as a creditable construct, it has potential importance in interpreting achievement (Shavelson, Hubner, and Stanton, 1976). Indeed, many authors link the self concept construct to achievement (Brookover, Thomas and Patterson, 1965; and Purkey, 1978).

Whether the concept of self is myth and does not really "exist" or whether it is an explanation of many, perhaps all, outcomes experienced by individuals is, of course,

debatable. However, the results of many studies in human perception indicate that the self is profoundly intertwined in the personal fabric of human existence.

The Paradox of Self

Historically research in self concept has emphasized total concept rather than situation specific self-perception such as self-concept-as-learner. It has become increasingly evident that self concept is multidimensional and that to attribute outcomes or behavior simply to "self concept" is too simplistic. To identify self concept as explanation for every behavior is to have it explain nothing. Therefore, reasonable caution should be taken when examining the self since it should be remembered that self concept is a complex mix of experiences that, when brought to the forefront, have been filtered and are often a reflection of what a person would like to be rather than an indication of the real self (Hamachek, 1978). However, self concept is obviously at the center of the individual's world and it would be an error to disregard it as extremely significant in explaining human behavior. This paradox of self and its multidimensional nature is now getting more attention than it has traditionally (Byrne, 1984; Byrne and Shavelson, 1986; Marsh, 1986; Harter, 1982; Purkey, Raheim and Cage, 1983).

It is appropriate, therefore, to exercise care in studying and evaluating the self as an explanation for every

human condition. It is likewise appropriate to consider self concept as a major force in the human condition.

The Self as a Hypothetical Construct

As indicated earlier in this paper, self concept is difficult to study and evaluate by concrete quantitative methods since it is a hypothetical construct lending itself more readily to the examination of outcomes rather than the observations of the self. The self is multifaceted and highly abstract (Purkey and Schmidt, 1987). Beane and Lipka (1984) describes this hypothetical construct in terms of its functions on three different levels: specific situations, categorical and general.

The Global Self

The general self is based on the outcome of many specific situations which are evaluated and weighed in terms of those roles and attributes we value most (Beane and Lipka, 1984). Purkey and Schmidt (1987) describe this phenomenon in terms of a spiral analogy (p. 33) representing the organized unity of self which can be described as the "global self". This global self has organization and encompasses all of the sub-selves described earlier. The global self is active and has balance within itself but is constantly being modified by our experiences, some of which are more central to the global self and thus have more influence on daily functioning than those which occupy a more peripheral position. Those parts of the self which are

most central are highly resistant to change and maintain the stability of the global self (Lowe, 1961). Thus, the "general" or global self is the sum of all the beliefs we have about ourselves.

The Specific Self

In our daily lives, each of us engages in specific situations which, as a consequence of these activities, feedback about ourselves is received. Examples of these activities are discussions with others, physical activities and so on (Beane and Lipka, 1984). Through these activities we exercise and develop our knowledge, skills, attitudes and beliefs about ourselves. As Purkey (1970) expressed it: "Things are significant or insignificant, important or unimportant, attractive or unattractive, valuable or worthless, in terms of their relationship to oneself" (p. 10).

The Categorical Self

Through specific situations we formulate concepts about ourselves in regard to the roles we play. Each of us maintains countless sub-selves which are significant in terms of how we view ourselves. These "categorical" or "sub-selves" define us in terms of specific images such as student, athlete, mother, Christian, American, and so on. These sub-selves referred to by Purkey and Schmidt (1987) as "me" are peripheral to the global self but influence in

varying degrees the total self-concept depending on how central they are to our global selves.

Specific situations act to formulate ideas about ourselves with regard to the roles one plays. For example, daily success in the classroom might serve to verify an adolescent's role as a "good student." Often specific situations act to verify or refute attributes and categories which often join together. An example is the case of an individual who perceives himself as a "loyal American" after he has voted in a national election.

Summary

Currently, the research continues in many areas. It is apparent that the professions have rediscovered the self and have begun to recognize its significance in all areas of human existence. Certainly, education and counseling now embrace self concept as a legitimate force by which human behavior can be explained and even modified. With the decade of the 1980s, the self has once again become a legitimate construct. Not only has self concept theory found prominence among educators and counselors, it has been accepted by developmentalists, theorists, sociologists, clinicians, and others. Hopefully, this renewed interest in the study of self will open many doors toward the understanding of self concept.

Self Concept and the Early Adolescent

Probably there is no more dramatic period of human existence than that of emerging adolescence. This period is marked by the emergence and achievement of puberty, the increased importance of the peer groups as "significant others," and the arrival of the formal cognitive operations stage of development (Beane and Lipka, 1984). Such "unexpected" activity has a significant effect on young adolescents' self-concept-as-learner.

Satisfying Personal Needs

Personal needs are recognized by Van Hoose and Strahan (1987) with three words: "security, support and success." Although young adolescents may appear to be confident and self-assured, many times they are not. Surveys and interviews reveal their lack of security and confidence. All individuals need support. To early adolescents who are searching, the need for support is essential. Simply to be recognized is an accomplishment. Major support people in the life of the young adolescent are teachers, parents/ guardians, coaches, Sunday school teachers, counselors, youth leaders and even selected members of their peer group.

The author recalls an occurrence of his middle years which illustrates this need for support. As a member of the junior high school football team, Bobby was proud to call Ed his personal friend. Ed, the much more accomplished athlete of the two, and Bobby lived in the same neighborhood and

were "buddies" throughout school. Bobby was a second string halfback who was used only sparingly in the school's weekly football game. Ed, on the other hand, was the starting quarterback. In a hard-fought football game against a rival school in the adjoining community, the starting halfback on the local team was injured late in the third quarter with the score tied 6-6. Bobby replaced him and responded to the confidence of the coach by scoring a 60-yard touchdown the first time he carried the ball. As Bobby returned to the huddle to set for the extra point, Ed responded to the timely touchdown by remarking, "Good going, Bobby. Now you are one of us!" Bobby expresses to this day his pride at hearing the remark and remembers the experience vividly.

The need "to belong" and to experience support is a compelling influence on the young adolescent.

Social Development

A critical area of concern for young adolescents is their social life. The development of social connections is a powerful variable in developing self concept. Early adolescents are highly concerned with what others think of them. The myriad social contacts experienced by middle level students developed over time are vital in determining how students perceive themselves (Van Hoose and Strahan, 1987). Data also indicate that high self esteem is less likely to be bothered by poor opinion than is low self-esteem (Rosenburg, 1965).

The Family

Family relationships are generally quite different than they were a decade ago. Various family compositions characterize contemporary families. These range from single parent homes, to homes in which one stepparent and one original parent resides, to homes where neither parent is present to homes where both original parents reside (Van Hoose and Strahan, 1987).

Restraints imposed by the family unit and which were acceptable to the individual as a child become highly unacceptable to the developing young adolescents. Restrictions on telephone use, types of clothing, and acceptable hours to be out of the home all result in issues which often alienate early adolescents from their parents. Anger is usually short-lived but reoccurs whenever similar situations arise. As students resist, it is not uncommon for them to become frustrated and angry (Van Hoose and Strahan, 1987).

It should be remembered that disagreements are common among early adolescents and parents as each struggles for control. It is unfortunate when these disagreements result in destructive behavior by the transecent if reasonable limits are set and family enforced parents and teachers have taken a major step toward developing a positive caring relationship (Van Hoose and Strahan, 1987).

Peer Pressure

Learning to accept and be accepted is an important undertaking for early adolescents. During the 10th and 12th year, same-sex companionship is common with opposite-sex companionship coming later (McEwin and Thomason, 1982). Early tentative friendships become more solidified during this period (Thornburg, 1980).

It is this period of transescence when the student is exposed to new values which they visualize as more important than those of the home or school. With the problems encountered in the home, the early adolescent finds solace in his/her peer group surrounded by others who are experiencing similar difficulties (Van Hoose and Strahan, 1987).

It is highly important to students in this group that they are accepted. Often members of this group will go to extremes in order to gain approval from peers. Normally, students take a more socially acceptable route by kidding students who appear different or by "wise-cracking" in class to gain attention. The urgent desire to be accepted may force young adolescents to join or to start their own subgroups in order to gain recognition and be a "member of the gang."

A serious concern is for those early adolescents who Van Hoose and Strahan (1987) refer to as "isolates." Usually the choice to become a "loner" is not theirs. These

"dropouts" from the peer group do so because of a variety of differences as perceived by their peers and themselves. For the transescent to be perceived as "stupid" or "spastic" or even an "Einstein" is to risk expulsion from the peer group.

Sex Roles

As young adolescents grow, their sex roles are constantly being defined within their concept of self. This is the process through which the young person learns to feel, think and act like a member of one sex contrasted to the other sex. Society expects that individuals display types of behavior consistent with their sex roles. While some behavior is quite acceptable for boys, it is unacceptable for girls. The reverse is likewise true. Aggressiveness is expected of boys but a girl who pushes a classmate in lunch line is thought not to have behaved in a "lady-like" manner (Alexander, Williams, Hines and others, 1969).

It is natural for early adolescents to be interested in members of the opposite sex. Early pressures, however subtle, by parents, by media and by school cause many transescents to develop their interests earlier than they might if left alone. The urgency of parents, for example, for young people to "gain experience" in the social graces places tremendous pressures as these youngsters interact with members of the opposite sex. As an example, one mother was heard saying, "Wouldn't it be wonderful if Andrew and

Julie got together socially. They would look so cute together...but Andy is so shy he may never ask Julie."

The Struggle for Independence

Developing young adolescents are caught in an experiential "never-never land" where quick change is common and where switches from childhood to adolescence and back are the norm. These individuals profess their readiness to accept roles but are quick to ask advice in social situations or in an academic endeavor. These young people actively press to establish themselves as "in charge" of their own destinies but are ready to seek adult counsel if something goes wrong. This struggle to break away from the parental and societal control is indeed a search for maturity. The path to maturity, however, is strewn with mistakes made by early adolescents and their parents. In an attempt to appear "mature" students often commit errors of judgement as well as errors in language. As a response to the comment of one early adolescent that she had a headache, a classmate was heard to say, "Oh Sally. You are such a 'hydrohondiac.'" Such vacillations and errors are normal and should be recognized by parents and teachers (Van Hoose and Strahan, 1987).

Self Concept and the School

Much has been written about the relationship between how students perceive themselves and their success in school. The relationship between school and self concept

implies that there are variables which are present in the normal school environment which impact on the self concept of each student. There are also strategies and activities which, when employed systematically by the school, can enhance student self esteem and thus promote achievement. The assumption here is, as is indicated in other parts of this paper, that self concept not only is affected by the environment, in this case the school, but also that the resulting self can in turn culminate in achievement consistent with the self image.

It is with the features of the school that the student self interacts to gradually develop the mature self image in adulthood. These features act as modifiers of the self which have been essentially stabilized at an early age. It is this element of interaction of the student's self with the school environment which is discussed here.

Self Concept of the Early Learner

When children enter school, they have already established perceptions about themselves in terms of adequacy and competency. This is a natural developmental pattern and arises out of the fact that from the first experiences in life children begin to become aware of themselves.

The self perceptions incorporated in the young child are the result of interactions and feedback from parents/guardians who fill the role of significant others

(Beane and Lipka, 1984). Other individuals such as older brothers and sisters may also be influential in the early development of the child. More and more research indicates that the early home environment and climate provided by parents are the most crucial factors in the clear and positive self concept development of young children (Beane and Lipka, 1984, Hymes, 1963; Purkey, 1970). The feelings of trust, love, acceptance and belonging are all related to personal adequacy and impact on this adequacy within the individual. Studies by Shaw and Dutton (1965), Davidson and Lang (1960) and others have shown that the child's self-regard is closely associated with his/her parents degree of regard for him/her.

These first years of existence are vital ones for the development of the "self-actualized self." It is during these years that children either begin to perceive themselves as worthy, capable, valuable, able, responsible and all of the other positive attributes connected with positive self concept or to perceive themselves as unworthy, not capable, not valuable, unable, irresponsible and all the negative attributes related to a negative self concept. It is with either group of these characteristics, or a combination of the two, that the child enters the school.

School Variables and Student Self Concept

As children begin school, they are immersed in a new set of experiences. The images which they bring to school

come face-to-face with opportunities for change. Each school experience holds the potential for either modifying or stabilizing self-perceptions depending on the continuity and consistency of situations (Beane and Lipka, 1984; Kash and Borich, 1978).

Some schools engage in planning for activities which enhance self-perception. Others do very little, if anything, to develop an environment in which self-perceptions are developed through experiences in the school environment, whether these are planned experiences or not.

The Self and the "Natural" School Environment

Studies of the institutional features of school have found that the self and social lessons which arise from the "hidden curriculum" are at least as powerful and perhaps more so than the academic curriculum (Apple and King, 1977; Beane and Lipka, 1984; Macdonald and Zaret, 1975; Snyder, 1973).

The environment of the school, however well planned, contains a number of "natural" features which contribute to the modification of students' self-image. Students receive many messages in the school. These messages take various forms and all affect how students feel about themselves. Studies document the fact that these messages exist (Beane and Lipka, 1984).

Types of messages vary in the school environment. Many are formal requests or rules. Some are internal

expectations, while others are verbal or nonverbal behaviors, unwritten traditions and agendas. These messages play an important part in determining how the student perceives himself (Purkey and Novak, 1984).

The signals students receive from their environment can be either inviting or disinviting (Purkey, 1970; Purkey and Novak, 1984). Inviting messages are positive; disinviting messages have negative connotations. These communications are transmitted by program, policies, places, and people. Some are intentional, others are unintentional or "natural" signals which indicate to the student whether or not he/she is valuable, able and responsible. Some are formal, such as a champion's trophy presented to a student for winning the regional essay contest. Others are informal, such as a smiling face drawn on a well-done homework paper.

Studies in classroom interaction have documented the presence of subtle, yet important, positive (inviting) and negative (disinviting) messages. Chaikin and Sigler (1973) found that teachers tend to send more positive non-verbal messages to students they consider to be bright than to those students considered dull. Teachers also tend to spend more formal and informal time with students they consider to be able (Baker and Crist, 1971; Beane and Lipka, 1984). "Least-efficient" students are more likely to be ignored (Willis, 1970). The image of the student's ability and potential in the mind of the teacher causes the student to

receive either "inviting" or "disinviting" messages, either intentionally or unintentionally (Purkey and Novak, 1984).

Self-Concept-as-Learner

While closely related to the "natural" environment of the school, the academic environment relates more closely to achievement in academic endeavors or a determinant of self-concept than do the subtle day-to-day experiences found in the "natural" environment. Indeed, it is difficult to separate the two. However, for purposes of discussion, the following paragraphs deal with the self-concept of student as learner.

