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A STUDY OF SELF-CONCEPT, SOCIAL ADJUSTMENT, CAREER AWARENESS AND ACADEMIC ACHIEVEMENT OF FOURTH GRADE STUDENTS

The Ohio State University

PH.D. 1980

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A STUDY OF SELF-CONCEPT, SOCIAL ADJUSTMENT,
CAREER AWARENESS AND ACADEMIC ACHIEVEMENT OF FOURTH GRADE STUDENTS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
Mary Elizabeth McDonald Makay, B.A., M.S. in Ed.

* * * * *

The Ohio State University
1980

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I want to express my gratitude to all those who have generously helped me in the completion of this dissertation. Professor James Wigtil and Professor Donald Haefele, in their reading of the entire manuscript, made important critical and constructive suggestions which led to considerable improvements. My colleagues, Alan Yarletts and Dr. Betty Melragon, gave of their time and energy in a way that lent integrity to our teacher-consultative strategy. The children and teachers who worked with us deserve appreciation as well. I want to thank most especially my adviser, Professor Joseph Quaranta, whose creativity, ingenuity and demand for excellence have enabled me to experience the process of career education.
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Chapter I
INTRODUCTION

Education continues to strive to meet the challenges of relevance in our technological society and, at the same time, satisfy the individual's need to experience education as a generative encounter. Educational programs demand constant examination in order to stay relevant to a rapidly changing society and to the growing person.

Since 1918, American education has defined its goals within the context of the Seven Cardinal Principles which include: Health, Command of Fundamental Processes, Worthy Home Membership, Vocation, Civic Education, Worthy Use of Leisure Time, and Ethical Character. Historically, educators have attempted to implement these goals through attending to the needs of the individual, maintaining high academic standards, prioritizing important learnings, implementing effective organization and methods of instruction while, at the same time, meeting the challenges of providing equal educational opportunity for all and being accountable to the public.

At least four elements are present in and basic to today's educational concerns: student self-concept and its humanistic implications; social adjustment and its implications for interpersonal behavior; school achievement as represented by basic academic skills; and career development and its implications for satisfactory work adjustment. This study is concerned with these four elements.
The broad area of self, as contained within the framework of the Career Education Seven Developmental Areas (Ohio Career Development Model), focuses on the individual as subject, which is in contrast to the object focus on the individual in the other Areas. Feelings, attitudes and values must be dealt with when self is subject; internal, rather than external, orientation to activities is noted in this area.

Within this orientation, the individual is viewed as progressing through three stages. The first stage, which may be termed self-awareness, occurs when the individual gathers perceptions. These perceptions are internalized, that is, organized and interpreted as the individual moves to the next stage. The second stage is reached when the individual's beliefs are formed and value systems emerge; this stage may be termed self-acceptance. Once the self-acceptance stage is reached, the person's beliefs affect the individual's behaviors as s/he moves to affirm or apply these beliefs to new and/or varying situations. This involves predicting consequences and making choices among alternatives, as well as asking appropriate questions to clarify and extend knowledge.

Basic academic skills, resulting in school achievement, are called for in the United States Office of Education Ten Learner Outcomes. The basic skills call for students to demonstrate levels of competency in the areas of reading, math, social science, science and listening comprehension. Career Education views basic academic skills to be foundational to educational programming as it pertains to lifelong career development planning. For the student, the basic skills exist as tools for work and measures for industry.
Social adjustment is addressed through the Developmental Area of Employability and Work Adjustment Skills. This broad area focuses on helping the student learn how good attitudes contribute to both their personal success and the success of social groups in which they function. Specific emphases for student activities in this developmental area include helping students become aware of skills related to building interpersonal relationships required in social groups, including the work setting. Students are encouraged to be motivated to function effectively in social and work settings. Emphasis is put on identifying current skills and adapting them to new and/or varying situations. Students are taught characteristics of a good worker, including personal appearance, manners, respect for others, and work skills.

Self-concept development, social adjustment and academic achievement, infused with career awareness through curriculum implementation, combine to contribute to the life-long process of career development. Career education programming, on the elementary level, focuses on developing within students the capacity to work, for the capacity to work is the capacity for industriousness. As the natural tendency toward industriousness is fostered, so are the natural tendencies toward healthy self-concept, social adjustment and school achievement. The individual is able to develop a healthy concept of self, relate successfully with others, be aware of work achievements and affirm personal and social beliefs as extensions of current achievements.
Statement of Problem

It was the purpose of this study to determine relationships among the variables of 1) self-concept, 2) social adjustment, and 3) career awareness of fourth grade students during one school year.

A second purpose was to determine what changes in the same variables took place in children identified as low on measures of self-concept and social adjustment, according to teacher nomination and/or low measured academic achievement, after teachers had been subject to a career education teacher-consultant intervention strategy.

A third purpose was to determine implications for teacher-consultative strategies for improving low self-concept, low social adjustment and low career awareness among fourth grade students and implications for career education and teacher education programming.

Specifically stated, the questions posed for this study are as follows:

What are the relationships among the variables of 1) self-concept, 2) social adjustment, and 3) career awareness at the beginning and end of an elementary school year which incorporates a comprehensive career education program?

What changes take place in the variables of 1) self-concept, 2) social adjustment, and 3) career awareness across a school year which incorporates a comprehensive career education program?

What are the relationships among the variables of 1) self-concept, 2) social adjustment, 3) career awareness, and 4) academic achievement for children identified low on measures of self-concept, social adjustment, career awareness, teacher nomination and/or academic achievement at the beginning of an elementary school year which incorporates a comprehensive career education program?
What changes in the variables of 1) self-concept, 2) social adjustment, and 3) career awareness take place across a school year in children identified as low on measures of the same variables and/or the variable academic achievement?

What are the implications of these findings for teacher intervention strategies for students low on measures of self-concept, social adjustment and career awareness for career education and teacher education programming?

Rationale

The rationale for this study rests in 1) the significance to education of four separate constructs—self-concept, social adjustment, career awareness and academic achievement—and relationships among these constructs; 2) the efficacy of career education as a means for improving educational programs; 3) the need for a means of assisting teachers in working with students low on measures of self-concept, social adjustment, career awareness and academic achievement; and 4) within career education, the need to work with teachers, specifically, in these areas.

Self-concept—Wylie (1974) states that, since 1940, over two-thousand studies have been conducted on self-concept. The theories surrounding the construct of self-concept are in many ways ambiguous, according to Wylie, and no one theory has received a great amount of empirical investigation. In 1961, Wylie summed up her exhaustive review of research by stating that the total accumulation of substantive findings was disappointing, especially in proportion to the great amount of effort which obviously had been expended.

In 1974, she once again concluded that the present state of affairs differed all too little from that state which she portrayed earlier in
1961, however, she did recommend research should finally make whatever theoretical and methodological improvements necessary.

The overwhelming yield of research into the construct of self-concept in recent years seems to give support to Wylie's recommendation in that there appears to exist, in the fields of education and psychology, an increasing effort to understand better the nature of self-concept and resultant behavior. Meador and Rogers (1973) reported evidence compiled over a twenty year time span which supports Rogers' contention that the development of a self-concept is dynamic and depends on how one perceives his/her environmental experiencing; that inherent in each individual is a need for positive regard which can be satisfied in a potent way by significant others; and that, whereas a person will quite naturally strive for internal consistency, thus resisting change, change can and will occur in the organization of self-concept if conditions are favorable.

It is useful for the educator to focus on the organization of the individual self-concept when the definition of self-concept as being self as the individual who is known to himself (Wylie, 1961) is accepted. For then, the self can be viewed as a dynamic process resting within a unity of organization or system of beliefs one holds about himself/herself. Some of these beliefs are close to the core and very resistant to change. Others are farther out toward the periphery and are more amenable to change. Each of these concepts has its own positive or negative value, thus a concept close to the core, or center, of oneself could have a negative or positive value.
This view of self-concept suggests that success and failure are generalized throughout the system so that failure in a positive belief lowers one's self-evaluation of other concept areas. The organization of each individual's concept of self is unique and determines how that person will view himself and his world. It is, further, a product of how others see the individual and a primary force in academic achievement.

The assumption held by most modern theorists about the self holds that the maintenance, protection and enhancement of the self, as organized within the individual, are the motives behind all behavior. It is not too surprising, then, that educators would claim that a child's success in school depends in large measure upon the concepts he/she has concerning himself/herself.

Self-concept exists within the field of educational research as a construct well worth investigating. Certainly, Wylie's call for theoretical and methodological improvements deserves attention. The rationale for the study of self-concept in this research, therefore, is founded on a specific definition of self-concept and on the existing research which supports this view.

Social adjustment—Fundamental to growth and learning is the human condition of belongingness. A child must feel that s/he belongs as a respectable and desirable member of the group if s/he is to grow in that environment. Acceptance by the group can be a most important factor in the child's establishment of a positive concept of self and success in school.
Moreno (1934) recognized the fact that within each classroom exists a social structure of which the teacher may or may not be aware. His studies in Brooklyn, New York, resulted in the sociometric test. This provided teachers with a means for beginning a process of assessing social intelligence progress along with progress in abstract and mechanical intelligence. A look at today's world would suggest that progress in social intelligence is lagging behind that of academic and technical progress as much, if not more, than it was forty-five years ago.