Research shows clearly a profound relationship between how students feel about themselves and their level of academic achievement. However, studies using self-report inventories found a stronger relationship between self-concept and achievement in boys than in girls (Bledsoe, 1967). Sex differences seem to be a strong variable when examining self-concept and academic achievement, especially in the area of under achievement (Purkey, 1978). In a study by Shaw, Edson and Bell (1960), the researchers used the Sarbin Adjective Checklist in order to measure the self perception of groups of achievers and underachievers selected from juniors and seniors in high school. They reported that male subjects "scored significantly higher than underachievers on the following objectives: Realistic,

Optimistic, Enthusiastic, Reliable, Clear-thinking, and Intelligent" (Purkey, 1970).

Brookover, Thomas and Patterson (1965) conducted a study of 1,000 seventh grade white students in an urban school system. The purpose of the study was: (1) to determine whether the student's concept of his ability in school is significantly and positively related to academic performance; (2) to see if the self concept is differential into specific self concepts which correspond to specific subject matter areas; and (3) to see if the self concept is significantly and positively correlated with the student's perception of how significant others view his/her ability (Purkey, 1970). The Self Concept of Ability Scale was used. After the I.Q. was factored out, the researchers found a significant relationship between the students' grade-point averages and reported concepts of their own ability. Conclusions of the study were that self concept and academic ability is associated with academic achievement at each grade level.

Numerous other studies have been conducted since the early 1960s which indicate a significant relationship between self concept and academic achievement. Bledsoe (1967), Campbell (1967), Caplin (1966), Chapman, Silva and Williams (1984), Fink (1962), Hansford and Hattie (1982), Irwin (1967), Purkey (1978), Purkey and Novak (1984), Rosenburg (1979), Song and Hattie (1984), Williams and Cole

(1968), Wylie (1961), and others have confirmed that there is a profound relationship between self concept and school achievement.

Cause and Effect Relationships

Based on studies of self concept as learner, it can be concluded that there is a clear relationship between the self and academic achievement. Although a number of researchers have linked self concept with academic achievement, it is difficult to locate research which definitely explains the processes which lead from one to the other. Helmke (1987) states: "...the question of which caused mechanisms produce or transmit the positive effect of self concept on academic achievement has been largely neglected." However, there is evidence from research which indicates a strong relationship between the two variables and implies a natural support system. In other words, they both perpetuate each other. It is likely, in view of earlier discussions concerning early self concept development, that self concept is the stronger variable. However, it should be pointed out that further research is needed before a definitive statement on this relationship can be made.

Self Concept as a Determinant of School Achievement

There is sufficient reason to believe that self concept is a major determinant of academic success. Given the existing knowledge of the early development of the self,

even before the child enters school, it is reasonable to believe that self concept has a cause-effect relationship to academic achievement. In 1987 Helmke found, in a study of 341 fifth and sixth grade children, self concept to be "usually dominant over achievement." By this study, the author documented that self-appraisals do make a difference in the cognitive development of children.

Studies have shown that children's perception of their environment, and their subsequent achievement in academic areas, such as reading, are effective indicators of success in academics. They may even be as good a predictor of achievement as I.Q. scores. As Beane and Lipka (1984) describe it: "Individuals are most apt to want to learn those skills and knowledge that they perceive to be most self-enhancing."

The value of attitudes toward self in predicting future academic performance has been emphasized by such authors as Benjamins (1950). In Benjamins' research, he pointed out that when the self concept of the individual is influenced, threatened or changed, the results are reflected in his overt behavior. Bieri and Trieschman (1956) proposed that the self may exert a major influence over certain aspects of social learning. In 1964 Haarer determined, in his work with ninth graders, that professed self concept of ability was a better predictor of the achievement of public school male students and institutionalized delinquent boys than was

I.Q. A study in 1965 by Brookover and others concluded that changes in the self-reported self concept of academic ability are related with parallel changes in academic achievement. Other researchers such as Purkey (1970) have found profound relationships between self concept and academic outcomes.

It can be concluded, therefore, that self concept influences academic achievement in a number of ways. The perception of self which the students bring with them to the school setting ultimately result in influence over academic outcomes. It is appropriate, however, that a look be taken at how academic achievement affects self concept.

School Achievement as a Determinant of Self Concept

Perhaps it is because of the extreme emphasis placed on academic achievement that the self concept of the individual is either enhanced or damaged. How many children have been reluctant to display their report cards knowing that the "C" received in English or the "E" in mathematics would not be welcome by their parents? Academic competence is "expected" by society and when the individual falls short of this expectation, the self concept suffers. Conversely, when achievement is attained the expectations of society, and especially of those "significant others" in the student's world, are fulfilled. This fulfillment results in positive self esteem. Thus, the student's self concept is influenced by academic performance. A study by Centi (1965)

illustrated the tendency for underachievers to acquire a lower general self evaluation following failure. The researcher compiled self reports of college freshmen before school began and after they had received their first semester grades. Losses of self esteem were recorded by students who received poor grades. Their response to their failure to achieve was characterized by rationalization, hostility and dissatisfaction with the course and the teacher and finally with school and classmates. They avoided further study and involved themselves in other activities, causing further decline in academic achievement (Purkey, 1970).

With few exceptions, researchers have found a significant relationship between academic achievement and self concept. For example, a study of eleventh grade over and under achievers revealed that students who achieve at high academic levels tend to have higher self concepts (Farquhar, 1968; Silvernail, 1987). Other researchers found underachievers to have more negative self concepts than achievers (Fink, 1962; Shaw, 1961; Silvernail, 1987).

As the preceding studies indicate, most researchers agree that underachievers suffer a significant loss of self-esteem. One study which illustrates this concept is that conducted by Gibby and Gibby (1967) as reported by Purkey (1970). The study examined two aspects of the stress resulting from academic failure: "(1) The effects upon the

self concept," and (2) "the effects upon intellectual productivity." The researcher selected 60 students in two seventh grade classes. These two cases were homogeneously grouped and were made up of bright and academically superior white children. All had extremely successful academic reviews and all were aware of their academic abilities and their placement. One class was designated as the central group while the other was utilized as the experimental group. Both groups completed their tests: "an English grammar test, a test of word fluency and the Gibby Intelligence Rating Scale." Each group was tested on the word fluency test three days later. The experimental group members all received slips of paper indicating that the previous word glossary test had been failed. The scores of the two groups were then compared with the result that under stress of failure children, even though they were able, performed less effectively.

Self Concept of the "Average" Learner

"Average" learners as described in this study are those students who have been grouped heterogeneously using only grade level as a criteria. Therefore the many forces which interact with self-concept-as-learner are broad and not as selected, at least within the classroom, as are those of homogeneously grouped "gifted" individuals.

Madden and Slavin (1983) reported findings which conflict when examining the placement of homogeneously

grouped children. According to studies by Chapman (1988) self-concept-as-learner of "average" students tend to vary according to a variety of placements while those of "learning disabled" children SCAL was consistent with their homogeneous grouping. Apparently "average" learners SCAL varies from environment-to-environment and according to the characteristics within the particular group.

Self Concept of the "Gifted" Learner

Self concept is considered by Nurius (1986) to be "a powerful system of cognitive structures that is quite likely to mediate interpretation of and response to events and behavior directed at or involving the individual."

Some research has indicated that gifted students are somewhat socially inadequate when compared with non-gifted students (Ross and Parker, 1980). However, in studies conducted by Colangelo, Kelly and Schrepfer (1987), it was found that social self concept is at least as high as that of non-gifted students. The relationship of academic ability and self concept was investigated. The study focused on gifted students, regular students and students with special learning needs. The researchers were also interested in how self-concept-of-learners changes over time. The three groups of students were administered the School Attitude Measure (SAM) (Dolan and Enos, 1980) and the Tennessee Self-Concept Scale (TSCS) (Fitts, 1965). The results indicated clear differences among students who are

gifted, those who have special learning needs and general students on both academic and social concept. The hypotheses that academic ability would be positively correlated with both social and academic self concept were partially confirmed. The third hypothesis, that no significant difference in self concept scores would be attained September and May, was fully supported.

While some children seem not to be bothered by challenges, others experience setbacks in self-esteem as a result of day-to-day problems. According to Silverman (1988) gifted children are particularly vulnerable because of their tendency to react to experience in an intensified manner. A small mistake may be interpreted as a large setback., evidence of the individual's unworthiness. According to Sisk (1982), gifted children are highly sensitive, perceptive, perfectionist and are highly critical of themselves. Because of these factors they have many opportunities to feel inadequate. Gifted children often believe they are not as smart as others perceive them (Silverman, 1988). These feelings of inadequacy are often masked while they many times act superior. Thus, self-concept-as-learner becomes an important factor for the academically gifted adolescent who has many opportunities in the classroom to experience failure as well as success.

Summary

The review of relevant literature suggests that academic achievement does affect self concept just as self concept affects academic achievement. Students who constantly achieve are more likely to perceive themselves in more positive, self-enhancing ways than do underachievers. Research by Lipsitz (1980, 1984), Van Hoose and Strahan (1987), Purkey (1970) and others indicates that there is a significant relationship between the developmental aspects of early adolescents and their self concept. Because of the numerous problems associated with early adolescents, self concept is extremely important as a major developmental factor. A major need of the early adolescent is that of positive self-concept-as-learner development. The understanding of this relationship is essential for educators who work to enhance the school environment. Continued research and study will help in the understanding of the transescent and thus provide a foundation in which schools can build to enhance positive self-concept-as-learner of early adolescents.

CHAPTER III

METHODOLOGY

This chapter describes the methods used in the study here reported. The methodology was designed to measure differences in self-concept-as-learner (SCAL) scores of 400 6th, 7th and 8th grade students using both inferred and professed measures. It was designed to measure differences among grade levels, differences between average (AV) and gifted (AG) students, differences between male and female students and differences in all of these categories over a five-month period.

Included in this chapter are a design of the study, hypotheses derived from the research questions, a description of subjects, instruments and procedures, an analysis of data, and a summary of methodology.

Design of Study

The design of the study made use of cross sectional techniques of analyses. Cross-sectional analyses were selected because of the desire to determine any differences among the various factors of the study. Because of the need to measure changes, if any, which might occur over a five-month period, longitudinal technique was used.

Three grade levels (6, 7 and 8) were used to construct a cross-sectional analysis of the tested grade levels to determine differences, if any, from level to level.

Two groups of students, one group identified by a North Carolina School System as "average" (AV) and one identified as "gifted" (AG), were used to determine any differences between the two groups. Analysis was also conducted on male and female students. A total of 400 students from two middle schools, one urban, the other rural, randomly selected by class were tested and re-tested for the study.

Hypotheses

This study sought to answer five basic research questions stated in Chapter I. To answer these questions, five major hypotheses and twelve corollaries were developed. The five hypotheses and twelve corollaries, stated in the null form, follow:

Hypothesis I (Differences among grade levels)

When Inferred and Professed measures of self-concept-as-learner (SCAL) of middle grade students are combined, there are no significant differences in group scores across grade levels of 6th, 7th and 8th grade students.

Corollary IA

When inferred measures of self-concept-as-learner (SCAL) alone are employed, there are no significant differences in group scores across grade levels of 6th, 7th and 8th grade students.

Corollary IB

When professed measures of self-concept-as-learner (SCAL) are employed alone, there are no significant differences in group scores across grade levels of 6th, 7th and 8th grade students.

Hypothesis II (Differences between average and gifted)

When inferred and professed measures of self-concept-as-learner (SCAL) are combined, there are no significant differences in group scores between academically gifted (AG) and average (AV) students across 6th, 7th and 8th grade levels.

Corollary IIA

When inferred measures of self-concept-as-learner (SCAL) are employed alone, there are no significant differences in group scores between academically gifted (AG) and average (AV) students across 6th, 7th and 8th grade levels.

Corollary IIB

When professed measures of self-concept-as-learner (SCAL) are employed alone, there are no significant differences in group scores between academically gifted (AG) and average (AV) students across 6th, 7th and 8th grade levels.

Hypothesis III (Differences between male and female students)

When inferred and professed measures of self-concept-as-learner (SCAL) are combined, there are no significant differences in group scores between male and female students across 6th, 7th and 8th grade levels.

Corollary IIIA

When inferred measures of self-concept-as-learner (SCAL) are employed alone, there are no significant differences in group scores between male and female students across 6th, 7th and 8th grade levels.

Corollary IIIB

When professed measures of self-concept-as-learner (SCAL) are employed alone, there are no significant differences in group scores between male and female students across 6th, 7th and 8th grade levels.

Hypothesis IV (Differences over time)

When inferred and professed measures of self-concept-as-learner (SCAL) are combined, there are no significant changes across grade levels of 6th, 7th and 8th grade students over a five-month period.

Corollary IVA

When inferred measures of self-concept-as-learner (SCAL) are employed alone, there are no significant changes across grade levels of 6th, 7th and 8th grade students over a five-month period.

Corollary IVB

When professed measures of self-concept-as-learner (SCAL) are employed alone, there are no significant changes across grade levels of 6th, 7th and 8th grade students over a five-month period.

Hypothesis V (Differences between inferred and professed scores)

When inferred and professed measures of self-concept-as-learner (SCAL) are compared, there are no significant differences across grade levels of 6th, 7th and 8th grade students.

Corollary VA

There are no significant differences between inferred and professed SCAL scores of average students (AV) across grade levels of 6th, 7th and 8th grade students.

Corollary VB

There are no significant differences between inferred and professed SCAL scores of academically gifted (AG) students across grade levels of 6th, 7th and 8th grade students.

Corollary VC

There are no significant differences between inferred and professed SCAL scores of male students across grade levels of 6th, 7th and 8th grade students.

Corollary VD

There are no significant differences between inferred and professed SCAL scores of female students across grade levels of 6th, 7th and 8th grade students.

The five hypotheses and 12 corollaries were designed to analyze self-concept-as-learner of students at three grade levels, 6, 7 and 8. They compared average and gifted students as well as male and female populations. They also look at changes, if any, that might occur over a five-month period.

Subjects

Two groups of students were selected to test the hypotheses used in the study. The subjects were 400 students from two middle schools in North Carolina. These students represented 24 classes randomly selected by class from 1,810 students attending the two schools. The selections were from grades 6, 7 and 8 and represented 30% of the total population of each school selected. "Average" (AV) students made up 75% of the selected group. "Gifted" students, identified by the schools as academically gifted (AG) and participating in the schools' gifted programs, made up 25% of the subjects.

Average (AV) students were those who were placed into regular classes based on grade level and previous academic achievement. Academically gifted (AG) students were those

who had high scores on IQ and achievement tests and were recommended for the AG program by their teachers.