Our democratic society is structured humanistically, with emphasis on the individual and interactions among individuals. In keeping with societal assumptions, so, too, are our classrooms structured humanistically, with attention to the individual student and social interaction held as goals for our teachers. Teachers are expected to attend to each individual's mental, emotional and physical development as well as those of the class.

The teacher, then, is confronted with the task of developing skills for attending to each student's individual, mental, emotional and physical development and to the development of each student's social adjustment, or social maturity. In addition to what already can be seen as a multifaceted challenge, the teacher has the task of coping with a group's growth or development and its impact on the individual. For purposes of this study, however, the emphasis on group is considered in light of the impact on the individual student.

The 1930's-1960's saw a proliferation of research and literature focusing on this particular classroom challenge (Bonney, 1943;1962;
In more recent years, however, educational literature does not appear to reflect the attention to research recommendations which the earlier studies yielded. It would seem to follow, then, that a field of emerging theory in education has somehow been redirected.

This study posits that, if educators are truly going to attend to the individual's need to grow in a context of a societal press for improved human relations, teachers need to be equipped with the necessary skills and aid to give thorough attention specifically to the social adjustment of their students.

Academic achievement--It is an underlying assumption of this study that a maximum achievement level commensurate with each student's ability is the basis responsibility of our educational system. Each teacher should be given whatever sort of support possible to reach this end. The rationale for academic achievement rests in the fact that our schools exist to equip each student with the basic academic skills needed to function in society. Achievement is viewed in at least three ways: 1) classroom achievement as judged by teacher evaluation and grade point average; 2) standardized test scores; and 3) actual use of academic skills in everyday living. It will be viewed as number two of these in this study because of its value in comparing children across the same set of variables measured, the value in normative comparison, and the value of content validity. The variables measured in this study are vocabulary, word study skills, math computation, math application, math concepts, spelling, language, social science, science, listening, and total scores.
It is possible for students to perform on such a measure in a way as to be placed on or above grade level. When subscales are examined, however, it can be seen that deficiencies in specific skills areas do exist for some of the students as well as below-grade-level students. The teacher, when assisted in examining these deficiencies in relation to other factors, is better able to plan and implement classroom intervention strategies.

Career awareness—Career awareness, through career education programming, serves as a core to integrate the three concerns discussed previously. This process of integration is accomplished through infusing a comprehensive career education program based on a conceptual framework of self-in-situation into the total curriculum. Program development infused career concepts through inclusion of the Seven Developmental Areas: Self; Individual and Environment; Economics; World of Work; Education and Training; Work Adjustment; and Decision Making Skills. The career education project under discussion in this study is organized into ten programmatical components:

Project Coordination—The coordinator is supported by the local school district funds and provides leadership for the career education staff.

K-6 Career Motivation Component—This component emphasizes curriculum infusion of career education to all subject areas in each elementary classroom.

7-8 Orientation Component—This provides for the establishment of a Career Information System and a Career Education Center in each of the district's two junior high schools, and the initiation of career orientation activities through each subject area.

9-10 Exploration Component—This provides for the development of a system for identifying field sites
for exploratory experiences, defining career exploration activities and assessing decision making skill development and application of exploratory experiences.

11-12 Preparation, Placement and Follow-Up--This provides for the development of a job placement and follow-up system for the high school, preparation for educational planning and placement skills, and the infusion into subject areas of career education preparation activities.

Guidance--Each of the three secondary schools has developed a program of guidance services which defines the roles and responsibilities of the counselors in each building.

Teacher Education--This component addresses the needs of pre-service teacher candidates assigned to the schools for field placements.

Teacher Development--This includes activities to assess teachers in their own career planning and development and to enhance their career educator skills.

School-Community Collaboration--This consists of a wide range of successful opportunities for students at all age levels. The activities available are in the areas of education, recreation, social and cultural needs.

Project Evaluation--The project is evaluated for the extent to which the objectives are accomplished by means of a formative and summative evaluation plan. (Comprehensive C.E. Project Proposal, 1978)

Career education attempts to coordinate programmatical concerns through recognizing that all learning is ultimately experiential; that activities provide the guide for learning. Situations and activities provided within these afford the individual an opportunity to live out learnings acquired in vicarious, simulated and experiential form. The behavior resultant is measurable through cognitive, affective and psychomotor domains.
Those human development programs, which are placed in a career context, place the individual at the center and view the individual child as an integrated whole within the totality of a life-span. A comprehensive career education program focuses the curriculum in such a way that the child, from the center, experiences his/her own uniqueness as an individual.

Career education programs, themselves, generally consist of four major emphases. These are curriculum infused activities; guidance related strategies which focus on career development; activities conducted in the career education centers and staffed by career education personnel; and the separate course approach which conducts career education structured activities as a part of a regular course. The career education program, in which the research reported here was conducted, employs all of these strategies except for the separate career education course. In the elementary schools where this study was conducted, curriculum infusion was the primary approach used. This career education curriculum is incorporated in the regular program.

The curriculum is designed to help the child develop awareness, appreciation and motivation for self-in-environment through objectives aimed at Ten Learner Outcomes: 1) Basic Academic Skills; 2) Good Work Habits; 3) Work Values; 4) Decision Making, Job-Hunting, Job-Getting Skills; 5) Interpersonal and Work Adjustment Skills; 6) Data Concerning Self and Educational-Vocational Opportunities; 7) Continuing Education Availabilities; 8) Placement in Paid Occupation or Further Education; 9) Desirable Life-Style; 10) Awareness of Career Options and Societal and Personal Constraints. (USOE Ten Learner Outcomes)
Relatedness of self-concept, social adjustment, academic achievement and career awareness can be established through career education programming. Teachers can be assisted in working with students low on measures of self-concept, social adjustment, academic achievement and career awareness as a part of a comprehensive career education program.

The rationale for a career education program, then, incorporates emphasis on self-concept, social adjustment, academic achievement and career awareness and reflects the belief systems upon which the educational program is based. It provides broad guidelines for program development as well as the philosophical and theoretical bases upon which goals, objectives and activities can be planned and implemented. Broad perspectives reach out to provide understanding of the way things are. The ambiguity present in the universality of things creates diverse points of view and people must continuously try to reach some sort of common sense agreement as to the relatedness of things.

Definition of Terms

The following are offered as definitions of terms used in the study.

Career awareness--knowledge and attitude level related to career education Seven Developmental Areas. Career awareness is operationally defined as career knowledge and career attitude scores on the Ohio Career Development Test.

Career education--the totality of experiences through which one learns about and prepares to engage in work as part of his or her
way of living. Career education is operationally defined as the program implemented in the school system as described in the career education funded project proposal.

**Self-concept**—the self as the individual who is known to himself or herself in relation to his or her environment. The emphasis is on conscious perceptions. Self-concept is operationally defined by scores on the **Piers-Harris Self-Concept Scale**.

**Peer reputation**—nominations by peers of classmates on selected peer reputation questions. Peer reputation is operationally defined as peer reputation by the selections made on the Peer Reputation Form.

**Social adjustment**—the extent to which students are perceived either to get along or not with other students in the classroom; to be concerned or worried; to be productive; to be selected as a friend. Social adjustment is operationally defined by the number of choices a student obtains on selected criteria or the Peer Reputation Form.

**Teacher nomination**—teachers' estimates of relative position of pupils to classmates on the Peer Reputation Form, students' concepts of themselves and levels of career awareness as measured by instruments. Teacher nomination is operationally defined as teacher verbal nominations of students who meet a perceived criteria of low self-concept, poor social adjustment and/or low academic achievement.

**Academic achievement**—student achievement in the classroom as reflected in grades or results on standardized tests which reflect the curriculum. For purposes of this study, academic achievement is operationally defined as scores on the **Stanford Achievement Test**.
subtests. These include: vocabulary, reading comprehension, word
study skills, math concepts, math computation, math application,
spelling, language, social science, science, listening comprehension,
complete battery score.

Limitations of the Study

Limitations of this study can be identified in five areas. These
are the setting, the population to which the research sample can
be generalized, the instrumentation and data collection procedures,
and the analysis of data.

The community in which the study takes place is an affluent
suburb located adjacent to and influenced by a major univeristy. The
community is predominately white with no major industry located within
its geographic boundaries. The parents are largely white collar
workers and some 85% of the high school graduates report intention
of going to college. The school system has seven elementary schools,
each of which is expected to implement similar academic programming
at each grade level. Curriculum coordinators and TIES (Teaming for
Individualization in the Elementary School) teachers maintain con­
tinuity between classroom activities and system-wide goals and ob­
jectives.

Of the twenty-four classrooms, three were not used because of
inconsistency in testing procedures. Of the twenty-one used in this
study, seventeen were regular (contemporary) classrooms; four were
open (informal); and two were combination grades. No attempt was
made to see if differences existed among these classes. However,
visual examination of the data seemed to indicate that no differences
appeared in the number of students identified as low on measures of self-concept, social adjustment, academic achievement and career awareness. Significant differences in the means did not appear on the standardized measures. All teachers were female. All but one were white, and all were experienced teachers. None of the teachers was a first year teacher.

Another limitation relative to the students in the sample is in the high mean scores of these fourth grade students compared with the mean scores of fourth graders on national norms for academic achievement. The mean IQ of 117 is well above the established mean of 100. These significantly high scores may, in fact, be influencing factors on students who score low and findings generated from this study on low students must be interpreted within the limits of these data.

Relative to the instruments used, the career awareness test was normed for the sixth grade and was used for this fourth grade population. Data were interpreted with this fact in mind largely to determine the appropriateness of this instrument at fourth grade. The peer reputation instrument is a near-sociometric measure and is subject to the limitations of reliability of such tools as reported in the literature. Local stanines were used to analyze data from the S.A.T. Students' scores were excessively high on national norms and an insufficient research sample could be generated from these data. Since self-concept and social adjustment relate to academic achievement as accomplished within a specific local setting, it is appropriate to identify low achieving from data based on local norms.
Use of a self-report instrument, the Piers-Harris Self-Concept Scale, presents limitations associated with the definition of self-concept and means by which it is measured. While the Piers-Harris itself is appropriate for research purposes, definition of self-concept must, of necessity, be limited to the means by which it was measured and conclusions drawn on this basis.

Test administration was conducted in the classrooms by experienced individuals comprising an external testing team. Pre-testing and post-testing were conducted over two-to-three week time spans.

A final limitation can be found in the phase of the study which measures change in low self-concept students following a period of a limited teacher intervention strategy which consisted of delivering information concerning the students back to the teachers. First, this intervention occurred during the last nine weeks of the school year. Second, it consisted of an average of four sessions per teacher which identified students, focused on their characteristics, provided suggestions for intervention, and reinforced teacher strategies.

Summary

This chapter presents the statement of problem, rationale, definition of terms and limitations of the study. Chapter Two contains a review of the literature and research. Chapter Three contains the procedures used to conduct the study. Chapter Four presents the findings. Chapter Five includes a summary, conclusions and recommendations.
Chapter II
REVIEW OF THE LITERATURE

The review of literature in this chapter focuses on theoretical considerations concerning self-concept as a construct; selected relevant research pertaining to self-concept as it relates to other variables under study; general issues relating to social adjustment and social adjustment as it relates to other variables under study; and general issues relating to career awareness and career education programming. A more detailed explanation is also provided on the research and theory which served as the theoretical basis for the study.

Self-Concept

The first section of this review of literature contains developmental and theoretical conceptions of self-concept as a construct. The second section reviews research pertaining to self-concept, and to academic achievement and other variables under study. In the third section, relevant research concerning effective interventions for development of positive self-concept, along with implications for educational programming, is reviewed.

Developmental and Theoretical Conceptions

Historically, the idea of self was first discussed as "soul." This later gave way to a notion of "self" which, in turn, gave way
later to a more specific notion of self-concept which brings us presently to examining self in terms of specific dimensions of the self-concept. In tracing the development of self-concept as a construct, through centuries of thought, one begins to grasp the complexity of the issue while, at the same time, verifying certain constants. For this study a major resource in the literature search was the 1952 Great Books of the Western World series, Robert Maynard Hutchins, editor-in-chief. The identification of significant literature in the Great Books was found under "soul."

The concept of man as being comprised of nonphysical aspects, as well as physical aspects, is traceable to the early Greek writings of Aristotle who wrote of the nonphysical core of the human. Prior to Aristotle, soul and mind had been identified; some contended that soul was identified with what is originative of movement, in other words, soul is the moving cause of things. Others believed that what has soul in it perceives what is. This belief held that soul is identified with Nature and is formed out of elements. Still others held that soul is a kind of harmony, incorporeal of all kinds of body.

Aristotle (Hutchins, 1952, Book 8) approaches the problem through a logical analysis of movement. He acknowledges that "to attain any assured knowledge about the soul is one of the most difficult things in the world." Aristotle contends that soul is worthy of investigation because knowledge of the soul contributes to advancement of truth and understanding of Nature. He sought to ascertain what the soul is; whether it is divisible or is without parts; whether it is
everywhere homogeneous, or, if not homogeneous, whether its various forms are different specifically or generically.

In order to determine the definition of soul, Aristotle claimed that the knowledge of the essential nature of a substance is largely promoted by an acquaintance with its properties; for, when one is able to give an account comfortable to experience of all or most of the properties of a substance, he explained, one will be in the most favorable position to say something worth saying about the essential nature of the subject. Definition of soul, according to Aristotelian thinking, holds that the body cannot be soul because the body is the subject, or matter, not what is attributed to it. Hence, contended Aristotle, soul must be a substance in the sense of the form of a natural body having life potentially within it. Thus soul is the first grade of actuality of a natural body having life potentially in it. The body so described is a body which is organized. Soul is substance in the sense which corresponds to the definitive formula of a thing's essence, claimed Aristotle. That means, then that it is "the essential whatness" of a body of the character just assigned. Soul has movement in the sense that it can be moved and can move in the vehicle in which it is carried.

In tracing the development of the concept of self, it is important to note that theological thinking has strongly impacted definition of self. St. Augustine (Hutchins, 1952, Book 18), in discussing Christian doctrine during the last part of the fourth century, spoke of self-love and soul as being something separate from the physical body. He wrote that there are four kinds of things that are to be loved—first, that which is above us; second, ourselves; third, that which is on a
level with us; fourth, that which is beneath us—no percepts, he said, need be given about the second and fourth of these. For, however far a man may fall away from the truth, he still continues to love himself and to love his own body. This seems to indicate an assumption that the self is something other than but contained within the physical body. He further claimed that "soul which flies away from the unchangeable Light, the Ruler of all things, does so that it may rule over itself and its own body."

Strong religious overtones dominated St. Augustine's discussion of the soul, of course. It is important to note the impact of theology on philosophy with Christian thinking occupying such a major position in history. The following passage from the writings of St. Augustine explains the Christian belief concerning soul as it was believed then and as it is believed now.

'He who loveth iniquity hateth his own soul' it has been said. And accordingly the soul becomes weak and endures much suffering about the mortal body. For, of course, it must love the body and be grieved at its corruption; and the immortality and incorruptibility of the body spring out of the health of the soul. Now the health of the soul is to cling steadfastly to the better part, that is, to the unchangeable God. But when it aspires to it even over those who are by nature its equals—that is, its fellow-men—this is a reach of arrogance utterly untolerable. (p. 630)

The religious outlook was pervasive for centuries until, during the fifteenth century, when the emergence of an increasingly secular spirit began to supplement and supercede the outlook of medieval man. Langer (1968) states that along with this new spirit came an emphasizing of the individual and his own experience which tended to
make man more self-conscious, more aware of his surroundings. The medieval ideal of Christian community and loyalty to the Papacy and the Holy Roman Empire were seen to diminish. The view of the world moved from being theocentric to being anthropocentric and humanistic thinking came into light.

Descartes (Hutchins, 1952, Book 31), writing on the distinction between soul and body during the early 1600's, linked soul to mind and reasoned that man's ability to objectify himself gave proof that there is an incorporeal aspect present within man. Man's essence, claimed Descartes, is that he is a thinking thing, a substance whose whole essence or nature is to think. And, although man possesses a body with which he is very intimately conjoined, on the one side, there is a distinct ideal of self as a thinking and unextended thing, and, on the other, there is a distinct idea of body, inasmuch as it is only an extended and unthinking thing. Descartes wrote the following:

It is certain that this I (that is to say, my soul by which I am what I am), is entirely and absolutely distinct from my body, and can exist without it. (p. 98)

There is a great difference between mind and body, explains Descartes. Body is by nature divisible; mind is entirely indivisible. If something is taken away from the body, nothing is taken away from the mind. Corporeal substances can easily be divided by the mind. Descartes concludes that this line of his thinking would be sufficient in itself to teach him that the mind or soul of man is entirely different from the body, had he not already learned it from other sources.
Kant (Hutchins, 1952, Book 42), in discussing the nature of existence during the 1700's, carried the defining of self to yet another level when he claimed that the mode of a person's existence, whether as substance or accident, cannot be determined by simple self-consciousness. Thus, he claimed, if materialism is inadequate to explaining the mode in which one exists, so is spiritualism. Kant concluded from this that one is utterly unable to attain any knowledge of the constitution of the soul in so far as it relates to the possibility of experience. It is not possible, he said, to pass the bounds of experience (our existence in this life) and to extend our cognition to the nature of all thinking beings by means of the empirical proposition, "I think." Rational psychology requires sensuous intuitions in order to give significance and cause which make possible a person's knowledge of self. But intuitions, according to Kant, never raise one above the sphere of experience. Whereas, the conceptions have practical use and can be understood logically, they originate from a very different principle other than the laws of nature.

The task of explaining the community of soul with body, argued Kant, does not properly belong to rational psychology. It proposes to prove the personality of the soul apart from this communion after death and is therefore transcendent in the proper sense of the word. Although occupying itself with an object of experience, it does so only in so far, however, as it ceases to be an object of an experience. Kant explained that the difficulty comes in a presupposed heterogeneity of the object of the internal sense, soul, and the objects of the
external senses. If, however, one considers that both kinds of objects do not differ internally, but only in so far as the one appears externally to the other, that which lies at the basis of phenomena, as a thing in itself, may not be heterogeneous. Then the difficulty disappears and a community of substance is possible.