Instruments

The Florida Key (Key) (Purkey, Cage, Graves, 1973) was used to measure the inferred self-concept-as-learner of all subjects. The Key is an instrument making use of teacher report techniques. This instrument was developed by asking groups of teachers to identify classroom behavior characteristics of students believed to possess positive and realistic self-images as learners. It contains 23 interrogative items listed in a questionnaire. The 23 questions are followed by a five-point scale to measure frequency of occurrence of classified behavior. The instrument was designed to allow teachers to infer self-concept-as-learner about their students.

Through the use of various statistical analyses, the factors of Relating, Asserting, Investing, and Coping were identified. The Key has an internal consistency of .86 (Fahey, 1983) comparing favorably with data reported by Purkey, Cage and Graves in 1973. Factor analysis of the 1973 version indicates that all items have loadings of at least .40. A student's high score on The Florida Key can be assumed to be an indication of good self-concept-as-learner.

The Key has been used in numerous school settings, including four middle schools in Florida to determine whether significant differences were present between

disruptive and non-disruptive students. Significant differences were found, with significantly lower scores being recorded for disruptive students (Branch, Purkey and Damico, 1976).

In addition to using the standard inferred Florida Key form, an additional form of The Florida Key was modified by the author and used for measuring professed (self report) self-concept-as-learner of the subjects. (Please refer to Appendix A and Appendix B.) The instructions and items on the Key were modified to present 23 interrogative statements to which each subject responded on a frequency of occurrence five-point scale.

Procedure

Upon receipt of permission from the central school administration to conduct the study, the principals of the two participating schools were contacted to schedule appointments. The project was explained to them. After receiving the principals' approval, permission was obtained to talk with the teachers. Twelve classes in each school were randomly selected. These selections represented two classes in each of the two areas investigated (AV and AG) on each grade level (6, 7 and 8).

Once classes were selected, two orientation sessions for teachers were scheduled. One was scheduled prior to the administration of The Florida Key and one additional

orientation session was scheduled for Spring Semester prior to the Spring administration of the Key.

In the teacher orientation session teachers were instructed on the use of the measurement instrument and given a set of written instructions for teachers and students. (Please refer to Appendix C.) Participating teachers completed the inferred version of The Florida Key for each student in his/her class during the first week in December and again during the last week in April. At the same time the participating students completed the matching professed version. Only students present were tested and no students were tested separately because of absence.

Analysis of Data

Scores for the 23 items, first on the inferred version and then on the professed version, were totaled. A minimum score of 0 and a maximum score of 115 were possible for each student tested. Scores on the inferred and professed forms were subdivided for each student into the four components of Relating, Asserting, Investing and Coping. While these sub-scores were not an integral part of the present study, they may provide data for future research.

The mean scores derived from the data collected were used to test the hypotheses of the study. Each of the hypotheses was examined by use of selected statistical techniques, including Analysis of Variance, Tukey's Range

Test. All data were tested at the .05 level of significance.

The mean scores for each of the following groups were computed: All 6th, 7th and 8th grade AV students; all 6th, 7th and 8th grade AG students; all 6th, 7th and 8th grade male AV students; all 6th, 7th and 8th grade female AV students; all 6th, 7th and 8th grade male AG students; all 6th, 7th and 8th grade female AG students.

Mean scores for each of these groups were obtained first using inferred measures, then professed measures. The inferred and professed measures were then combined to obtain means for each of the groups tested.

Students included in the study were tested in December and again in April to obtain two sets (Fall and Spring) of comparison scores (Hypothesis IV).

Tables were constructed to display mean scores for each group. This was done to examine differences as well as possible changes between Fall and Spring data.

To examine the variances between the means within each group and among all groups and means, an analysis of variance (ANOVA) was employed as the major statistical technique. A Tukey's Range Test was used to test for statistical significance. An alpha .05 range was used in order to determine the level of significance.

A consultant in the Department of Statistics at UNC at Greensboro was retained to assist in analysis and

interpretation of data. A software package, SAS, was used for data analysis employing the VAX computer.

The mean and standard deviation of SCAL group scores were calculated for each group of students studied using both the inferred and professed data.

Summary

The analyzed data were applied to the hypotheses to answer each of the five research questions. Each hypothesis was then analyzed in its sub-components using a series of corollary hypotheses, each relating to a major hypothesis. These were outlined earlier in this chapter. The mean scores were examined in all categories within each hypothesis, and a Tukey's Range Test was applied at the .05 level of significance to determine any significant differences and changes. Results of this analysis are recorded in Chapter IV.

Chapter IV includes the results of the tests of each of the five hypotheses and twelve corollaries and a summary of the results obtained from each hypothesis tested.

CHAPTER IV

RESULTS

This chapter consists of six major sections. Each of the five hypotheses and their corresponding twelve corollary hypotheses are restated and the results of the tests of each are described in sections one through five. Data from the statistical tests described in Chapter III are presented for each of the hypotheses in these five sections. Section six is a summary of the results.

Results of Hypotheses

Each hypothesis and research outcome is displayed on the following tables. Following each hypothesis table are tables for each of the related corollaries.

Hypothesis I

Hypothesis I proposed that when inferred and professed measures of middle level students are combined, there are no significant differences in SCAL scores across grade levels 6, 7 and 8.

Hypothesis I was not supported. When the inferred and professed SCAL scores were averaged together by grade level, significant differences were found at each of the three grade levels.

Examination of the data by grades revealed significantly and progressively lower scores for 7th and 8th

graders as compared to 6th grade students. Scores for 7th grade students were found to be significantly lower than those of 6th grade students. There was a leveling effect from grades 7 to 8 with scores remaining within 1.53 points between 7th and 8th grades, but the data indicated significantly lower scores on the 8th grade level than those on the 6th grade level.

Table 1

Results for Hypothesis I

HI	When inferred and professed measures of SCAL are combined, there are no significant differences in group scores across grade levels of 6th, 7th and 8th grade students.

Average Combined Inferred and Professed SCAL Scores: by Grade - Fall

Grade	N	Combined Average
6	82	84.82
7	138	75.68*
8	182	76.15*

$p<.05$ indicates significant difference from previous grade level.
*Indicates significant difference from grade 6.

When inferred and professed Fall data were combined, significant score differences of -9.14 points from 6th to

7th grade and -8.66 from 6th to 8th grade were found. A difference of +0.47 points was found from grades 7 to 8. This 7th to 8th grade change was found not to be significant.

Table 2

Tukey's Range Test for Average Combined SCAL Scores

Fall

Grade Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	Significance at.05 Level Indicated By *
6-7	4.58	9.14	13.70	*
7-8	-4.16	-0.47	3.21	
6-8	4.13	8.66	13.01	*

Alpha = 0.05 Confidence = 0.95 DF = 396
Critical Value of Studentized Range = 3.32

Table 3

Average Combined Inferred and Professed SCAL Scores:

by Grade - Spring

Grade	N	Combined Average
6	79	83.82
7	133	72.50*
8	178	75.30**

$p<.05$
*Indicates significant difference from previous grade level.
**Indicates significant difference from grade 6.

Average combined data for Spring supported the findings for Fall in that similar results were found in both time

periods. When the inferred and professed Spring data were combined significant score differences of 11.31 from 6th to 7th grade and -8.5 from 6th to 8th grade were found. A difference of +2.8 points was found from grades 7 to 8. The 7th to 8th grade change was found not to be significant.

Table 4

Tukey's Range Test for Average Combined SCAL Scores

Spring

Grade Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	Significance at.05 Level Indicated By *
6-7	6.74	11.31	15.88	*
7-8	-6.48	-2.80	0.88	
6-8	4.16	8.51	12.86	*

Alpha = 0.05 Confidence = 0.96 DF = 384
Critical Value of Studentized Range = 3.32

Corollary IA

Corollary IA stated that when inferred measures of SCAL are employed there are no significant different SCAL scores across grade levels 6, 7 and 8. This corollary hypothesis was not supported. The data indicated significantly lower scores for 7th and 8th grade students as compared with 6th grade students when the inferred version of The Florida Key was used. There was a slight, but not significant, higher score for grade 8 as compared to grade 7.

Table 5

Results for Corollary IA

CIA When inferred measures of self-concept-as-learner (SCAL) are employed, there are no significant differences in group scores across grade levels of 6th, 7th and 8th grade students.

Average Inferred SCAL Scores:

by Grade - Fall

Grade	N	Inferred Average
6	84	84.73
7	142	73.20*
8	184	75.24*

$p<.05$
*Indicates significant differences from previous grade level.
**Indicates significant differences from grade 6.

The average inferred data for Fall showed significant score differences from 6th to 7th grade (-11.95 points) and from 6th to 8th grade (-9.48). A difference of +2.46 points was found from grade 7 to 8. The Tukey's Range Test indicated that the 7th to 8th grade level was not significant.

Table 6

Tukey's Range Test for Average Inferred SCAL Scores

Fall

Grade Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	Significance at .05 Level Indicated by*
6-7	6.7	11.95	17.73	*
7-8	-7.14	-2.46	2.21	
6-8	3.97	9.48	14.99	*

Alpha = 0.05 Confidence = 0.95 DF = 396
Critical Value of Studentized Range = 3.32

Table 7

Average Inferred SCAL Scores:

by Grade - Spring

Grade	N	Inferred Average
6	79	89.26
7	133	75.98*
8	178	78.71**

$p<.05$
*Indicates significant difference from previous grade level.
**Indicates significant differences from grade 6.

The average inferred data for Spring also supported the findings for the Fall. Similar results were found in both Fall and Spring. When grade levels for Spring were

examined, significantly lower scores were found for grades 7 and 8 as compared to grade 6. A difference of -13.28 was discovered from grade 6 to 7. From grade 6 to 8 a difference of -10.55 was found. No significant change was found in data from grades 7 to 8 where a +2.72 difference was found.

Table 8

Tukey's Range Test for Average Inferred SCAL Scores

Spring

Grade Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	Significance at .05 Level Indicated By *
6-7	7.22	13.28	19.34	*
7-8	-7.61	-2.72	2.16	
6-8	4.78	10.55	16.31	*

Alpha = 0.05 Confidence = 0.95 DF = 384

Critical Value of Studentized Range = 3.327

Corollary IB

Corollary IB proposed that when professed measures of SCAL of middle level students are employed no significant differences would be found in the professed SCAL scores. This corollary was also not supported. The data indicated scores on the 7th and 8th grade level were significantly lower than those recorded for 6th grade students.

Significant differences were also found from grade 6 to 7. A slightly lower score was recorded for 8th grade students as compared with 7th grades. However, this difference was found not to be significant.

Table 9

Results for Corollary IB

CIB When professed measures of self-concept-as-learner (SCAL) are employed, there are no significant differences in scores across grade levels of 6th, 7th and 8th grade students.

Average Professed SCAL Scores by Grade - Fall

Grade	N	Professed Average
6	82	84.85
7	138	78.52*
8	182	77.00**

$p<.05$
*Indicates significant differences from previous grade level.
**Indicates significant difference from grade 6.

The average professed data for Fall showed significant score difference from 6th to 7th grade (-6.33) and from 6th to 8th grade (-7.84). A difference of -1.51 was found from

grade 7 to 8. The Tukey's Range Test indicated no significant difference from grade 7 to 8.

Table 10

Tukey's Range Test for Average Professed SCAL Scores

Fall

Grade Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	Significance At .05 Level Indicated By *
6-7	1.30	6.33	11.36	*
7-8	-2.55	1.51	5.58	
6-8	3.05	7.84	12.64	*

Alpha = 0.05 Confidence = 0.95 DF = 396

Critical Value of Studentized Range = 3.32

Table 11

Average Professed SCAL Scores

by Grade - Spring

Grade	N	Professed Average
6	82	78.12
7	138	69.23*
8	178	71.90**

$p<.05$

*Indicates significant differences from previous grade level.

**Indicates significant difference from grade 6.

The average professed data for Spring was similar to the professed Fall data in that significant differences were found. The data showed differences from 6th to 7th grade (-6.47) and from 6th to 8th grade (-6.47). A difference of +2.87 was found from grade 7 to 8. The Tukey's Range Test indicated no significant differences from grade 7 to 8.

Table 12

Tukey's Range Test for Average Professed SCAL Scores

Spring

Grade Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	Significance at .05 Level Indicated By *
6-7	3.93	6.47	11.62	*
7-8	-7.24	-2.87	1.49	
6-8	1.32	6.47	11.62	*

Alpha = 0.05 Confidence = 0.96 DF = 384
Critical Value of Studentized Range = 3.32

Hypothesis II

Hypothesis II proposed that when inferred and professed measures of SCAL are combined, there are no significant differences in group scores between academically gifted (AG) and average (AV) students across 6th, 7th and 8th grade levels.

Hypothesis II was not supported. When the inferred and professed SCAL scores were averaged together, significant

differences were found between average (AV) and gifted (AG) student. Examination of the data by class (AV and AG) revealed significantly lower scores for average (AV) students than for gifted (AG) students. This was also true for 6th, 7th and 8th grades.

Table 13

Results from Hypothesis II

HII When inferred and professed measures of self-concept-as-learner (SCAL) are combined, there are no significant differences in group scores between academically gifted (AG) and average (AG) students across 6th, 7th and 8th grade levels.

Average Combined Inferred and Professed SCAL Scores:

Fall		
Class	N	Combined Average
Average	274	72.91
Gifted	128	88.13*
Spring		
Class	N	Combined Average
Average	267	72.67
Gifted	123	83.46*

$p<.05$
*Indicates significant differences between classes

Tables 13, 14 and 15 display data indicating the differences between combined SCAL scores of average and gifted students for Fall and Spring testings. Significant differences ($p<.05$) were found between average and gifted SCAL scores for both Fall and Spring (Table 13). When inferred and professed SCAL were averaged together gifted students scored 15.22 points higher than average students in the Fall and 10.79 points higher in the Spring.

Table 14

Average Combined Inferred and Professed SCAL Scores:

by Grade and by Class - Fall

	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Grade 6						
Average	49	79.52*	18.33	40.00	110.00	2.62
Gifted	33	92.70**	11.51	5.50	108.50	2.00
Grade 7						
Average	86	70.01*	12.76	39.50	102.00	1.32
Gifted	52	85.07**	9.52	60.00	102.00	1.32
Grade 8						
Average	139	72.38*	15.08	31.00	106.50	1.28
Gifted	43	88.35**	12.35	55.50	108.50	1.08

$p<.05$

*Indicates significant difference when compared with AG students on same level.

**Indicates significant differences when compared with AV students on same grade level.

An examination of the combined Fall data indicate significant differences ($p<.05$) on all three grade levels. Sixth grade gifted students recorded a mean SCAL score 13.18 points higher than average 6th grade students. Seventh grade gifted students scored 15.06 points higher than their average classmates. On the eighth grade level gifted students' mean scores were 15.97 points higher than average 8th grade students' scores.

Table 15

Average Combined Inferred and Professed SCAL Scores:

by Grade and by Class - Spring

	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Grade 6						
Average	47	80.87*	15.71	42.00	108.50	2.29
Gifted	32	88.16**	10.16	69.50	111.00	1.80
Grade 7						
Average	81	68.05*	14.35	31.50	100.50	1.59
Gifted	52	79.45**	11.24	46.50	100.00	1.56
Grade 8						
Average	139	72.60*	14.62	36.00	100.00	1.24
Gifted	39	84.97**	11.62	54.50	101.50	1.79

$p<.05$

*Indicates significant differences when compared with AG students on same grade level.

**Indicates significant difference when compared with AV students on same grade level.

Spring data show results similar to that of Fall (Table 15). Significant differences ($p<.05$) were found on all three grade levels. Sixth grade gifted students recorded a mean SCAL score 7.29 points higher than average 6th graders. Seventh grade gifted students scored 11.40 points higher than average 7th graders. On the eighth grade level gifted students scored 12.37 points higher than average 8th graders.

Corollary IIA

Corollary IIA stated that when inferred measure of SCAL are employed there are no significant differences in inferred self-concept-as-learner (SCAL) scores between academically gifted (AG) and average (AV) students across 6th, 7th and 8th grade levels. Corollary IIA was not supported. The data indicated significantly lower scores for average students than for academically gifted students on all three grade levels.

Table 16

Results for Corollary IIA

CIIA When inferred measures of self-concept-as-learner (SCAL) are employed, there are no significant differences in group scores between academically gifted (AG) and average (AV) students across 6th, 7th and 8th grade levels.

Average Inferred SCAL Scores:

	Fall	
	N	Inferred Average
Average	274	70.29
Gifted	128	89.46*

	Spring	
	N	Inferred Average
Average	267	74.58
Gifted	123	91.50*

*Indicates significant differences between classes (AV and AG).

Table 16, 17 and 18 display data indicating the differences between inferred SCAL scores of average and gifted students for Fall and Spring testings. Significant

differences were found between average and gifted inferred SCAL scores for both Fall and Spring (Table 16). When inferred SCAL scores were averaged separately gifted students scored 19.17 points higher than average students in the Fall and 16.92 points higher in the Spring.

Table 17

Average Inferred SCAL Scores:

by Grade and by Class - Fall

	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Grade 6						
Average	50	77.36*	23.33	29.00	115.00	3.30
Gifted	34	95.56**	16.36	51.00	115.00	2.81
Grade 7						
Average	87	66.85*	15.67	32.00	102.00	1.68
Gifted	55	83.25**	12.41	46.00	105.00	1.67
Grade 8						
Average	142	69.92*	18.46	27.00	106.00	1.55
Gifted	42	93.21**	15.48	55.00	113.00	2.39

$p<.05$

*Indicates significant difference when compared with AG students on same grade level.

**Indicates significant difference when compared with AV students on same grade level.

An examination of the Fall inferred data indicates significant differences ($p<.05$) on all three grade levels. Sixth grade gifted students recorded a mean SCAL score of 18.20 higher than average 6th grade students. Seventh grade gifted students scored 16.40 points higher than their average classmates. On the eighth grade level gifted students' mean score was 23.29 points higher than average 8th grade students' score.

Table 18

Average Inferred SCAL Scores:

by Grade and by Class - Spring

	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Grade 6						
Average	48	82.00*	23.99	.00	115.00	3.46
Gifted	35	94.40**	21.64	.00	115.00	3.66
Grade 7						
Average	85	68.42*	19.61	27.00	113.00	2.13
Gifted	55	86.44**	10.10	63.00	103.00	1.36
Grade 8						
Average	142	74.18*	20.06	25.00	114.00	1.68
Gifted	41	94.41**	11.80	65.00	112.00	1.84

$p<.05$

*Indicates significant difference when compared with AG students on same grade level.

**Indicates significant difference when compared with AV students on same grade level.

Spring inferred data show results similar to that of Fall (Table 18). Significant differences ($p<.05$) were found on all three grade levels. Sixth grade gifted students recorded a mean SCAL score 12.40 point higher than average 6th graders. Seventh grade gifted students scored 18.02 points higher than average 7th graders. On the eighth grade level gifted students scored 20.23 points higher than average 8th graders.

Corollary IIB

Corollary IIB stated when professed measures of SCAL are employed there are no significant differences in professed self-concept-as-learner (SCAL) scores between academically gifted (AG) and Average (AV) students across 6th, 7th and 8th grade levels. This corollary hypothesis was partially supported. Significantly lower professed scores for average students than scores for academically gifted students were found on all three grade levels when all grades were averaged together. However, when data was analyzed by grade levels significant differences were found for Fall (on all three grade levels) but only for 7th and 8th grade in the Spring.

Table 19

Results for Corollary IIB

CIIB When professed measures of self-concept-as-learner(SCAL) are employed, there are no significant differences in group scores between academically gifted (AG) and average (AV) students across 6th, 7th and 8th grade levels.

Average Professed SCAL Scores:

Fall

	N	Professed Average
Average	274	75.53
Gifted	128	86.81*

Spring

	N	Professed Average
Average	267	70.76
Gifted	123	75.43

*Indicates significant differences between classes (AV and AG).

Tables 19, 20 and 21 display data indicating the differences between professed SCAL scores of average and gifted students for Fall and Spring testings. Significant

differences were found between average and gifted professed SCAL scores for Fall but not for Spring (Table 19). When professed SCAL scores were averaged separately gifted students scored 11.28 points higher than average students in the Fall. Gifted students scored 4.67 points higher than average students in the Spring.

Table 20

Average Professed SCAL Scores:

by Grade and by Class - Fall

	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Grade 6						
Average	51	82.12	16.79	36.00	111.00	2.35
Gifted	34	89.18	11.63	52.00	104.00	2.00
Grade 7						
Average	87	73.47	15.49	27.00	106.00	1.66
Gifted	54	87.00	12.16	54.00	107.00	1.65
Grade 8						
Average	142	74.98	16.76	25.00	115.00	1.41
Gifted	43	84.42	13.50	42.00	105.00	2.06

The Fall professed data indicate significant differences ($p<.05$) on all three grade levels. Sixth grade gifted students recorded a mean SCAL score of 7.06 higher than average 6th grade students. Seventh grade gifted

students scored 13.53 points higher than their average classmates. On the eighth grade level gifted students' mean score was 9.44 points higher than average 8th grade students.

Table 21

Average Professed SCAL Scores:

by Grade and by Class - Spring

	N	Mean	SD	Min. Val.	Max. Val.	Std. Error of Mean
Grade 6						
Average	47	77.47	16.99	28.00	108.00	2.48
Gifted	35	79.00	12.46	54.00	109.00	2.11
Grade 7						
Average	84	67.18	18.31	5.00	104.00	2.00
Gifted	54	72.43	18.94	.00	104.00	2.58
Grade 8						
Average	139	70.73	15.07	33.00	105.00	1.28
Gifted	39	76.10	12.75	41.00	99.00	2.04

Spring professed data show mixed results (Table 21). Sixth grade gifted students scored only 2.47 points higher on the professed SCAL test than did average 6th graders. However, significant differences ($p<.05$) were found in grades 7 and 8. Seventh grade gifted students scored 5.25 points higher than 7th grade average students. Eighth grade

gifted students scored 5.37 points higher than 8th grade average students.

Hypothesis III

Hypothesis III examined the differences between SCAL scores by gender. It was proposed when inferred and professed measures of SCAL are combined there are no significant differences between scores of male and female students on grade levels 6, 7 and 8. Hypothesis III was not supported. Differences existed between female and male SCAL scores on all three grade levels examined with females scoring higher than males on all three levels.

Table 22

Results for Hypothesis III

HIII When inferred and professed measures of self-concept-as-learner (SCAL) are combined, there are no significant differences in group scores between male and female students across 6th, 7th and 8th grade levels.

Average Combined Inferred and Professed SCAL Scores: by Gender - Fall and Spring

Gender	N	Combined
Female	434	79.30*
Male	346	72.03*

$p<.05$
*Indicates a significance difference between genders (male and female).

Table 22 displays data indicating the differences between combined inferred and professed SCAL scores of male and female students for Fall and Spring testings. Significant differences ($p<.05$) were found for both Fall and Spring between male and female students.

Corollary IIIA

Corollary IIIA proposed no significant differences would be found between inferred self-concept-as-learner (SCAL) scores of male and female students across grade levels 6, 7 and 8. This corollary was not supported. Significant differences were found between inferred male and female SCAL scores on all three grade levels. Data for corollary IIIA are displayed in Table 23.

Table 23

Results for Corollary IIIA

CIIIA When inferred measures of self-concept-as-learner (SCAL) are employed, there are no significant differences between male and female students across 6th, 7th and 8th grade levels.

Average Inferred SCAL Scores:
by Gender - Fall and Spring Combined

Gender	N	Inferred Average
Female	217	83.91*
Male	173	69.15*

$p<.05$
*Indicated significant difference between scores by gender (male and female).

When Fall and Spring inferred SCAL scores are averaged together a significant difference is found. Female students scored 14.76 points higher than did males.

Table 24

Average Inferred SCAL Scores:

by Gender and by Grade

Gender	Grade	Inferred Mean
Male	6	77.57
Male	7	70.85
Male	8	73.04
Female	6	90.17*
Female	7	74.37*
Female	8	77.11*

$p<.05$
*Indicates significant difference between genders (male and female) on comparable grade levels.

Sixth grade female students scored 12.60 points higher than 6th grade male students on the inferred test. Seventh grade data show a 3.52 points higher score for female students than for male students. Eighth grade female students scored 4.11 points higher on the inferred test than did male 8th grade students.

Corollary IIIB

Corollary IIIB stated that no significant differences exist between male and female students on grade levels 6, 7 and 8 when professed measure of self-concept-as-learner (SCAL) are employed. This corollary was not supported.

Differences between male and female professed SCAL scores were found on all three grade levels. These data are reported in Table 25.

Table 25

Results for Corollary IIIB

CIIIB When professed measure of self-concept-as-learner (SCAL) are employed, there are no significant differences in group scores between male and female students across 6th, 7th and 8th grade levels.

Average Professed SCAL Scores:
by Gender - Fall and Spring Combined

Gender	N	Professed Average
Female	217	74.69*
Male	173	69.15*

$p<.05$
*Indicates significantly difference between scores of genders (male and female).

When Fall and Spring professed SCAL scores are averaged together a significant difference is found. Female students scored 5.54 points higher than did males.

Table 26

Average Professed SCAL Scores:

by Gender and by Grade

Gender	Grade	Professed Mean
Male	6	82.05*
	7	75.20*
	8	72.96*
Female	6	86.93*
	7	81.07*
	8	80.24*

$p<.05$
*Indicates significant difference between genders (male and female) on comparable grade levels.

Sixth grade female students scored 4.88 points higher on the professed test than did male 6th graders. Seventh grade data show a 5.87 points higher score for female students than for male students. Eighth grade female students scored 9.08 points higher on the professed test than did male 8th grade students.

Hypothesis IV

Hypothesis IV proposed that when inferred and professed measure of SCAL are combined there are no significant changes in SCAL scores across grade levels of 6th, 7th and 8th grade students over a five-month period. Hypothesis IV was supported. When inferred and professed SCAL scores were

averaged together in Fall and Spring, no significant differences were found. Examination of combined data revealed no significant differences for 6th, 7th and 8th grade students' scores in the Spring as compared with Fall scores.

Table 27

Results for Hypothesis IV

HIV When inferred and professed measures of self-concept-as-learner (SCAL) are combined, there are no significant changes across grade levels of 6th, 7th and 8th grade students over a five-month period.

Average Combined Inferred and Professed SCAL Scores: by Grade - Spring Compared to Fall

	Fall		Spring		
Grade	N	Mean	N	Mean	Differences
6	82	84.82	79	83.82	-1.00
7	138	75.68	133	72.50	-3.18
8	182	76.15	178	78.71	-2.86

Although minor decreases in mean scores from Fall to Spring occurred when inferred and professed SCAL scores were combined, the data show no significant ($p<.05$) changes from Fall to Spring.

Corollary IVA

Corollary IVA proposed that when inferred measures of self-concept-as-learner (SCAL) scores are examined there are no significant changes on grade levels 6, 7 and 8 over a five-month period. This corollary was supported. Examination of inferred data revealed no significant differences for 6th, 7th and 8th grade students in the Spring as compared with scores in the Fall.

Table 28

Results for Corollary IVA

CIVA When inferred measures of self-concept-as-learner (SCAL) are employed, there are no significant changes across grade levels of 6th, 7th and 8th grade students over a five-month period.

Average Inferred Spring SCAL Scores Compared with Inferred Fall SCAL Scores

	Fall		Spring		
Grade	N	Mean	N	Mean	Differences
6	84	84.73	83	87.23	+3.50
7	142	73.20	140	75.50	+2.30
8	184	75.24	183	78.72	+3.48

Although inferred SCAL scores increased slightly from Fall to Spring, the inferred data show no significant ($p \leq .05$) changes from Fall to Spring.

Corollary IVB

Corollary IVB proposed that when professed measures of self-concept-as-learner (SCAL) are employed, no significant differences would be found across grade levels 6, 7and 8 over a five-month period. This corollary was not supported. Unlike the results of inferred measures SCAL scores resulting from the use of professed measure revealed significant changes across three grade levels from Fall to Spring. A significant difference in SCAL was recorded.

Table 29

Results for Corollary IVB

CIVB When professed measures of self-concept-as-learner (SCAL) are employed, there are no significant changes across grade levels of 6th, 7th and 8th grade students over a five-month period.

Average Professed Spring SCAL Scores Compared with Professed Fall SCAL Scores

	Fall		Spring		
Grade	N	Mean	N	Mean	Differences
6	85	84.94	82	78.12	-6.82*
7	141	78.65	138	69.23	-9.42*
8	185	77.17	178	71.90	-6.87*

$p<.05$
*Indicates significant differences at 0.05 level

Unlike the combined and inferred SCAL scores comparing Fall to Spring, professed SCAL scores dropped significantly on all grade levels from Fall to Spring. Sixth grade students inferred scores dropped by 6.82 points from Fall to Spring while scores for 7th and 8th grade students dropped by 9.42 points and 6.87 points respectively. These scores represent highly significant ($p<.05$) changes from Fall to Spring on the self-report test.

Hypothesis V

Hypothesis V proposed that when inferred and professed measures of SCAL are compared, there was no significant differences between inferred and professed measure of self-concept-as-learner (SCAL) scores across grade levels 6, 7 and 8. Hypothesis V was partially supported. No significant differences were found when Fall SCAL scores for all students (AV and AG) were averaged together. However, Spring professed SCAL scores were significantly lower than Spring inferred scores.