According to Kantian thinking, the conception which enables one to raise a question, gives the power of answering it. In some cases, as with the soul, the person is actually seeking an idea of an object. It may be unknown to the person but not impossible. The idea is a creation of reason itself which cannot disclaim the obligation to answer or refer one to the unknown object.

In considering philosophical soul-theory, William James (Hutchins, 1959, Book 53) claimed soul-theory is a "complete superfluity" and concluded that the substantial soul explains nothing and guarantees nothing. In seeking relationships between physiology and psychology, James asserted that the consciousness of self involves a stream of thought each part of which, as "I," can 1) remember those which went before and know the things they knew; and 2) emphasize and care paramountly for certain ones among them as "me," and appropriate to the rest. The nucleus of "me," writes James, is always the bodily existence felt to be present at the time. This "me" is an empirical aggregate of things objectively known. The "I" which knows them cannot itself be an aggregate; neither for psychological purposes need it be considered to be an unchanging metaphysical entity like the Soul, or a principle like the pure Ego.
A man's Self, according to James, is the sum total of all that he can call his, not only his body and his psychic powers but all of his material possessions as well as his family, friends, reputation, works and land. If a person loses any of these, a part of the self is lost. The constituents of Self, according to James, then, are: a) The material Self—body and clothes; b) the Social Self—recognition by others; c) the Spiritual Self—inner, subjective being, capable of thinking of self as thinker, and, d) the pure Ego—principle of personal unity. Each human mind's appearance on this earth is conditioned upon the integrity of the body with which it belongs, upon the treatment which that body gets from others, and upon the spiritual dispositions which use it as their tool and lead it either towards longevity or to destruction. Personal identity, suggested James, is a subjective synthesis, a bringing together of things into the object of a single judgment. Thus, self-regard is comprised of intellectual self-estimation, self-feelings, and self-seeking and self-preservation.

The influences of James's thinking on contemporary self-theory is apparent when reviewing his contention that self-feeling in this world depends entirely on what one backs himself to be and do. It is determined by the ratio of actualities to supposed potentialities. Self-feeling (self-complacency, self-satisfaction) is in one's power according to James.

During the second, third and fourth decades of the twentieth century, behaviorists and functionalist psychologies dominated the American psychological scene and constructs concerning self did not receive much attention. Psychodynamic postulates were being developed
by Freudians and neo-Freudians, however, and these implied a self-referent to make them plausible and understandable. (Wylie, 1974, p. 729)

Modern self-theories originated in large part with Freud's assignation of importance to ego development. Freud (Hutchins, 1952, Book 54) contended that there are two kinds of unconscious—that which is latent and can become conscious and that which is repressed and cannot become conscious. In other words, the ego can be unconscious as well as conscious. He referred to a differentiating grade within the ego as being the "ego-ideal" or "super-ego." What exists in the lower depths of the human mind (id) is changed, through the forming of the ideal, into what is valued as higher in the human soul. The ego, according to Freud, has the task of bringing the influence of the external world to bear upon the id and its tendencies, and attempts to substitute the reality-principle for the pleasure-principle which reigns supreme in the id. The ego, he explained, represents what is called reason and sanity, in contrast to the id which contains the passions. In stressing the importance of considering ego-development, Freud contended that if the ego were merely the part of the id that is modified by the influence of the perceptual system, the representative in the mind of the real external world, one should have a simple state of things to deal with. But there is a further complication, he claimed. It is necessary, said Freud, to examine the part of the ego which is less closely connected with consciousness than the rest.
Freud's analysis of the structure of personality is significant in that it serves as a foundation for so many later definitions of self to be found in current theories of personality. Wylie for example (1974) traced the origins of modern self-theories to Freud's work on ego-development theory, the ideas of the introspectionists, the gestaltists with their phenomenological methods and theories, and the demand of the behaviorists for scientifically measurable behavior. She summarized the fusing of philosophical theorizing, introspectionist methods and gestalt phenomenological methods and ideas into general psychology. The fusing of general psychological theories of cognition and motivation with the psychoanalytic or psychodynamic theories originating in the clinic has resulted in all theories of personality which have been put forth during the last two decades assigning importance to self-referent constructs. And so in order to understand the current status of the nature of the construct, it is necessary to examine certain of those more recent personality theories.

Carl Jung, founder of analytical psychology, developed his theory from that of Freud but departed from orthodox Freudian theory. In defining self, Jung (Campbell, 1978) emphasized the psyche's striving toward psychological unity and self-realization. Jung stated that the personality as a total phenomenon does not coincide with the ego or conscious personality. Rather, it forms an entity that has to be distinguished from the ego. The need to do this, he reasoned, is incumbent only on a psychology that reckons with the fact of the unconscious but for such a psychology the distinction is of paramount importance. Jung suggested calling the total personality which, though
present, cannot be fully known, the self. The ego is, by definition subordinate to the self and is related to it like a part of the whole.

In defining personality or self, Allport (1968) argued for a systematic eclecticism. He stresses a sense of bodily self and asserts its importance in the overall sense of self. By eclecticism in psychology, Allport explained that he means a system that seeks the solution of fundamental problems by selecting and uniting what it regards as true in several specialized approaches to psychological science. Drawing from the work of William Stern, Allport sees the self as a unified organization of elements which is unique and strives for consistency.

Lecky (1961) offered a similar view as he defines the personality as a unified scheme of experience, an organization of values that are consistent with one another. If a value is assimilated into the organization or expelled from it, claims Lecky, the process is not one of addition or subtraction, but rather of general revision and reorganization. Lecky, then, argued for a theory of self-consistency. According to his theory of self-consistency, people seek those experiences which support their values, and avoid, resist or, if necessary, forcibly reject those which are inconsistent with them.

Rogers (1951), noted as a person-centered psychologist, defined self as consisting of an organized structure. The self-concept, wrote Rogers, or self-structure may be thought of as an organized configuration or perceptions of the self which are admissible into awareness. It is composed of such elements as the perceptions of one's characteristics and abilities, the percepts and concepts of the self in relation
to others and as associated with experiences and objects. It is further composed of goals and ideals which are perceived as having positive or negative valence.

Rogers (1959) further claimed that the perception of experiences is influenced by a person's need for positive regard, a universal need in human beings, pervasive and persistent. The development of a self-concept, then, according to Rogerian thinking, can be viewed as a dynamic process linked closely to the individual perceiving his experiencing of his environment. This line of thinking refers to the idea of the phenomenal self further substantiated by the work of Snygg and Combs (1949). They explain that the phenomenal self includes all those parts of the phenomenal field which the individual experiences as part or characteristic of himself.

Horney (1945) added a further dimension to the conception of self with her work on the idealized image of self. According to Horney, the idealized image of self, in contrast to authentic ideals, has a static quality. It is not a goal toward whose attainment the person strives but a fixed idea he worships. Ideals have a dynamic quality, stated Horney. They arouse an incentive to approximate them; they are an indispensable and invaluable force for growth and development. The idealized image according to Horney has a decided hindrance to growth because it either denies shortcomings or merely condemns them. Genuine ideals make for humility, the idealized image for arrogance, meaning the ascribing of inflated qualities to oneself. True self-esteem, then, rests on qualities which a person actually possesses, while self-inflation implies presenting to the self and others qualities and
achievements for which there is no adequate foundation. This is an interesting theory in view of this study because in assessing self-concept of children who are also being assessed in terms of perceptions of peers and teachers, it became clear that whereas some students scored very high on a measure of self-reported self-concept consistently over the course of an academic year, in the judgments of others who watched them closely, they actually did not possess those qualities and achievements they claim to possess. The question, then, becomes one of discovering how to help these students develop a more real self-concept without causing them to experience a withdrawing of positive self-regard from others.

It can be seen that psychology provides a range of theories providing self-concept definitions. Wylie (1974) in referring to this range states that commonalities are present in the theories and that these commonalities form what she terms a generic self-concept. The commonalities existant in Wylie's generic definition are comprised of the following:

1. Each person is a separate entity.
2. The sense of being the same person is continuous over time.
3. Behaviors as experienced and remembered are included.
4. Physical characteristics as experienced are part of the concept.
5. Organization or unity among elements of the self-concept is experienced.
6. Self-concepts and self-percepts are not distinguished by theorists. That is, there is no connection made between stimulating characteristics and alleged perceptual experiences.
7. An individual's self-concept includes his evaluations as well as his cognitions.
8. Self-concept involves degrees of consciousness or unconsciousness.
Wylie further suggests that the generic definition might become more theoretically and empirically useful if at least the following possibilities for subclassification and analysis are recognized:
a) the evaluative aspects of the generic self-concept rest partly on an assumed division into an ideal-self concept and the actual-self concept; it is necessary to examine the person's ideal-self as a separate classification, considering separately the ideals a person has for oneself and of others' ideals for him; b) the person often differentiates between the social effects of his behavior as he sees it (his social self-concept) and his own view of his characteristics (private self-concept); c) the social-self concept itself if typically multiple, corresponding, for example, to different social roles... subcategorization is needed here; and d) some systematic relation of self-concept to the unconscious-conscious dimension is needed.