Table 30

Results for Hypothesis V

HV When inferred and professed measures of self-concept-as-learner (SCAL) are compared, there are no significant differences across grade levels of 6th, 7th and 8th grade students.

Inferred and Professed SCAL Scores

All Students by Grade - Fall

	Grade	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Inferred							
	6	84	84.73	22.55	29.00	115.00	2.46
	7	142	73.20	16.52	32.00	105.00	1.39
	8	184	75.24	20.31	27.00	113.00	1.50
Professed							
	6	85	84.94	15.27	36.00	111.00	1.66
	7	141	78.65	15.71	27.00	107.00	1.32
	8	185	77.17	16.52	25.00	115.00	1.21

When inferred and professed SCAL scores for Fall were compared, no significant difference was found between inferred and professed 6th, 7th and 8th grade scores.

Table 31

Inferred and Professed SCAL Scores:

All Students by Grade -Spring

	Grade	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Inferred							
	6	83	87.23*	23.71	0.11	115.00	2.60
	7	140	75.50*	18.71	27.00	113.00	1.58
	8	183	78.72*	20.34	25.00	114.00	1.50
Professed							
	6	82	78.12*	15.16	28.00	109.00	1.67
	7	138	69.23*	18.67	0.00	104.00	1.59
	8	178	71.90*	14.73	33.00	105.00	1.10

$p<.05$
*Indicates significant differences between inferred and professed scores on comparable grade levels.

When inferred and professed SCAL scores for Spring were compared, significant differences were found between inferred and professed scores on all three grade levels, unlike the inferred and professed comparisons for Fall. Professed SCAL scores for 6th grade students were found to be 9.08 points lower than inferred scores for the same students. Professed scores for 7th grade students were found to be 6.27 points lower than inferred scores for 7th graders. Professed SCAL data for 8th grade students show a

lower score by 6.82 points as compared with inferred SCAL data for 8th graders.

Table 32

SCAL Scores: All Students -

Fall Compared to Spring

Grade	Class	Fall Combined	Fall Inferred	Fall Professed	Spring Combined	Spring Inferred	Spring Professed
6	AV	79.52	77.36	88.12	80.87	82.00	77.47
6	AG	92.70	95.56	89.18	88.16	94.40	79.00
7	AV	70.01	66.85	73.47	68.05	68.42	67.18
7	AG	85.07	83.25	87.00	79.45	86.44	72.11
8	AV	72.38	69.92	74.98	72.60	74.18	70.73
8	AG	88.35	93.21	84.42	84.97	94.41	76.10

Table 32 displays combined, inferred and professed scores for Fall and Spring for comparison.

Corollary VA

Corollary VA proposed that when inferred and professed measures of SCAL are compared no differences exist between inferred and professed SCAL scores of average students across grade levels 6, 7 and 8. This corollary was not supported. Significant differences were found between

inferred and professed SCAL scores of average students in both Fall and Spring.

Table 33

Results for Corollary VA

CVA There are no significant differences between inferred and professed SCAL scores of average students (AV) across grade levels of 6th, 7th and 8th grade students.

Inferred and Professed SCAL Scores of Average Students: by Class - Fall

	Grade	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Inferred							
	6	50	77.36*	23.33	29.00	115.00	3.30
	7	87	66.85*	15.67	32.00	102.00	1.68
	8	142	69.92*	18.46	27.00	106.00	1.55
Professed							
	6	51	82.12*	16.79	36.00	111.00	2.35
	7	87	73.47*	15.49	27.00	106.00	1.66
	8	142	74.98*	16.76	25.00	115.00	1.41

$p<.05$
*Indicates significant differences between inferred and professed scores on comparable grade levels.

When Fall inferred and professed SCAL scores of average students are displayed, significant differences are shown on

all three grade levels. Professed scores for 6th grade students are 4.76 points higher than inferred SCAL scores for 6th graders. Professed scores for 7th grade students are 6.62 points higher than inferred SCAL scores for 7th grade students. Professed scores for 8th grade students are 5.06 points higher than inferred SCAL scores for 8th graders.

Table 34

Inferred and Professed SCAL Scores of Average Students: by Class -Spring

	Grade	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Inferred							
	6	48	82.00*	23.99	0.00	115.00	3.46
	7	85	68.42	19.61	27.00	113.00	2.13
	8	142	74.18*	20.06	25.00	114.00	1.68
Professed							
	6	47	77.47*	16.99	28.00	108.00	2.48
	7	48	67.18	18.31	5.00	104.00	2.00
	8	139	70.73*	15.07	33.00	105.00	1.25

$p<.05$
*Indicates significant differences between inferred and professed scores on comparable grade levels.

When Spring inferred and professed SCAL scores of average students are displayed, significant differences are

shown on grade levels 6 and 8. Professed score for 6th grade students are 4.53 points lower than inferred SCAL score for 6th graders. Professed scores for 8th grade students are 3.45 points lower than inferred SCAL scores for 8th graders. No significant differences were found in 7th grade scores for Spring when inferred and professed data for average students were compared.

Corollary VB

Corollary VB proposed that when inferred and professed measures of SCAL are compared, there are no differences between inferred and professed SCAL scores of academically gifted students across grade levels of6th, 7th and 8th grade students. Corollary VB was not supported. Significant differences were found between inferred and professed SCAL scores of academically gifted students in both Fall and Spring.

Table 35

Results for Corollary VB

CVB There are no significant differences between inferred and professed SCAL scores of academically gifted (AG) students across grade levels of 6th, 7th and 8th grade students.

Inferred and Professed SCAL Scores of Gifted Students: by Class - Fall

	Grade	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Inferred							
	6	34	95.56*	16.36	51.00	115.00	2.81
	7	55	83.25	12.41	46.00	105.00	1.67
	8	42	93.21*	15.48	55.00	113.00	2.39
Professed							
	6	34	89.12*	11.63	11.63	104.00	2.00
	7	54	87.00	12.16	54.00	107.00	1.65
	8	43	84.42*	13.50	47.00	105.00	2.06

$p<.05$
*Indicates significant differences between inferred and professed scores on comparable grade levels.

When Fall inferred and professed SCAL scores of average students are displayed, significant differences are shown on

6th and 8th grade levels. No significant differences were found on the 7th grade level. Professed scores for 6th grade students were found to be 6.44 points lower than inferred SCAL scores for 6th graders. Professed scores for 8th grade students show a difference of 8.79 points lower than inferred scores for this group of students.

Table 36

Inferred and Professed SCAL Scores of Gifted Students:

by Class - Spring

	Grade	N	Mean	SD	Min. Val.	Max. Val.	Standard Error of Mean
Inferred							
	6	35	94.40*	21.64	0.00	115.00	3.66
	7	55	86.44*	10.10	63.00	103.00	1.36
	8	41	94.41*	11.80	65.00	112.00	1.84
Professed							
	6	35	79.00*	12.46	54.00	109.00	2.11
	7	54	72.43*	18.94	0.00	104.00	2.58
	8	39	76.10*	12.75	41.00	99.00	2.04

$p<.05$
*Indicates significant differences between inferred and professed scores on comparable grade levels.

The most significant differences between inferred and professed SCAL scores were found when comparing 6th, 7th and 8th grade levels for the Spring testing. A lower difference

of 15.40 points is shown for professed scores as compared with inferred scores on the 6th grade level. A lower difference of 14.01 points is shown for professed scores as compared with inferred scores on the 7th grade level. The 8th grade data show a lower difference of 18.30 points as compared with inferred scores on the 8th grade level.

Corollary VC

Corollary VC proposed that when inferred and professed measures of SCAL are compared, there are no differences between inferred and professed SCAL scores of male students across grade levels of 6th, 7th and 8th grades. This corollary was supported. The data indicated no significant differences between inferred scores for male students as compared with professed SCAL scores of male students.

Results of Corollary

CVC	There are no significant differences between inferred and professed SCAL scores if male students across grade levels of 6th, 7th and 8th grade students.

When inferred and professed SCAL scores for male students were compared, no significant difference was found.

Inferred data for male students show a mean of 73.19 while the mean score for professed data is 75.53.

Corollary VD

Corollary VD proposed that when inferred and professed measures of SCAL are compared, there are no differences between inferred and professed SCAL scores of female students across grade levels of 6th, 7th and 8th grade students. This corollary was supported. The data indicated no significant difference between inferred scores for male students as compared with professed SCAL scores of female students.

Results for Corollary VD

CVD	There are no significant differences between inferred and professed SCAL scores of female students across grade levels of 6th, 7th and 8th grade students.

When inferred and professed SCAL scores for female students were compared, no significant difference was found. Inferred data for female students show a mean of 78.88 while the mean score for professed data is 81.92.

Summary

Several significant findings were discovered in this study. All five null hypotheses were tested. Hypotheses I, II and III were not supported. Hypotheses IV and V were partially supported.

Testing of Hypothesis I revealed significant differences ($p<.05$) between the combined (inferred and professed) mean scores of all 7th and 8th grade students and those of students in 6th grade. Scores for 7th and 8th graders were significantly lower. However, no significance was found between combined scores of 7th and 8th grades. There was a leveling effect from grade 7 to grade 8. The related corollary hypotheses IA and IB were also not supported. Significantly lower inferred and professed scores were found for 7th and 8th grade students when compared to 6th grade students. The leveling effect from 7th to 8th grade was also present for both inferred and professed scores.

Testing of Hypothesis II revealed significant ($p<.05$) differences between combined (inferred and professed) scores of academically gifted (AG) and average (AV) students across 6th, 7th and 8th grade levels. When corollaries IIA and IIB were tested, significant differences were found across grade levels 6, 7 and 8. When inferred scores were examined and when professed scores were examined, significant differences

were found between academically gifted (AG) and average (AV) students on all three (6th, 7th and 8th) grade levels.

When Hypothesis III was tested, significant differences in SCAL scores between SCAL scores were found for male students and scores of female students. When Corollary IIIA was tested significant differences were found between inferred SCAL scores of male students and those of female students. Corollary IIIB data revealed significant differences between male and female SCAL scores for professed data.

Hypothesis IV was partially supported. Although significant declines from Fall to Spring were found for professed SCAL scores, no significant changes were found for inferred SCAL scores. When inferred and professed SCAL scores were combined, no significant differences were found.

Hypothesis V was partially supported by the data. Significant differences were found between inferred and professed SCAL scores for Spring but not for Fall. Corollaries VA, VB and VC were not supported. However, Corollary VD testing indicated a significant difference between Spring inferred and professed scores.

Chapter V presents conclusions and implications of the results shown in Chapter IV. Chapter V includes four sections: conclusions of the study, implications, recommendations for further study and a summary.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

The study described in the preceding pages was concerned only with stating and testing the five hypotheses and twelve corollaries and with describing the results of the SCAL tests which were used. No attempt was made to identify causes of the test scores nor their relationships in each of the described categories. This chapter projects beyond the study to propose possible conclusions and implications of the data. Recommendations are made which are offered to further research and understanding of the self-concept-as-learner phenomenon of middle level students.

Conclusions

A number of conclusions can be drawn from the study. These are included in the following paragraphs.

Based on the data analysis in Chapter IV, it is plausible to conclude that self-concept-as-learner is lower for seventh and eighth grade students than for sixth graders. Therefore, a major conclusion is that self-concept-as-learner decreases from grade 6 to 8. This is supported by the fact that there was a decline in scores from Fall to Spring as well as 6th, 7th and 8th grade comparison scores. Teacher evaluations of SCAL of middle

graders as well as self report of students also support this contention.

When one considers differences between average and gifted students, the data would seem to support the contention that gifted middle grade students have a higher self-concept-as-learner than do their average classmates. However, it is also logical, based on the professed data, that their self-concept-as-learner declines at a more rapid rate than does that of average students. Perhaps this is due to the great academic expectations placed on gifted students by parents, teachers and peers. These expectations seem to "take their toll" over time and result in rapidly diminishing self esteem as learners for gifted students. Teachers appear to maintain the "image" of gifted students as having positive self-concept-as-learner over longer periods of time than do students of themselves. This is supported by the fact that teachers rate gifted students higher than gifted students rate themselves.

Professed self-concept-as-learner declines sharply throughout the year while inferred self-concept-as-learner does not show as rapid a decline. Are gifted students more unsure of themselves as learners than their teachers believe they are? Teachers apparently feel that gifted students' SCAL either stays the same or rises as a result of the efforts of the school and instruction. According to the data, students do not concur with teachers' evaluations.

Put simply, when student self report is the criterion it appears that teachers overestimate the self-esteem-as-learner of gifted students, by assuming that this group of students automatically have high self-concept-as-learner because they are labeled "gifted."

Teachers also rate average students higher on self-concept-as-learner than these students rate themselves. Although to a lesser degree than gifted students, teachers seem to assume that average students maintain these self-concept-as-learner and in some cases increase it. The professed data of average students would not support this contention.

Female students' inferred and professed data supports the contention that there are differences in the environmental perceptions of these students when compared to male students. It seems that male middle level students feel more unsure of themselves as learners than do female students. When this phenomenon is considered one is reminded of the often expressed belief that girls are smarter than boys and that boys are not supposed to be intelligent but are supposed to exhibit physical aptitude and athletic ability. The implication here is that being an athlete and a scholar are not compatible endeavors. Girls also are faced with the dilemma. A girl who is athletic is often faced with being classified as either "smart" or "athletic" but not both. It is easy to see why

students self-concept-as-learner often suffer when both boys and girls struggle to maintain the "image" that society and the school imposes on them.

Data in this study indicates that there is a decline in self-concept-as-learner over time. Based on the results of the analysis one can assume that this is possibly true at all levels and likely at the early adolescent level. As indicated earlier, teachers tend to underestimate this decline as is evidenced by the relationship between Fall and Spring self-concept-as-learner scores. However, students indicate by self report methods that their self-esteem-as-learners decline over time.

Implications

A commission on self esteem set up in California to study the effects of self esteem has identified a number of social problems related to self concept. Testimony by people from all walks of life have identified low self esteem as a possible cause of many of societies ills. Data collected from counselors, educators, police, AIDS victims and gang members support the contention that poor self esteem is linked to drug abuse, alcoholism, crime and violence, child abuse, teenage pregnancy, prostitution, chronic welfare dependency and failure of children to learn (Grubb, 1989).

The reader is referred to Chapter II where the various problems faced by the early adolescent are analyzed. The

relationship between self concept and the problems facing middle level youth are profound ones. The increasingly high drop-out rate for students at all levels can be linked to the low self esteem of students. It is not difficult to imagine that students who view themselves as unworthy, unreliable and generally incompetent learners would tend to leave school at an early age.

Perhaps many middle level students begin to consider drugs and alcohol as an alternative to success in school when their self-concept-as-learner declines to the point where failure is imminent. Crime and violence is a problem often related to middle level students. Perhaps a more humane, caring, inviting school atmosphere would serve to substitute for the temptation to commit a crime or to engage in a violent act.

Studies have shown the cognitive and affective development can not be separated. Schools which give attention to the affective aspects of the curriculum enhance the cognitive development of students (Purkey and Aspy, 1988). Schools which invite students to fulfill their potentials, in the cognitive as well as in the affective and psychomotor domains, have gone a long way toward developing positive self-concept-as-learner of students.

School practices which invite students to become their "best" generate positive outcomes not only for the student but for the school. Schools which consistently practice

optimism, respect for students and teachers, and genuine concern over their welfare are destined to become "intentionally inviting" schools. Such institutions greatly contribute to students self-concept-as-learner as well as their global self concept (Purkey and Aspy, 1988). When students perceive themselves as valuable, capable learners and are surrounded by those persons who share this belief, they are more likely to develop positive self concept.

Poor self-concept-as-learner is related, perhaps significantly, to many of the problems discussed in Chapter II. Self-concept-as-learner decreases over time. Many teachers are not aware of the severity and impact of self concept on the learner. However these relationships fit into the broad pattern of early adolescent development, it is safe to say that the school's problems and perhaps a large number of society's problems, are linked to poor self concept. It can be assumed, based on the results of this study and others reviewed in Chapter II that self-concept-as-learner is a vital component of the early adolescent's makeup. To underestimate it is to take a chance with the school achievement and mental health of middle level learners.

Recommendations for Further Study

The results of this study suggest other studies, outside the parameters of the current one, which might serve

to better clarify the phenomenon of self-concept-as-learner. Additional areas for study are:

1. The self concept of teachers who evaluate student self-concept-as-learner.
2. The self-concept-as-learner of minority groups of 6th, 7th and 8th grade students.
3. The self-concept-as-learner of additional 6th, 7th and 8th grade students from schools outside North Carolina and perhaps from schools in other counties within North Carolina.
4. The self-concept-as-learner of various ethnic groups.
5. A follow-up study using the students in this study as 9th, 10th, 11th and 12th graders.

Summary

It is the author's hope that the data analyzed and reported in this study will serve to bring attention to the importance of the relationship between how early adolescents perceive themselves as learner and how they achieve in schools. Indications are that teachers often do not recognize the true level of self-concept-as-learner of their students. Perhaps examination of the data in this study and similar ones would help in the recognition of the relationship between self-concept-as-learner and school achievement. The author contends that the schools which recognize this

relationship and the magnitude of it have gone a long way toward making middle level schools more inviting places.

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APPENDIX A

The Florida Key

THE FLORIDA KEY

AN INSTRUMENT TO INFER STUDENT SELF-CONCEPT AS LEARNER

IN GRADES ONE THROUGH SIX

MANUAL

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THE FLORIDA KEY

MANUAL

THE FLORIDA KEY MANUAL

INTRODUCTION

> A person who doubts himself is like a man who would enlist in the ranks of his enemies and bear arms against himself. He makes his failure certain by himself being the first person to be convinced of it.
>
> Alexandre Dumas

Many in education, psychology, sociology, and related fields have identified the significant relationship between self-concept and school achievement. On the basis of available research it now appears that students who doubt their ability to learn in school carry with them a tremendous handicap.

The purpose of the Florida KEY is to provide teachers and related professionals with a single instrument to infer self-concept as learner of students in grades one through six. This instrument can be scored easily and quickly by classroom teachers without previous training and provides them with an insight into students' perceptions of themselves as learners. The KEY identifies selected behaviors of students who seem to possess positive and realistic self-concepts in the area of school success. Identification of these selected behaviors was based on the research findings of Purkey, Cage, and Graves (1973) and Fahey (1983).

An important advantage of the Florida KEY is that it avoids the problems involved with reliance on self-report (professed self-concept). The KEY is unobtrusive, non-reactive, and does not depend on self-report as do most instruments designed to measure self-concept. There are significant differences between self-concept and self-report. Self-concept consists of all those perceptions which an individual holds to be true regarding his or her personal existence. Self-report

is what an individual is able, willing, or can be tricked or forced into professing about oneself. Self-concept and self-report are by no means the same (Combs, 1962). The Florida KEY provides a way for teachers to infer students' self-concepts as learners without relying on self-reports. This provides additional insights into how students see themselves and may have important implications for improving pupil performance in school (Purkey, 1970; Purkey, 1978; Purkey & Novak, 1984).

Importance of self-concept

Over the past several decades the concept of self has become a central part of many human personality theories and the major basis for numerous programs in education. Many authors and researchers have identified self-concept as a central ingredient in understanding human personality and behavior. Among the most graphic accounts of how self-concept is acquired, modified, and in turn modifies future experiences are those of Coopersmith (1967), Gergen (1971), Hamachek (1978), Jourard (1971), Maslow (1962), and Rogers (1951). These and numerous other works provide considerable evidence that self-concept is an essential and influential part of human personality and individual behavior.

In light of present knowledge it appears that self-concept is learned. The beginnings of this learning take place in the earliest months of life. Gradually, infants begin to relate to significant others in their lives. These early relationships are the matrix in which an awareness of self as an independent agent takes place. Within the first few years of life, the child develops a relatively stable self-concept and is busy referring to his or her personal existence as "I" or "me." This early and rapid development of a complex "theory" of one's personal existence is a remarkable feat.

During the early years of development, each child is surrounded by countless signal systems. "Inviting" or "disinviting" messages inform the child of his or

her abilities, values, and autonomy, or the lack thereof. Each experience the child has, and each interpretation he or she makes of that experience, influences the development of the child's self-concept, positively or negatively. By the time a child reaches school age, his or her self-concept is already developed and functioning. All later experiences will be filtered through this self-concept. As this filtering process takes place, the self-concept itself is gradually altered. A major way the self-concept is altered is through the addition of self-concept as learner.

Importance of self-concept as learner

As vital as early preschool experiences are in creating self-concept, school experiences should not be underestimated. When children enter schools they are expected to undertake a major new identity, and they assume this identity with greater or lesser success. The result is an often overlooked aspect of self-concept theory: self-concept as learner. Self-concept as learner is that part of a person's "global self"--all the attitudes, opinions, and beliefs that a person holds to be true of his or her personal existence--that relates directly to school achievement.

Most self-concept researchers have tended to focus on global self-concepts rather than on situation-specific self-images, such as self as athlete, self as family member, self as learner, or self as friend. By observing only global self-concept--which is many-faceted and contains diverse, even conflicting sub-selves--investigators have underestimated the importance of those sub-systems (Purkey, Raheim, & Cage, 1983).

Students' perceptions of themselves as learners apparently serve as personal guidance systems in directing their behavior in school. This aspect of self-concept theory plays a critical role in determining students' academic performances. Thus, the ability to infer how students see themselves as learners, without

relying on self-report or student awareness of being evaluated, is an important skill for teachers to use in developing their sensitivity and appreciation of the internal world of the developing child.

THE FLORIDA KEY

The Florida KEY provides educators and other professional helpers with a means to infer student self-concept as learner that can be:

1. quickly scored by a classroom teacher without previous training or special skill.
2. used to provide the teacher with an insight into the student's perception of oneself as a learner.
3. applied in a way which avoids reliance on self-report (professed self-concept).

Thus, the KEY is easy to use, provides insights into how students view themselves as they relate to school, and avoids reliance on professed self-concept.

Development of the Instrument

The KEY was developed by identifying typical classroom behaviors exhibited by those students considered by teachers to possess positive and realistic self-images as learners (Purkey, Cage, & Graves, 1973). Two procedures were involved in the development of the KEY. The first was item identification and pilot testing. A random sample of elementary teachers was asked to list and later evaluate a large number of student classroom behaviors in terms of their validity and reliability in inferring pupil self-concepts as learners. From these activities, behavioral acts were isolated, described in simple written form, and juxtaposed with a six-point rating scale to measure perceived frequency of occurance. Data were collected and analyzed on elementary students in Florida and Oklahoma, in grades three through six, and four factor dimensions were identified through statistical analysis. These factors are relating, asserting, investing, and coping. In the second

procedure, pupil populations of two additional elementary schools were evaluated by teachers, followed by other school populations. Approximately 1,000 students participated in the preliminary data collection phase.

Instrument Content

The MEY contains 23 interrogative items that describe student behavior in a classroom. Contextually, the items identify behaviors that occur more often by students who have a good self-concept as learner. Factor analyses by Fahey (1983) have supported the original factor structure of relating, asserting, investing and coping identified by Purkey, Cage, and Graves (1973). A description of each factor follows.

I. RELATING reflects a basic trust in people. The student who scores well on relating probably identifies closely with classmates, teacher, and school. He or she thinks in terms of our school, our teachers, my classmates; as opposed to the teacher, that school, those students. Being friendly comes easy for this student, and he or she is able to take a natural, spontaneous approach to school life. The student finds ways to express feelings of frustration, anger, and impatience without exploding at the slightest problem.

II. ASSERTING suggests a trust in one's own value. The student has learned to see himself or herself as having some control over what happens to oneself in school. The student who does well on asserting is willing to challenge authority to obtain a voice in what takes place in the classroom. There seems to be present in this person a learned process of affirmation: to claim one's integrity, to compel recognition. (An individual scoring high on asserting would probably announce to one and all that "the emperor has no clothes on!")

III. INVESTING implies a trust in one's potential. The person who feels good about oneself as a learner is more willing to risk failure or ridicule. A high score on investing suggests an interest in originality, a bent towards creativity, and a willingness to try something new. Students who score high in investing volunteer in class, although their good intentions sometimes backfire. By investing, the individual enjoys a release of emotional tension and exhibits an attitude of excitement and wonder.

IV. COPING indicates a trust in one's own academic ability. The student who scores well on coping is interested and involved in what happens in the classroom. Pride is taken in school work and attempts are made to obtain closure. Students who score high in coping are usually accomplishing their academic goals in school.

The four factors of the KEY support the position that when an individual relates well in school, is able to assert thoughts and feelings, feels free to invest in class activities, and confidently seeks to cope with the challenges and expectations of school, then this student may be said to possess a "good" self-concept as learner.

ADMINISTRATION

A set procedure is used. Each teacher is to complete the Florida KEY in relation to each student to be tested for learner self-concept. Each item of the KEY is rated in accordance with a 0 - 5 point scale. For example, if the student never gets along with other students (item 1) a score of 0 is given; if the student very seldom gets along with another student a score of 1 is given, etc. Students should not be rated until at least six weeks into the term or until the teacher feels that she or he knows each child on a personal basis.

TABLE I

THE FLORIDA KEY

Elementary Form Grades 1-6

This scale is to assist you, the teacher, in assessing how the student perceives his or her "learner" self. Please select one of the following answers and record the number in the blank space provided.

NEVER: 0, VERY SELDOM: 1, ONCE IN A WHILE: 2, OCCASIONALLY: 3, FAIRLY OFTEN: 4, VERY OFTEN: 5

Name of Student _____ Teacher _____ Date _____

Compared with other students of the same age, does this student:

R	1.	Get along with other students?	_____
R	2.	Get along with other teachers?	_____
R	3.	Keep calm when things go wrong?	_____
R	4.	Say good things about his/her school?	_____
R	5.	Tell the truth about his/her work?	_____
A	6.	Speak up for his/her own ideas?	_____
A	7.	Offer to speak in front of the class?	_____
A	8.	Offer to answer questions in class?	_____
A	9.	Ask meaningful questions in class?	_____
C	10.	Exhibit confidence in his/her school work?	_____
C	11.	Persist in his/her school endeavors?	_____
C	12.	Talk to others about his/her school work?	_____
C	13.	Join in school activities?	_____
I	14.	Seek out new things to do in school on his/her own?	_____
I	15.	Offer to do extracurricular work in the classroom?	_____
I	16.	Spend time helping others?	_____
I	17.	Show an interest in others' work?	_____
I	18.	Show interest in being a leader?	_____
I	19.	Initiate school projects?	_____
C	20.	Finish his/her school work?	_____
C	21.	Pay attention to class activities?	_____
C	22.	Do his/her school work carefully?	_____
I	23.	Talk to teachers about personal concerns?	_____

TOTAL _____

SCORING

The KEY is scored by assigning 0 for never, 1 very seldom, 2 once in a while, 3 occasionally, 4 fairly often, and 5 very often. Only one number is recorded for each item. Scores for the 23 items are totaled and recorded in the direction of high, moderate and low learner self-concept.

Total scores may then be sub-divided into the four components of the KEY. Hence, separate scores may be obtained for relating, asserting, investing, and coping. For example, scores for items 1, 2, 3, 4, 5 give a total for relating; 6, 7, 8, 9 for asserting; 10, 11, 12, 13, 20, 21, 22 for coping; and 14, 15, 16, 17, 18, 19, 23 for investing. These sub-divisions are also recorded in the direction of high, moderate, and low learner self-concept behavior.

INTERPRETATION OF RESULTS

Analysis of the psychometric properties of the Florida KEY, reported both in American and Australian research studies, provides an initial basis for concluding that the KEY is a useful research instrument which teachers can use with children over the full range of elementary school ages from 6-12 years. The Florida KEY is attractive because of its brevity and simplicity and can be used with ease by both experienced and inexperienced teachers.

The KEY has an acceptable level of internal consistency of 0.86 (Fahey, 1983) which compares favorably with the estimated reliability of the original version reported by Purkey, Cage, and Graves (1973). Factor analysis of the present version reveals that all items have loadings of at least 0.40 and thus are interpretable in relation to students' self-concepts as learners. If a students scores highly on the Florida KEY, it can be assumed that this person possesses a good self-concept as learner. Similarly, if the score is low, it may be assumed that the student possesses a negative self-concept as learner. High, moderate, or low learner self-concept is determined in accordance with the table below.

TABLE II

Total Score for the Florida KEY - Learner Self-Concept

Score	High	Moderate	Low
Range	81-115	35-80	0-34

The KEY is a valuable instrument in assisting the teacher to examine the positive and persistent relationship between specific aspects of a students' self-concept and success or failure at school. The four factors of the KEY - relating, asserting, investing, and coping - may also be identified by teachers and consequently used with affirming techniques to help students gain academic achievement and a positive concept of self in relation to learning. For example, low scores on any of the four factors may indicate students at risk who require the teachers' assistance. Such scoring, moderate to low, generally sensitizes the classroom teacher to the academic needs of the students as well as the need to provide activitites for developing their self-esteem. Table III outlines the range of scores high, moderate, and low for each of the four KEY factors. Examination of these components in detail will be useful, as they serve as a basis for suggesting ways in which teachers may invite students to learn.