Self-referent constructs are invented with the general aim of improving our behavior laws, claims Wylie, but there is a great deal of ambiguity, sketchiness, incomplete and apparently contradictory information present in the theory. Self-theorists seem to want to reintroduce assumptions which are inappropriate to the scientific method, Wylie observes. They seem to want to bring into psychology concepts which by definition operate in a nondeterministic way and are indescribable by scientific operations. Then, at the same time, they want to have the advantages of being scientific.

Wylie further contends that, to be consistently phenomenological a self-concept theorist must be concerned with the relationship between the subject's conscious actual-self concept and his conscious
ideal-self concept, rather than relating the subject's conscious self-concept to an objective judgment or cultural stereotype of an ideal person. Measures typically used, then, are measures of conscious self-regard or evaluation; measures of configurational properties of the self-concept, however little empirical work has been done to define these properties operationally and relate them to theoretically relevant variables; and measures of the unconscious self-concept where theory, measurement and research design have yielded no interpretable patterns to date.

Wylie contends that it is necessary to measure self-concept through a self-reporting of self-referent attitudes because the subjects' cognition are beyond observation by the investigator. Self-report, suggests Wylie, is a specified, conscious process determined in the form of verbal response or choice response and, as a method of measurement, is appropriate to this type of construct. Wylie sees problems of measuring the phenomenal field and self-referent attitudes as being problems of construct validity. Construct validity is necessary because self-concept theories require that one measures a stated class of variables, that is, the subject's conscious processes; and, by definition, says Wylie, the subject's phenomenal fields are private and beyond direct observation. It must be assumed that the subject's response is determined by his phenomenal field but also we must take into consideration that the subject's responses might be influenced by a) the subject's intent to select that which he wants to reveal; b) the intent to state attitudes and perceptions which are not actual;
c) the subject's response habits, particularly those involving introspection and the use of language; and, d) various situational and methodological factors.

Wylie further asserts that the experimenter must use some sort of self-report response, usually verbal, made by the subject as a basis for his inferences in order to index constructs involving the subject's phenomenal field. It is not appropriate to demonstrate that self-concept measures have predictive or concurrent validity. Wylie recommends that self-concept theorists examine and apply relevant analyses made by psychologists working in other areas, those working in the field of perception, for example. Further recommendations include establishing construct validity of measuring instruments according to more particularized specifications. Wylie's recommendations are based on the work of Cronbach and Meehl (1955) and Campbell and Fiske (1959) and are here summarized:

a) Make observational and mathematical analyses of the measuring process to determine what variables other than the construct in question might be influencing results;
b) Ascertain that there are intercorrelations among measures presumed to measure the same construct;
c) Make internal item analyses and factor analyses of an instrument to determine how many basic processes must be postulated to account for response variance on the instrument as a whole;
d) In the absence of suitable external validating criteria, examine results obtained from studies in which responses on the instrument in question are related to other stimulus and response variables. That is, design a study based on certain theoretically premises coupled with an assumption concerning the construct validity of the instrument being used to measure one of the variables.
Wylie concludes that in examining the current status of self-theory, one finds a variety of self-referent constructs but that synthetic ideas and principles can be formulated from the available theoretical writings; much still needs to be done on reliability and construct validation of the many measures used to index conscious self-concept. The precision of inference can be increased when appropriate scaling techniques are applied—problems arise when the subject describes himself by choosing among several degrees of response; and common faults in research designs used in self-concept studies must be overcome.

In summary, Wylie contends that the current status of self-concept theory suggests that personality theories which stress the self have addressed themselves to important, unanswered questions concerning human behavior but that empirical evidence supporting these theories is seriously limited. This is due, in part, to each of four factors: 1) the lack of proper scientific characteristics of the theories themselves; 2) the difficulties encountered in formulating relevant, well-controlled researches in a new area; 3) individual researches are not part of a planned research program thus cannot be easily synthesized; and, 4) avoidable methodological flaws. Wylie concludes that since the theories do concern themselves with important issues, it may well prove worthwhile to try to make the necessary changes in theory-building and methodology despite the arduous and time-consuming process it would necessitate.
Self-Concept as it Relates to Academic Achievement and Other Variables

Under Study

In defining self-concept, a point consistently made by self-theorists is that a person tends to perceive or learn more readily those things which are consistent with the self-concept. Contemporary educational research reflects this assumption; however, the trend over the past twenty-five years reveals a change from viewing self-concept as antecedent to achievement to viewing the child in a more wholistic manner, crediting the child's total environment with the power to directly impact affective traits and the ways in which the child views himself/herself.

The latter is not a new idea among educators. Combs (1958) wrote that the child's success in school depends in very large measure upon the kind of self concepts he has about himself. Psychologists in recent years, he explains, have discovered that the self concept, or the beliefs we hold about ourselves, is so tremendously important that it affects practically everything we do. In fact, the self concept acts very much like a quota for an individual. He seems to infer from this, however, that self-concept will determine behavior as he concludes that "what a person believes about himself establishes what he can and will do." (pp. 22-23) Similarly, Roth (1959) suggests that individuals have a conception of self and invest a definite amount of that conception in performance. Those who do not achieve choose not to do so, contends Roth. Those who do achieve choose to do so.
In the interest of researching the causal relationship between self-concept and academic achievement, Shaw and McCuen (1960) hypothesized that, if academic underachievement is related to basic personality structure, such behavior can be detected in early school years. Their subjects consisted of 36 male achievers, 36 male underachievers, 45 female achievers and 17 female underachievers, all of whom were 11th and 12th graders who had been in the same school since first grade. The mean grade point average was computed at each grade level. They found no significant difference in grade point averages between male achievers and male underachievers at first grade level; there was a significant difference reported at third grade level for the same two groups. An increase in grade point differences between the two groups was reported between grades three to ten with a slight decrease shown at grade ten. There was no significant difference between female underachievers and female achievers before grade nine but the difference increased in grades nine to eleven. Whereas academic underachievement was not apparently detectable in the early school years, it did become apparent from third grade on among the males but did not become apparent among females until the high school years.

Similar conclusions were reached by Fink (1962) who matched 20 pairs of boys and 24 pairs of girls on the basis of IQ (90-110). These students were judged achiever or underachiever depending on whether their grade point average fell above or below the class median. The self-image of each student was rated adequate or inadequate by three psychologists based on three personality tests, a personal data sheet and a student essay. A strong significant relationship was found
between self-concept and academic underachievement. The relationship was stronger for boys than for girls, however, which seems to infer that boys are more likely than girls to acquire negative perceptions of themselves and school.

Brookover, Thomas and Patterson (1964) in their longitudinal study of 1,000 students who were in the seventh grade found a significant positive relationship between self-concept and academic performance. Self-concept was significantly and positively related to perceived evaluations of significant others. Self-concept of ability was a significant factor in achievement at all levels, through grades 7-10. Whereas students with high self concepts might achieve at lower levels of achievement, students with low self-concept did not achieve at higher levels.

Viewing self-concept and ego-strength as both antecedent and predictive of reading achievement, Wattenberg and Clifford (1964) found that measures of self-concept and ego-strength made at the beginning of kindergarten were more predictive of reading achievement two and one-half years later than were measures of intelligence. Measures of intelligence, self-concept, ego-strength and reading ability were administered to 128 kindergarteners in two schools and again at the completion of second grade.

The use of a self-concept measure as being predictive is questionable. Leviton (1975) in his study of studies concluded that the results of this study indicate that self-concept stands in a causal relationship to reading achievement and, furthermore, progress in reading did not have a marked effect on the formation of the self-concept.
Leviton in surveying self-concept and academic achievement studies conducted during the late 50's and early 60's found that there was present in those studies a consistent, moderate correlation between self-concept and academic achievement. Academic achievement, according to Leviton, does not appear to be determined solely by intelligence or other variables over which teachers have no control; rather, the self-concept, which is amenable to influence, does affect achievement. Leviton found methodological and sampling problems evident in the research surveyed but found evidence to support the relationship between self-concept and academic achievement. He concluded that the acceptance of the premise that an individual's self-concept emerges from interaction with society, including education, and the acceptance of the premise that self-concept influences behavior and learning rate have significant implications for the educational process.

It is interesting to note that Caplin (1966) chose not only to examine the relationship between self-concept and academic achievement but also the relationship between level of aspiration and academic achievement. He hypothesized that children, both white and Negro, attending a defacto segregated school have less positive self-concepts and lower levels of aspiration than do children attending desegregated school; and that there is a significant positive relationship between self-concept and academic achievement and between level of aspiration and academic achievement. He administered a self-report instrument for self-concept and level of aspiration and referred to composite standard scores on the Iowa Test of Basic Skills for measures of academic achievement. The findings indicated that school-related
self-concept and level of aspiration of children (white and Negro) attending the de facto segregated school were significantly lower than those of children attending the newly desegregated or long-term desegregated schools. However, no significant differences were indicated between school for that part of the self-concept and level of aspiration relating to personal/social qualities. Caplin concluded that there was a significant positive relationship between self-concept and academic achievement and between level of aspiration and academic achievement. In other words, those children having more positive self-concepts and/or higher levels of aspiration had higher academic achievement.

Whereas Caplin's study examines relationships between variables, Jones and Grieneeks (1970) postulated that on the basis of the assumption that an individual will report feelings about himself accurately, measures of self-perception can be used as predictors of scholastic achievement. Their subjects consisted of 411 female and 466 male college sophomores who were given non-intellectual measures including the Identity Rating Scale; Self-concept of Ability and Self-Expectations; and a measure of scholastic aptitude. All were used to predict scholastic achievement. The results showed all variables to be positively associated with achievement and all variables with the exception of self-expectation and scholastic aptitude to be positively associated with each other. Perhaps, measures of self-perception can be shown to be useful as predictors for college age students, however the conclusions drawn from this probably bear further investigation. Jones and Grieneeks state, for example, that the self-concept of
ability measure has been particularly effective in predicting scholar­ships both at the high school and college level, in both cases having equal or better predictive ability than standard measures of intelli­gence and aptitude. (p. 203) From this they suggest that the finding that nonintellectual factors are viable predictors of scholarship at the college level, as well as the high school level, reinforces their thinking that educators, in general, and counselors, in particular, will do well to attend more directly and discriminately to the self­perception of students, at all levels. (p. 203) Whereas attention to children's perceptions of self is something that needs direct attention of teachers and counselors, the use of self-report measures as valid predictors of achievement is something which must be challenged on the basis of Wylie's recommendation that responsible researchers should acknowledge self-report instruments should not be viewed as having predictive or concurrent validity.

Another study in which self-concept was shown to add significantly to the prediction equation for achievement is that of Stenner and Katzenmeyer (1976). The purpose of this study was to determine whether or not, among all the sex-race groups, self-concept is something other than a more or less objective appraisal of one's scholastic standing and aptitudes. The subjects consisted of 225 sixth graders in two West Virginia rural counties. They were administered two ability tests, verbal and nonverbal; six achievement tests and seven scales of the SOS (Self-Observation Scales). The authors report that self-concept as measured by the SOS was shown to add significantly to the prediction equation for achievement over and above the contribution of nonverbal
intelligence. They support this with the findings that the SOS accounted for 22% of the variance in reading achievement with nonverbal intelligence accounting for 34% of the variance in reading achievement. Stenner and Katzenmeyer conclude by stating that the fact that the causal interplay among the ability, achievement, self-concept, and motivation domains has not yet been systematically examined makes any generalizations premature. They further assert that the conceptual independence of nonverbal IQ and self-concept has been clearly supported and a much firmer foundation exists for theorizing about the contribution of affective variables to observed differences between high and low SES children or between black and white children. (Stenner and Katzenmeyer, 1976, p. 273)

Kifer (1975) designed a study based on the theory that an individual's feelings of efficacy emerge from his/her competent interactions with the social and physical environment and that those feelings are developed gradually in conjunction with stages of human development. The study was quasi-longitudinal in design and it is interesting to note that it stresses the notion of self-concept/academic achievement as an interactive factor rather than in terms of antecedent-consequence. Kifer states that his study seeks to show that a powerful model for explaining the relationships between academic achievement and personality characteristics is one which views the characteristics as responses to accumulated patterns of academic achievement. He asserts, according to the model he is examining, it is the student's history of consistent success or failure which is most directly linked to affective traits. His subjects were students in grades 2, 4, 6, and 8. He took one-half
from the top 20% of their classes and one-half from the bottom 20%.
The second part of the design included entire groups of fifth and
seventh graders. Measures of self-esteem, self-concept of ability
and intellectual achievement responsibility of Coopersmith, Brookover
and Crandall were given. Kifer reports that the correlations between
the personality characteristics and achievement was higher in all cases
in the seventh grade than in the fifth grade. According to Kifer, this
provides additional evidence for the idea that accumulated patterns of
success and failure are related to the student's personality charac-
teristics. The second finding of note reported by Kifer is that the
home concern variable correlates with the personality variables
higher in the fifth grade than in the seventh. He states that this
further substantiates the notion that home concern is a more powerful
variable in the early school years than in later ones. The differences
among correlations for boys and girls presented no discernible pattern.
Kifer concludes that the pattern of findings provides strong support
for the view that certain personality dimensions of the learner are
concomitants of histories of successful and unsuccessful academic
achievement.

In an earlier study, Kifer (1973) examined the effects of school
achievement of the affective traits of the learner. His subjects were
suburban Chicago students in the upper and lower fifths of grades 1-2;
1-4; 1-6; and 1-8. Students (not the same students) over the years of
schooling were given an adaptation of the Brookover Test of Self-
Concept of Ability to test the continued effect of success or lack of
success on academic self-concept. In this study Kifer found that
students in grades 1 and 2 were nearly the same in their average self-concept of ability; by grade 4 the higher and lower groups became more distinct, more so by grade 6 and very different in their average by grade 8.

Interestingly, Kifer (1975) recommends that educators view achievement as being the manipuable variable. He states that "those instructional procedures such as Mastery Learning that view achievement as a manipuable variable and seek a uniformly high level of achievement for most students seem most appropriate." (p. 207)

Mastery Learning, of course, refers to the work of Bloom. The latent curriculum, contends Bloom (1977), which every student encounters throughout his/her some 20,000 total hours of schooling at completion causes each student to learn who he/she is in relation to others. The student is constantly having to judge himself/herself against standards set by others. No matter how well a student does, says Bloom, if others do better, he must judge himself accordingly. This, in fact, does not relate to the world of work as adult workers who for the most part must meet a minimal standard and are rarely judged relative to others. According to Bloom, subject-related affect can be gaged according to whether or not the student would voluntarily engage in the activity. Subject feelings are determined by students' perceptions of adequacy or inadequacy which come from previous judgments. Since tasks are sequentially organized for students, feelings and self-perceptions tend to take on a set pattern. Thus the frequency and consistency of adequacy or inadequacy over a period of years have major effects on the academic self-concept. In light
of the fact that he sees evidence suggesting that students' self-concept of ability is largely dependent on relative achievement measured through teachers' marks, Bloom makes the following observation:

The system of grading and instruction operates to open doors for some students while effectively closing doors for others—and this system is independent of success or failure in any absolute sense. It is dependent on local definitions of success or failure relative to other students in the class or school. (p. 195)

The implications of Bloom's observation are especially significant in light of this study, since the children under study were located in a setting where achievement and intelligence means are above the national norm. Obviously, it stands to reason that a sizeable number of these students have normal ability but, in a relative sense, are probably being judged as low achievers and in certain cases, perhaps, failures. Bloom contends that if the school environment provides the individual with evidence of his adequacy over a number of years, especially in the first few years of school, supported by consistent success over the next four or five years, "this is likely to provide a type of immunization against mental illness for an indefinite period of time." (p. 197) If one is to suppose the reverse is true then the implications for educational programming are indeed awesome.

Bloom's observations and commendations viewed in contrast with the research of Mintz and Muller (1977) become somewhat questionable. Mintz and Muller examined correlations between academic achievement and factor specific, as well as global, measures of self-concept for 314 4th and 6th grade boys and girls divided into grade level groups with and without Spanish surnames. Self-concept was measured
by the Primary Self-Concept Inventory, with factor specific scores being yielded from six scales. A global measure was provided by the total score of the six scales. Academic achievement was measured by the student's total score on the Comprehensive Tests of Basic Skills. The success and student-self scales showed low positive correlations with achievement. Remaining specific measures as well as the global measure tended to show no relationship to achievement. The researchers conclude that the results suggest an area specific model to self-concept is more useful than a global or undifferentiated mode. Further, the low correlations between school related self-concept and achievement suggest that, as a group, students frequently have rather inaccurate academic self-concepts.

Mintz and Muller state that perhaps the most startling result of this study is the universally low correlation between self-concept and achievement and further conclude that children tend to describe themselves in ways that are not related to their actual behavioral qualities. They believe that this is hardly surprising since children rarely receive any systematic instruction in self-appraisal; in other words, children are not taught how to form accurate self-concepts. Mintz and Muller suggest that factor specific rather than global measures of self-concept relate to academic achievement but they are unable to suggest the extent to which specific factors relate. It is interesting to note that factors which correlated significantly with achievement among fourth grade students were student-self (Spanish surname students) and peer acceptance self-concept (Spanish surname). Success correlated significantly with achievement among sixth grade
Spanish surname students. There was no correlation between self-concept factors, physical size, emotional state or helpfulness and academic achievement.

Simon and Simon (1975) explored further the relationship between self-esteem as measured by Coopersmith's Self-Esteem Inventory (SEI) and standardized academic achievement. A secondary purpose of the study was to investigate the relationship between self-esteem and intelligence. The subjects consisted of 87 fifth graders in a New York City suburb, 45 of whom were males, 42 females. Intelligence was measured by the Lorge-Thorndike Intelligence Test, achievement by the SRA Achievement Series, and self-concept by the SEI. Results yielded a mean of distribution of scores for the total group on the SEI of 70.23. The composite percentile on the SRA was 65.78. The correlation between the SEI and SRA scores was .333. (p. 1) From this the conclusions consist of additional validity being provided for Coopersmith's SEI and a significant relationship to exist between a global measure of self-concept and a standardized measure of academic achievement. Simon and Simon's study can be viewed as useful in providing validity for an instrument. The relationship between self-concept and academic achievement remains difficult to investigate, however, due to the divergence in theoretical conceptualizations of the construct of self-concept along with the failure of theorists to precisely specify measurement operations (Wylie, 1974; Mintz and Muller, 1977).