TABLE III

Scores for the Four Components of the Florida KEY

Score Range	High	Moderate	Low
1. Relating	18-25	9-17	0-8
2. Asserting	14-20	6-13	0-5
3. Investing	25-35	11-24	0-10
4. Coping	25-35	11-24	0-10

Much of the current research in the area of self-concept theory indicates the need for teachers to encourage their students to view themselves as able, valuable, and self-directing. Both the American and Australian studies emphasize the value of the Florida KEY in determining the learner self-concept of students in elementary schools. The KEY gives support for the position that when an individual relates well in school, is able to assert feelings, feels free to invest in class activity, and can reasonably cope with the challenges and expectations of school, then this person may be said to possess a good self-concept as learner.

TECHNICAL INFORMATION

In 1973, all pupils in the 5th and 6th grades (N=180) of an elementary school in north central Florida, and all pupils in Quads 5 and 6 of an experimental elementary school in northeast Florida (N=155) were asked to rate themselves on the Short Form of the Coopersmith Self-Esteem Inventory (Coopersmith, 1967) which relies on self-report. Their teachers were asked to complete the Florida KEY for each pupil completing the Coopersmith Self-Esteem Inventory. A total of 335 pupils in the two elementary schools yielded twenty-five professed self-esteem statements as elicited by the Coopersmith Self-Esteem Inventory. Three-hundred fifty-seven Florida KEY ratings were obtained on the same population, as more than one teacher rated several children.

Concurrently, a validity study was done with Oklahoma teachers enrolled in a graduate course. These teachers were asked to rate their pupils on the dimensions of relating, asserting, coping, and investing. The teachers had not been exposed to the Florida KEY, and their ratings were to be subjective evaluations of placement of children on these dimensions based on school performance. The meaning of each dimension was presented in a manner to avoid terms and behaviors found in the KEY. One week later they completed the KEY on the same children using an unlabelled form of the instrument. Teachers were not informed of any relationship

between the two instruments and conditions minimized any connections drawn between the tasks. Among this group, four teachers were identified who were working in an appropriate grade range (3rd grade to 6th grade) for the analyses. These four teachers each rated 20 to 25 students.

Later in 1973 a second validity study was conducted at a university laboratory school in Florida. Teachers who had used the Florida KEY to assess learner self-concept of their students in kindergarten through eighth grade were asked to choose five students who, "in your judgment feel best about themselves as learners." The teachers were also asked to consider, when making their choice, whether the student had a "positive attitude toward school and willingness to participate in classroom activities" and were advised that "these students may not necessarily be the best students academically." Teachers were also asked to choose the five students at the opposite end of the continuum, i.e., those who "feel badly about themselves as learners" and "have negative attitudes toward school." This categorization of students by the teachers was done six weeks following their use of the Florida KEY.

Through use of these data, items were standardized within each teacher's ratings and were factor analyzed by a principal axes solution, rotated to the varimax criterion. Four factors were identified which accounted for 71 percent of the total score variance and 92 percent of the common factor variance. These four factors were labelled: (1) Relating, (2) Asserting, (3) Investing, and (4) Coping.

In addition, three teachers were identified who had rated the same eleven students. An index of reliability of 0.84 was obtained through use of an analysis of variance procedure (Kerlinger, 1973). Coefficients of reliability employing the split-halves procedure were determined for all teachers. These coefficients ranged from 0.62 to 0.92. A split-halves estimate of reliability of total score across all teachers was found to be 0.93.

Teacher listings were compared with Florida KEY scores. In separate analyses for each teacher, of sixteen correlation coefficients produced ranging from 0.40 to 0.79, only two were not significant at the 0.01 level (one was significant at the 0.02 level, the other at the 0.10 level). The average correlation (using Fisher's transformation) was 0.62.

In another validation study done in 1973, twenty-seven elementary teachers each chose five students as "feeling best about themselves as learners" and five who "felt badly about themselves as learners." The mean factor score in the four Florida KEY factors for each of the two groups was used to determine a point-biserial correlation coefficient. The mean total score was also calculated for each of the two groups, and a point-biserial coefficient was obtained. These coefficients ranged from 0.57 (relating) to 0.71 (coping), with the correlation for total score being 0.68, all of which were significant at the 0.01 level. (See Table IV.)

In 1979 a survey was conducted of all persons who had requested copies of the KEY. The survey requested information as to the KEY's use, appropriateness of items to the general elementary school population and suggestions for additional items. From a response of 47 survey forms a slightly revised instrument of 23 items was developed and field tested with 25 elementary teachers in Mississippi. An item analysis and a validity and reliability study was conducted on the instrument. Two items "look people in the eye" and "read in class" were deleted from the instrument. Seven items "exhibit confidence in his/her school work", "persist in his/her school endeavors", "spend time helping others", "show an interest in others' work", "show interest in being a leader", "initiate school projects" and "talk to teachers about personal concerns" were added to the instrument.

TABLE IV

Rotated Factor Loadings for Florida KEY

(Values below 0.400 omitted)

Item	I Relating	II Asserting	III Investing	IV Coping
1	0.732			
2	0.731			
3	0.712			
4	0.617			
5	0.616			
6		0.800		
7		0.772		
8		0.766		
9		0.725		
10		0.604		
11		0.565		
12		0.533		
13			0.524	
14			0.448	
15				0.717
16				0.617
17				0.613
18				0.612

The revised 23-item instrument was used in an extensive Australian study of middle school pupils by Fahey (1983). A copy of the revised instrument with the item factor clusters is given in Table I. While the reliability and validity of the Florida KEY have been established in United States samples, it was considered appropriate to confirm reliability and validity of the Florida KEY in the Australian study.

A sample of 1,000 elementary students (462 males, 538 females) randomly selected from government and non-government schools in the Sydney Metropolitan Area completed the Middle Childhood Self-Concept Questionnaire, a self-report scale designed to measure self-concept. As a means of validating this test and to examine the students' self-concepts in a specific situation within the classroom, the students' teachers were requested to make inferences about their pupils' self-concepts in relation to learning. For this purpose 212 teachers were requested to use the Florida KEY. The principals and the teachers were individually given a brief explanation of the KEY as none of the Australian teachers or administrators had any previous experience with it. The results follow.

Reliability Analysis for the Florida KEY - Australian Study

The reliability analysis for the scale and for the four variables viz: relating, asserting, investing, and coping within the scale were assessed. For the total sample alpha was 0.90, a very highly significant estimate of reliability.

1. Relating. The first five questions relate to the subjects' positive relationships in the actual classroom. The alpha for these items is 0.82 and these five items showed a high correlation from 0.78 to 0.79.
2. Asserting. Asserting is demonstrated by the students' assertive behavior in socially acceptable ways in the classroom. Four questions made up this section of the KEY which had a somewhat similar alpha as relating, alpha=0.81. Item correlation is also similar being 0.78 to 0.79.

3. Investing. This component in a sense is contrary to self-doubt and relates to the creative part of self-concept as learner. The student is considered to be willing and confident to trust self and try new things. The seven items have an alpha=0.81 which is the same coefficient as asserting. The item correlation varies from 0.77 to 0.79.

4. Coping. The seven items relating to the student's ability to copy or achieve in school has the lowest alpha, which is .60. The item correlation for coping lies between 0.50 to 0.70. With Cronbach's alphas, .90 for the total test and the alphas ranging from 0.81 to 0.61 on the four factors within the KEY the estimates provide ample evidence of reliability for the scale which infers self-concept as learner. These results also compare favorably with an index of reliability of 0.84 obtained by the authors through use of an analysis of variance procedure (Kerlinger, 1973).

Factor Structure of the Florida KEY

The scores were intercorrelated across the twenty-three items and the resulting matrix was factor analyzed using the principal factor procedures with iterations (the PA2 solution in Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). In the present solution, the four-factor solution was substantially the same as the authors' original report (Purkey, Cage, & Graves, 1973). An oblique factor pattern matrix after rotation with Kaiser normalization 1/4 = 0 detailed the item behaviors relating to the students' self-concept as learners.

After rotation, the factors were easily interpreted and a four-factor solution is summarized below.

TABLE V

Four Factor Solution - Florida KEY

Factor	Label	Eigen Value	Percentage of Variance	Cumulative Percentage
1	Coping	7.156	71.1	71.1
2	Relating	1.262	12.5	83.6
3	Investing	0.970	9.6	93.2
4	Asserting	0.680	6.8	100.0

Factor 1 - Coping. The first varimax rotated factor was labelled as coping and had loadings as high as 0.69, with the lowest loading being 0.45. The items in this factor did not correspond closely to the original structure but nevertheless the items were concerned with coping with school work and class activities. For example, -persists in his/her school endeavors—had a loading of 0.60, while the item relating to finishing work had a loading of 0.60.

Factor 2 - Relating contained exactly the same items as the original relating factor interpreted by the authors. The item loadings were as high as 0.76 and 0.68 and described how well students related to their peers and teachers.

Factor 3 - Investing contained items identical with Purkey and his associates' investing factor. One additional item loaded within this factor which is accurately interpreted as investing. This item refers to the students' investing time in discussing their personal concerns with their teachers and has a loading of 0.40. Seven items fell into this factor and teachers showed particular interest in them. Like the authors, many teachers expressed the belief that these questions on the scale related to the creative aspect of the students' self-concepts as learners. The item with the highest loading was -initiate school projects (0.73). Other high

loadings (in order of loadings) are: spent time helping others (0.67), show an interest in other works (0.60), offer to do extracurricular (0.55), seek out new things to do in school on his/her own (0.40), talk to teacher about personal concerns (0.40).

Factor 4 - Asserting contains four of the original items concerned with assertive behavior. Assertive behavior as the student's affirmation of his or her rights was expressed in the four following items: offer to speak in front of the class (0.71), speak up for his/her own ideas (0.64), offer to answer questions in class (0.41), and ask meaningful questions (0.41).

On the basis of the results from the Florida KEY obtained from 212 Australian teachers and 1,000 students, the correlation between the Middle Childhood Self-Concept Questionnaire and the Florida KEY was high. The correlations between this self-report and the Florida KEY are detailed in the table below.

TABLE VI

Correlations Between Self-Concept Test and the Florida KEY

Elementary Schools	Classes (Grades)	N	Correlation - Pearson r
1. State	3-6	640	0.94
2. Catholic	3-6	240	0.96
3. Independent	3-6	120	0.98
Total Sample	3-6	1,000	0.96

Mean Scores and Standard Deviations

The mean scores and standard deviations of the Florida KEY total scores were very similar to the means and standard deviations on the total Questionnaire

scores. Both tests have similar mean scores of 93.0 with a standard deviation of 2.5.

Homogeneous grouping

A multiple range test was applied to the Florida KEY scale to investigate the homogeneous subsets of school groups in the differing status areas (Newman-Keuls Procedure ranges from the 0.50 level). Results indicated that the higher mean scores were invariably related to several of the schools who emphasized a humanistic approach and implemented school curricula techniques for self affirmation training.

Sex Differences

A two-way Anova was used to test the effects of subjects' sex and teachers' sex on the total scores for the Florida KEY. The main effect of subject's sex was not statistically significant ($F\ [1,996] = 1.59$). The main effect of teacher sex was not significant ($F\ [1,996] = 0.04$) and their interaction was also non-significant ($F\ [1,996] = 2.89$).

A similar statistical procedure was used to test the effects of subjects' sex and teachers' sex in relation to each of the four factors within the scale. The results showed there were no main effects due to either the subjects' sex, or teachers' sex in relation to the factors--investing and relating to peers and teachers. However, for the other two factors, namely asserting and coping with school work and activities, there is a slight effect due to the sex (male) of teachers. Asserting ($F = 4.23$, df 996, $p < 0.05$; coping $F = 5.29$, df 996, $p < 0.01$).

STUDIES USING THE FLORIDA KEY

From 1973 to the present, the KEY has been used to investigate self-concept as learner of various groups of school students. Branch, Purkey, and Damico (1976) used the KEY with students of four middle schools in Florida to determine whether

significant differences existed between disruptive and nondisruptive students. Analyses revealed significant differences, with disruptive students scoring significantly lower on all four factor of the KEY.

Damico and Purkey (1978) used the KEY in an unusual study, to investigate the "class clown" phenomenon. From a sample of 3,500 eighth grade students, 96 class clowns were identified by peers on a sociometric form. These students were compared to a randomly selected sample of 237 nonclown classmates on a variety of measures including the KEY. Although there were no significant differences between clowns and nonclowns on the KEY total score, significant differences did appear on two KEY factors—asserting and coping. Clowns scored significantly higher than nonclowns on asserting, and significantly lower on coping. To date, the Damico and Purkey investigation of class clowns is the only available study of this particular group of students.

Weeden (1984) used the Florida KEY in a study of the effects of a contrived treatment program on the self-concept of seventh and eighth grade students. The KEY differentiated between the experimental and control groups on the asserting and coping factors and the total score favoring the experimental group ($p \leq 0.05$). The Piers-Harris Self-concept Instrument was used as a self-report and showed the same findings.

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Mary Fahey received her doctorate in Educational Psychology at the University of New South Wales. She is a Sister of Charity who has been a teacher, principal, a supervisor of schools and a consultant to Catholic Education where she designed and implemented a Leadership Program for educational administrators. She has written and lectured extensively on self-concept and leadership in educational administration at the University of New South Wales, as a consultant in educational and organizational development seminars pertaining to the building of positive self images for parents, teachers, and students.