A fairly recent emphasis in self-concept research is that of examining locus of control in relationship to self-concept and academic
achievement, Gordon (1977) hypothesized that an internal Locus of Control (LOC) orientation would be found more often among high-achieving children, and that these children would also have higher self-esteem than children with an external orientation. It was predicted also by Gordon that the achievement-LOC relationship would be stronger for males than for females. The subjects consisted of 113 fourth graders, 60 males, 53 females 90% of whom were white living in a metropolitan area. Self-concept was measured by the Piers-Harris Self-Concept Scale; LOC by the Nowicke-Strickland Locus of Control Scale for Children; achievement by the Iowa Test of Basic Skills.

Gordon states that the concept of internal-external locus of control refers to the degree to which individuals perceive that their positive and negative reinforcements are contingent upon their own behavior and discusses his finding that the predicted relationships between an internal LOC and greater academic achievement were obtained, as well as between high self-esteem and greater academic achievement. Boys with an internal LOC were likely to possess high self-esteem. Regarding girls Gordon postulates:

"Internal girls...probably receive little recognition for having higher achievement test scores, hence do not have higher self-esteem. Because females are socialized into the role of being nurturant, obedient, dependent and less competitive than boys, the relationship between achievement and LOC for girls has not been found to be as consistent as it is for boys." (p. 383)

Gordon bases the above assumption on the work of McCandless (1967) and it is obviously laced with stereotypic thinking. It is important to pay attention of stereotyping as a factor in self-concept and it has
been found to play a part. Garwood (1976) conducted an interesting study based on the assertion that children bearing desirable first names (derived at by ratings of 79 elementary teachers) might score higher on self-concept and academic achievement measures. Out of a pool of 176 sixth grade males, he selected 47 and administered the TSCS, Children's Self-Concept of Achievement, and the Iowa Test of Basic Skills. The desirable name group differed significantly on variability, flexibility of description, conflict, personality integration, expectations and aspirations about achievement behavior and standardized achievement scores. He concludes that:

There is now sufficient evidence indicating that name stereotyping is one aspect of expectancy behavior. Teachers, for the most part, are the arbiters of what is success and what is failure in our schools. (p. 487)

With teachers being held accountable for so much of what students experience as success or failure, some of the research in education is being directed toward the effect of the teacher's inferred self-concept upon student achievement. Aspy and Buhler (1975) advanced the hypothesis that teacher behavior affects student performance including academic achievement and that the teacher influences students' self-perceptions. Since self-concept is positively related to student performance, teacher perception of students must ultimately affect their performance. The central tenet of this theory, Aspy and Buhler explain, is that a person's behavior is a function of his/her self-concept at a given point in time. They sought to establish the relationship between teachers' self-concept and students' academic achievement on the basis of the idea that teachers' behavior which
influences students' self-perceptions is a function of the teachers' self-perception and should therefore be related to student achievement. Six third grade teachers were observed for one hour in class by three trained raters; each teacher completed Fiedler's Q-sort modified by Tyler and Inferred Self-Concept by Parker in September and March. The subjects consisted of five high IQ boys, five high IQ girls, 5 low IQ boys, and 5 low IQ girls out of each class of twenty students. The subjects were given Stanford Verbal Subtests. It was found that students having high self-concept teachers made greater achievement gains except in spelling.

This would seem to imply that teachers' behaviors which influence student performance not only are a result of how they perceive and act toward the students but that their perceptions and behaviors are ultimately a result of their own self-concept. Attending to teacher self-concept development would seem to be indicated.

The level of adjustment students develop in a social setting in relationship to self-concept and personality adjustment is the subject of an investigation conducted by Galluzzi and Zucker, (1977). This study investigated the effects of a low self- and a low others-concept; a high self- and a high others-concept; a low self- and a high others-concept; or a high self- and a low others-concept on a child's level of personality adjustment. The sample was comprised of 114 fourth, fifth and sixth graders, 63 of whom were males, 51, females. The Piers-Harris was given to obtain a measure of self-concept; the Paired Hands Test for a measure of others-concept; and the California Test of Personality, Elementary, for personality adjustment. Galluzzi and
Zucker reported that the results of the study indicated that self-concept, as a predictor of personality adjustment, consistently remained a fairly good predictor as more middle scores were included but this was not found to be true for the others-concept. The Paired Hands Test improved prediction over that accomplished by the Piers-Harris alone only when the analysis was limited to extreme scores. Galluzzi and Zucker concluded that the results underscore the point that a combination of positive self-concept and a positive others-concept is optimal for adjustment. In other words, on the basis of this research, we cannot assume that because a person has positive self-regard, this will not necessarily mean he/she will have positive regard about other people. The process of socialization in the classroom is one which needs careful attention.

Effective Interventions for Development of Positive Self-Concept; Implications for Educational Programming

Research reveals: one way of attempting to design effective interventions for developing positive self-concept in children is to try and determine predictors. There are those who contend that programs designed to ensure success for the student will result in positive self-concept (Kifer, 1975; Bloom, 1977). McIntyre and Drummond (1977), in an effort to determine predictors of positive self-concept, conducted a study whose purpose it was to investigate the relative contribution of a variety of variables to self-concept. Specifically, the contribution of demographics, achievement, and global personality measures were assigned. The subjects consisted of 144 fourth graders, 72 boys, 72
girls in a Maine suburb. One-half of the subjects were from Franco-American homes. Instruments administered were the Piers-Harris Self-Concept Scale, Children's Personality Questionnaire, the SRA Achievement Series and the Otis-Lennon Mental Ability Test. The researchers found that personality, rather than achievement, ability or demographic factors tends to be predictive of self-concept. They report that about half of the variance is unaccounted for in the study, however. McIntyre and Drummond state that according to the results of this study, they determined that children with low self-concepts tend to get emotional when frustrated, are easily perturbed, tend to give up early and are changeable in attitudes and interests. They suggest, that on the basis of such knowledge, changes in self-concept at the lower elementary level might more effectively result from stress on affective based experiences rather than on cognitively based experiences. There should be opportunities, they contend, for children to develop their self-awareness. Specific affective objectives need to be set for each child rather than for a group or grade, as each child has a different pattern of behavior and a different degree of self-awareness and self-confidence.

Dil and Gotts (1971) in searching for ways to ensure success and to improve arithmetic self-concept through combined positive reinforcement, peer interaction and sequential curriculum grouped 27 seven to nine year old students in the lowest track of third grade. Particular attention was given to four children who had exceptionally low achievement and school adjustment problems. The remaining 20 children served as the control group. All children were involved in treatment with the
group of four given special treatment. Treatment consisted of a remedial phase and a treatment phase which included the use of small groups, peer interaction, individualized curriculum adjustment and positive reinforcement, individual and group. The control group improved its performance highly significantly and the group of four gained significantly on the control group. Affective gains accompanied cognitive gains. When treatment was withdrawn, performance returned to baseline; with reinitiation of treatment performance returned to near its pre-drop level. The use of such an intervention suggests to Dil and Gotts that "specific classroom management arrangements were responsible for maintaining the achievement behavior of both experimental and control children." (p. 470)

Another intervention study was conducted by Wirth (1977) concerning the effects of a multifaceted reading program on self-concept. Ninety-five students in grades 3-6 served as subjects; these students had been identified as underachievers in reading and were in a Title I program. The intervention was targeted through four reading teachers, four aides, one nurse and one counselor. The students participated in daily thirty minute classes. DUSO materials were used, counseling was provided for those low on perception of responsibility for success or failure and parent discussion groups were held over a period of nine weeks. I.A.R. pre and post scores were compiled. Wirth reports that students in the intermediate grade levels who participated in the Title I reading program showed a significant increase in perceived responsibility. This finding would seem to imply that careful targeting and attending to children in need of specific sorts of help is of
importance in educational programming. Apparently, the way in which children see themselves as performers and workers is the way in which they tend to view themselves and the view held is reinforcing, thus the student perpetuates the concept of self held. Wirth concludes that "as underachievers advance in school, their willingness to assume responsibility for their academic successes and failures diminishes markedly in comparison with their more 'successful' peer group." (p. 37) Educational programming needs to address the issue early on.

Intervention strategies can also be effective through the use of classroom organizational groupings according to Schrankler (1976). Schrankler in studying the affective outcomes of multi-age grouping on the affective domain found that self-concept was favored in a complete multi-age (5-12 years) group and a restricted (two to three years difference in age) group. These results were determined through the pre and post scores on the Instructional Objectives Exchange, Measures of Self-Concept and Attitudes Toward School and the Iowa Test of Basic Skills. Two-hundred twenty-five children were involved in the study broken into groups of Complete Multi-Age, Restricted Multi-Age and traditional self-contained classroom. Attitude toward school was favored in the Complete Multi-Age group. There was no significant advantage found for achievement except in arithmetic achievement where the Restricted Multi-Age group scored higher.