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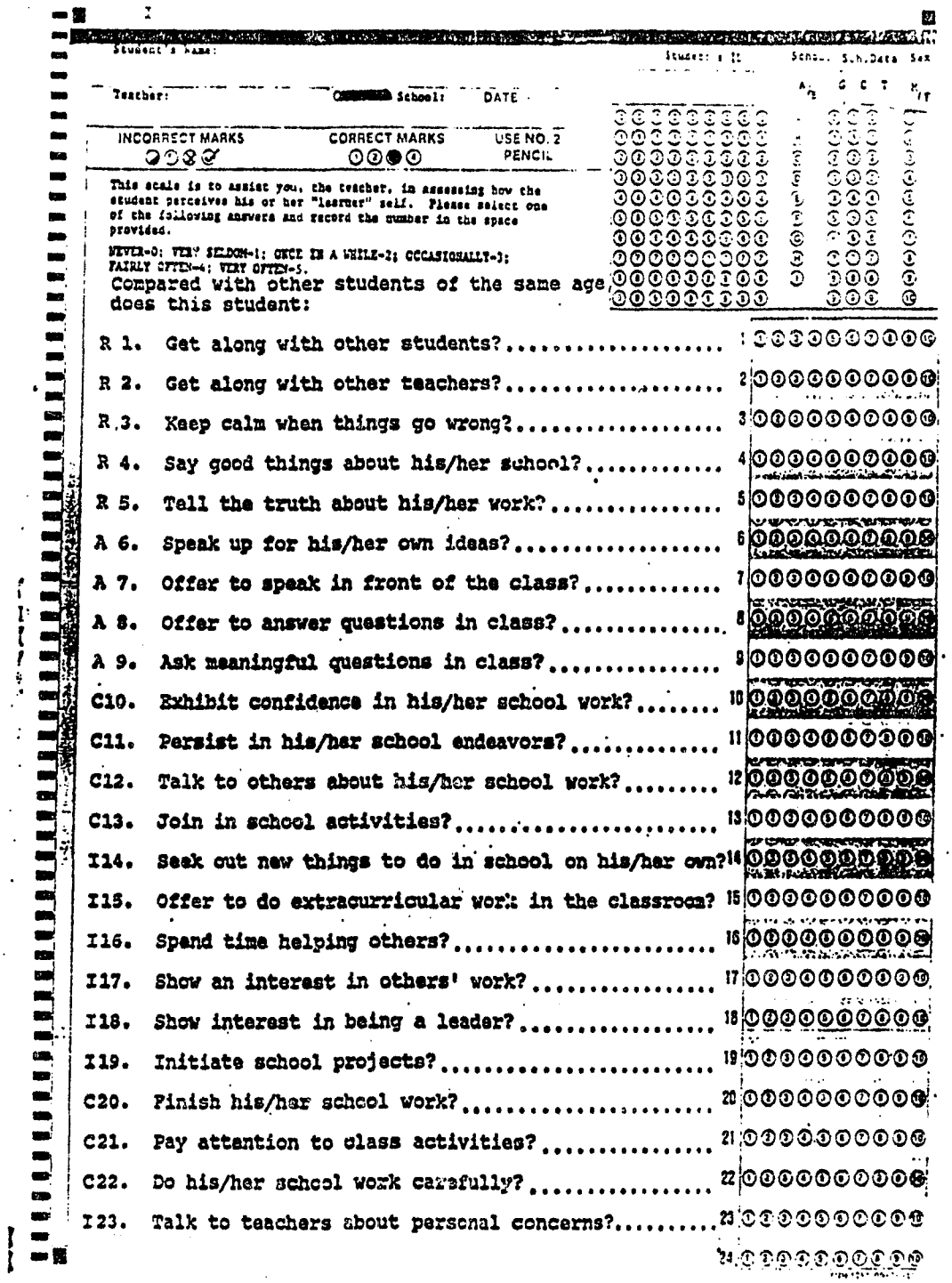
APPENDIX B

Response Forms



Student's Name: Student # Sch... S.h.Data Sex

Teacher: School: DATE

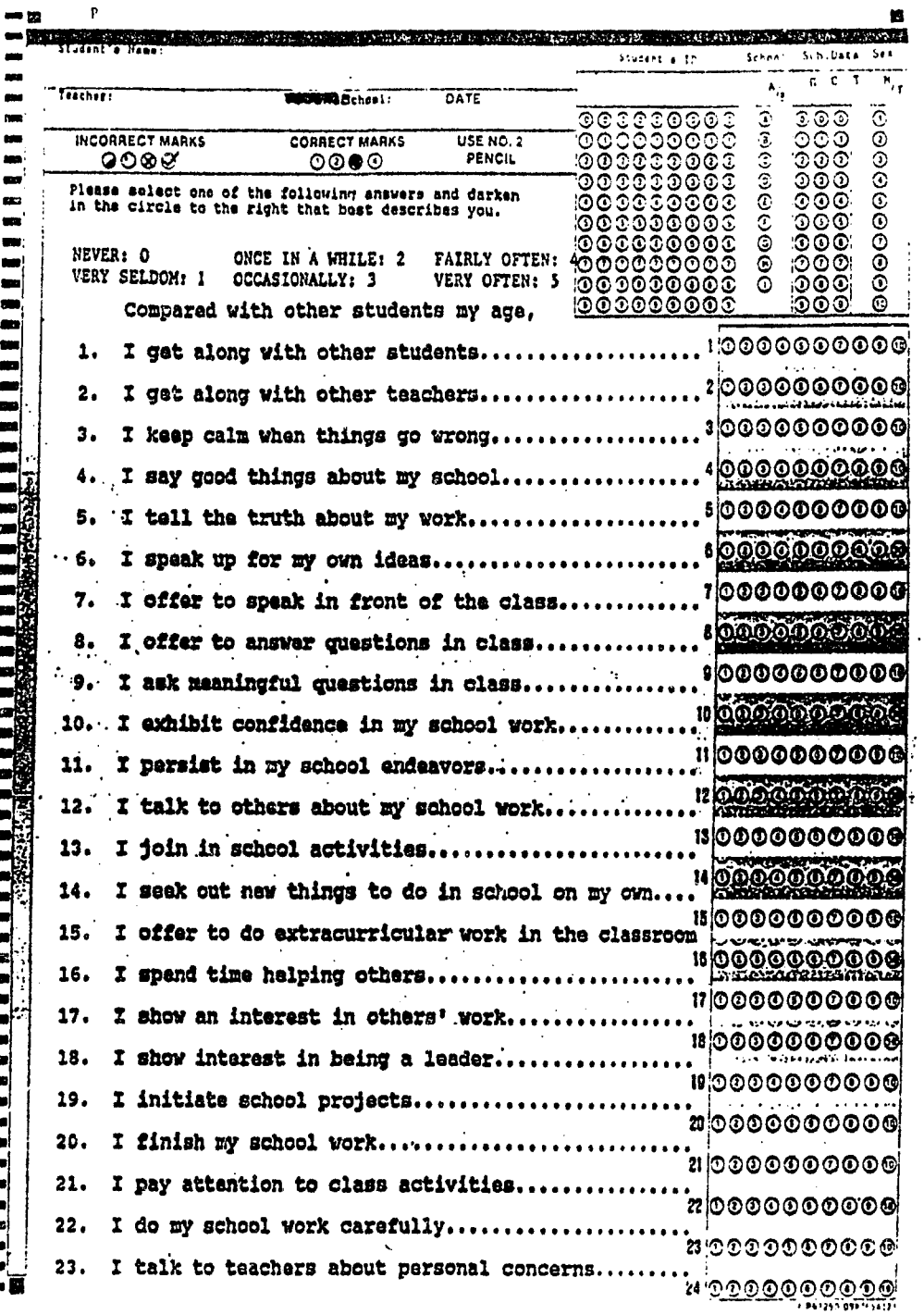
INCORRECT MARKS	CORRECT MARKS	USE NO. 2 PENCIL
⊘ ⊘ ⊗ ✓	① ② ● ④	

This scale is to assist you, the teacher, in assessing how the student perceives his or her "learner" self. Please select one of the following answers and record the number in the space provided.

NEVER-0; VERY SELDOM-1; ONCE IN A WHILE-2; OCCASIONALLY-3; FAIRLY OFTEN-4; VERY OFTEN-5.

Compared with other students of the same age, does this student:

R 1.	Get along with other students?	1
R 2.	Get along with other teachers?	2
R 3.	Keep calm when things go wrong?	3
R 4.	Say good things about his/her school?	4
R 5.	Tell the truth about his/her work?	5
A 6.	Speak up for his/her own ideas?	6
A 7.	Offer to speak in front of the class?	7
A 8.	Offer to answer questions in class?	8
A 9.	Ask meaningful questions in class?	9
C10.	Exhibit confidence in his/her school work?	10
C11.	Persist in his/her school endeavors?	11
C12.	Talk to others about his/her school work?	12
C13.	Join in school activities?	13
I14.	Seek out new things to do in school on his/her own?	14
I15.	Offer to do extracurricular work in the classroom?	15
I16.	Spend time helping others?	16
I17.	Show an interest in others' work?	17
I18.	Show interest in being a leader?	18
I19.	Initiate school projects?	19
C20.	Finish his/her school work?	20
C21.	Pay attention to class activities?	21
C22.	Do his/her school work carefully?	22
I23.	Talk to teachers about personal concerns?	23
		24



Student's Name:

Student's ID | School | Sch. Data | Sex

Teacher: School: DATE

A G C T M/F

INCORRECT MARKS ⊘ ⊗ ✓ | CORRECT MARKS ● | USE NO. 2 PENCIL

Please select one of the following answers and darken in the circle to the right that best describes you.

NEVER: 0 ONCE IN A WHILE: 2 FAIRLY OFTEN: 4
VERY SELDOM: 1 OCCASIONALLY: 3 VERY OFTEN: 5

Compared with other students my age,

1. I get along with other students..... 1
2. I get along with other teachers..... 2
3. I keep calm when things go wrong..... 3
4. I say good things about my school..... 4
5. I tell the truth about my work..... 5
6. I speak up for my own ideas..... 6
7. I offer to speak in front of the class..... 7
8. I offer to answer questions in class..... 8
9. I ask meaningful questions in class..... 9
10. I exhibit confidence in my school work..... 10
11. I persist in my school endeavors..... 11
12. I talk to others about my school work..... 12
13. I join in school activities..... 13
14. I seek out new things to do in school on my own.... 14
15. I offer to do extracurricular work in the classroom 15
16. I spend time helping others..... 16
17. I show an interest in others' work..... 17
18. I show interest in being a leader..... 18
19. I initiate school projects..... 19
20. I finish my school work..... 20
21. I pay attention to class activities..... 21
22. I do my school work carefully..... 22
23. I talk to teachers about personal concerns..... 23
24. 24

APPENDIX C

Directions for Administration

ADMINISTRATION OF THE FLORIDA KEY
GUIDE FOR TEACHERS

Thank you for agreeing to administer the "Florida Key" to your students. There are two basic parts of the survey. Form "I" which is illustrated on page 7 on the "Florida Key Manual" and Form "P" which is modified to be completed by the students.

ADMINISTRATION OF FORM "I" (Completed by the teacher)
Please:

1. Review the Florida Key Manual, paying particular attention to pages 5-7. These pages define various terms used in the "Key" and describes the survey administration.

2. Using a #2 pencil, carefully code one opscan sheet for each student being assessed at the top of the sheet.
   - print in student's name: LAST, FIRST, MIDDLE
   - print your name under "Teacher"
   - print in under school either School A or School B
   - print in date using numbers (ex. 12-5-88)
   - enter the student's ID number in the ID column
   - under the school column enter either:
     "A" for School A.
     "B" for School B
   - under "School Data":
     under "G" (Grade) enter either 6 or 7 or 8
     under "C" (Class) enter either "1" for Regular Class or "2" for AG Class
     under "T" (Teacher) enter your teacher code: "1-9" or "0"
     under "Sex" enter either "M" (Male) or "F" (Female) Sex Code: M = 1 or F = 2
   - after you have entered the proper data on all sheets, carefully darken the corresponding circle below each item.

3. Consider each student carefully and his/her self-concept <u>as a learner</u>.
   - respond to each of the 23 items as they relate to the particular student being evaluated.
   - select the appropriate response (0-5) from the chart at the top of the opscan page. For example, if the student <u>never</u> gets along with other students (item 1) no score is given; if the student very seldom gets along with another student, a score of 1 is given, etc.
   - darken the corresponding circle to the right of the item (1-5)

4. After every student has been evaluated, please place all survey forms in the appropriate folder provided by the researcher and return them to him.

ADMINISTRATION OF FORM "P" (completed by student)

Please:

1. Distribute to every student:
   - a copy of "Form P" of the "Florida Key" survey sheet.
   - a #2 pencil to those who need one.

2. Explain to the group that:
   - THIS IS NOT A TEST.
   - THERE ARE NO RIGHT OR WRONG ANSWERS.
   - THE SURVEY IS BEING GIVEN TO HELP YOU AND ME TO UNDERSTAND YOU BETTER.
   - JUST RELAX, TAKE YOUR TIME AND RESPOND TO EACH QUESTION HONESTLY.

3. Walk the students through the coding of the opscan sheets:
   - beside "Student's Name" print your name: LAST, FIRST, MIDDLE I.
   - under "Teacher" print in teacher's name. Example: "Mrs. J. Smith"
   - under "School" print in either "School A" or "School B"
   - under "Date" print in date example - 12-8-88
   - write in your ID number under "Student's ID"
     - darken carefully the correct circle under each number
   - under "School" print in either
     A for School A or
     B for School B
     - darken the correct circle under the letter.
   - under "School Data" enter appropriate grade: "6" or "7" or"8"
     - appropriate class:
       "1" for Regular
       "2" for AG
     - appropriate teacher number (teacher provides)
     - darken the appropriate circle under each letter
   - under "Sex" print in either M for male or F for female darken the appropriate circle under the letter:
     "1" for Male
     "2" for Female

4. Walk the students through the sample on the "Instructions for Students" sheet.
   - read the directions aloud to the class as they follow along on their sheets
   - walk the students through the first item: "Compared with other students,..." (if you think you VERY OFTEN get along, darken "5") or (if you think you NEVER get along, do not darken anything since the response is "0", etc.)

- SAY TO THE STUDENTS:

  - Work slowly and consider each question carefully.
  - Are there any questions?
  - If not, you may begin.

5. After the students have completed their questionnaire, take them up one at a time to ensure that each sheet has been coded properly.

   NOTE: Please be sure that no item has a response beyond "5" since each column has 10 circles and only 1 of 5 responses are possible.

THANK YOU FOR PARTICIPATING IN THIS

SELF-CONCEPT RESEARCH.

INSTRUCTIONS FOR STUDENTS

1. Your teacher will assist you in completing the top part of your questionnaire.

2. Please be sure to follow instructions carefully and code your questionnaire sheet carefully.

3. When responding to each question:

   - select <u>one</u> answer for each question (0 or 1 or 2 or 3 or 4 or 5)

   - select either:
     NEVER = 0 (DO NOT DARKEN A CIRCLE IF THIS IS SELECTED)
     VERY SELDOM = 1
     ONCE IN A WHILE = 2
     OCCASIONALLY = 3
     FAIRLY OFTEN = 4
     VERY OFTEN = 5
   <u>Select no answer above 5</u>

   - Practice by answering the question below:

     Compared with other students my age,

     1. I get along with other students .... 1 ① ② ③ ④ ⑤

THIS IS NOT A TEST.

THERE IS NO RIGHT OR WRONG ANSWER.

APPENDIX D

Data Processing Form

DATA PROCESSING FORM

The Florida Key

Teacher: _____ _____
Teacher Number

School: _____ _____
School Number

Please indicate below with a check (✓) which grade(s), academic group(s), and survey form(s) were used by you in The Florida Key administration. Write in the number of students surveyed in each category rather than a check if the number(s) is/are known.

Grade 6 _____

"I" Form _____ "P" Form _____

AV _____ AV _____

AG _____ AG _____

Grade 7 _____

"I" Form _____ "P" Form _____

AV _____ AV _____

AG _____ AG _____

Grade 8 _____

"I" Form _____ "P" Form _____

AV _____ AV _____

AG _____ AG _____

Thanks for your help!