Schrankler suggests that implications suggested here are for educational programmers to consider the value of cross-age tutoring; the value of establishing in school a microsociety more in tune with the real world; the value of enriching the intellectual environment during the
early school years; and the value of teacher interaction with students for more than one year.

Felker, Stanwyck and Kay (1973) conducted a study which indicates that teacher motivating and attending can enhance student self-concept, academic achievement and reduce student anxiety. The study was conducted in eight inner-city schools which were predominantly black. Half of the teachers in grades one through six were involved in a 12-week program designed to help understand and apply classroom methods of increasing self-rewarding behavior of children. The program classes made important gains, report the researchers, in self-concept, reductions in anxiety and were seemingly faced with fewer failure experiences than the control groups. Confounding of results due to teacher enthusiasm may have moderated posttest differences found but the researchers contend that this very diffusion phenomenon may be seen as further evidence that the self-concept enhancement program was perceived as an important contribution to in-class behavior designed to enhance self-concept. (p. 145)

Other findings showed that analysis of the Piers-Harris posttest scores alone, as with the Pictorial Self-Concept Scale, revealed those classes to which the pretest had been administered evidenced higher self-concept mean scores than did those classes to which the pretest had not been administered. Felker, Stanwyck & Kay speculate that the focus of pupil attention on feelings, attitudes and circumstances depicted by test items resulted in treatment interaction. If self-report is an accurate report of the subject's conscious perceptions, however, perhaps there are implications inherent in such attending for student self-concept development. Another factor of the study was that teachers were not asked to
avoid communicating with other teachers about the program. As a result, report the writers, several teachers reported they had become so excited and enthusiastic about the observable effects of something they had found in their own classrooms, that they had told the teachers in the lunchroom about it. The researchers believe this diffusion effect could account for the general increases in self-concept. (p. 444)

This section of the review of literature focused on the development and theoretical conceptions of self-concept as a construct, research pertaining to self-concept as it relates to academic achievement and other variables under study and research concerning effective interventions for development of positive self-concept as well as implications for educational programming. The following sections focus on general issues relating to social adjustment; social adjustment as it relates to other variables under study; and general issues relating to career awareness and career education programming.

Social Adjustment

General Issues Relating to Social Adjustment

Educational measurement of social adjustment typically has been conducted by means of sociometric or near-sociometric measures substantiated by other insight data. Sociometry has been defined by Moreno (1949) as "the mathematical study of psychological properties of populations." (p. 3) Moreno further explains that sociometry is an experimental technique which allows for obtaining results by the application of quantitative methods. It further allows for the inquiry into
the evolution and organization of groups and the position of individuals within them; measurement can be conducted of person to person, person to group and group to group relations.

Jacob Moreno, credited with being the founder of sociometry in America, gave sociometry its official start in 1923 with the publication of "Das Stegreittheater" in Berlin. The American edition was published in 1947, entitled "The Theatre of Spontaneity." It was a description of a study of small group interaction and a means of measuring those interactions.

Describing his sociometric studies in *Who Shall Survive?*, Moreno (1953) discusses his findings:

> The finding that the maturing of the intelligence and the emotions also the socialability of an individual matures was to be expected. But it is unexpected to find that a group of individuals 'grows,' and that the organization of their interrelations crystallizes, that the clashes between the different intelligences, emotionabilities and socialabilities of the individuals within the group do not destroy the process of maturation nor prohibit the existence and recurrence of regular tendencies within it. The criss-cross currents in a group come to a synthesis, they promote organizations which have a 'sense' and invite interpretation. (p. 65)

Moreno further states that the fundamental mark in the process of socialization appears to be reached at seven to nine years; the next mark at thirteen to fifteen years when sexual development is dominant; and the third mark at sixteen to seventeen years at the limit of mental development. A strong advocate of attending to social development, Moreno holds that no therapeutic procedure can have less an objective than the whole of mankind and this means that no adequate therapy can
be prescribed as long as there is not some kind of unity present in mankind. To achieve unity, social organization must be known.

**Social Adjustment as it Relates to Other Variables Under Study**

The movement to understand classroom social organizational patterns through the use of sociometric techniques was strong during the fourth, fifth and sixth decades of this century. Theory and method are discussed in the literature of that period (Moreno 1949; 1953; 1960; Loomis, 1949). Jennings (1948), in discussing theory and method, asserts that learning takes place within a setting of pupil-to-pupil interaction; this can affect personal and academic growth. She states that what is not so well realized, however, is that social atmosphere is largely created and maintained by pupil interaction, and this can be constructively influenced by the tone the teacher sets and the grouping practices she uses. A decisive factor in the social atmosphere, contends Jennings, is the constellation of attraction and rejection linked with the values of the children. There is, in each classroom, an underlying network of affectional ties and prestige relations. Assessment of these and interventions can help foster personal development and increase students' motivation to learn, according to Jennings.

Bronfenbrenner (1945) established a frame of reference for comparing the status of individuals in different groups. Northway, Frankel & Potashin (1947) claim that this frame of reference can be helpful and sociometric techniques can be useful in clarifying the preference-prejudice phenomena present in groups of children. Northway, et. al., state that investigators who have attempted to clarify the personality
characteristics of highly accepted and least accepted individuals have consistently discovered the same general patterns. The least accepted individuals always include the retiring, lethargic, ingrown, self-centered persons; the highly accepted ones are the expansive, sympathetic, dynamic, objective ones. This consistency, according to the writers, leads to the hypothesis that an individual's acceptance score is an outward measure of a psychological characteristic called acceptability.

Northway (1944) in studying personality patterns of children least acceptable to their peers found that children are more acceptable by the group if they have a friend. The child without a "friend" while he may not be rejected by the others is generally not sought out as a companion by his classmates. (Northway, 1944, p. 51) Interestingly, she also found that "stars" tend to be in a closed clique whereas well-accepted but not overly prominent children have a wider spreading variety of expanding contacts.

In a five-year follow-up case study of ten elementary children, five popular and five unpopular, Bonney (1947) compared the popular and unpopular children on the basis of a comprehensive classification of traits related to social acceptance. Popular and unpopular children were identified on the basis of pupil choices when given choice situations. The subjects were analyzed on the basis of ten personality trait syndromes, were ranked on mutuality of choices, IO scores were compiled, along with achievement scores, personal self-rating scores, and the Minnesota Home Status Index scores. Evaluations of teachers were gathered and an interest inventory was administered. Bonney
reports that the unpopular children are not equal to the popular children in any of the ten trait-syndromes. Popular children are superior to the unpopulars on socially desirable traits but considerable overlapping is present. It appears that a person is liked or disliked on the basis of the total personality structure and the total impression s/he makes on others. Family size is not a determinant.

Gronlund (1959) examines the accuracy of the perceptions of teachers regarding the social status of sixth grade students. The purpose of his study is to determine the accuracy of teacher judgments concerning the degree to which sixth graders are accepted by their classmates and the relationship of certain variables to the accuracy of these judgments. In comparing measures of teacher judgments and student sociometric status, he found a difference to exist. Interestingly enough, teachers who were participating in a child development course at the time were more accurate in their judgments. Other findings include teacher overjudging of students preferred and the underjudging status of students least preferred and the lack of relationship between the freedom pupils have in class and the accuracy of their teacher’s judgment of their social status.

A search of current research and literature does not result in the discovery of educational studies of student social adjustment in relation to other variables, per se. Patterson (1973) explains that the new critics are the successors of the life adjustment educators whose approach resisted the restriction of public education to the development of the intellect. It went beyond, he writes, the early extension of education to preparation for making a living, through the development
of vocational technical curricula, to a concern with preparation for living. Interest in the individual's physical and mental condition as it influenced academic performance was replaced by interest in the social and emotional development of the student as a person. The focus or emphasis, however, claims Patterson, tended to be upon preparing the student for responsible citizenship, rather than the student's development as an individual or a person. Patterson further asserts that the current successors are more concerned about the development of the student as a person, his growth and development as a free individual; their emphasis is characterized as a humanistic approach to education and is concerned with the psychological or emotional atmosphere of the classroom.

Patterson sees a need for more informal social interaction as an important aspect of personal development or self-actualization in interpersonal relationships.

Therefore education must, as must all of society, become concerned with the development of men not just as citizens, but as persons, as members of a community, and as members of the human race. (p. 16)

Career Awareness

General Issues Relating to Career Awareness

The National Institute of Education's Career Awareness Division, in developing a statement concerning a conceptual framework for career awareness, aimed to collectively explore concept of career awareness existant in the literature; to clarify differing and incomplete notions of career awareness present in the field; to develop a conceptual
framework that would serve as a platform for educational research and development; and to make a contribution to the area of career development.

As a construct, career awareness, according to the Division, is made up of both cognitive and affective elements and can include information about the nature and requirements of occupations, attitudes toward occupations and work in general, aspirations, knowledge of one's own capacities and interests, understanding of adult roles in the family and in the world of work, and the skills of planning for and choosing career opportunities.

Four elements encompass most of the conceptual dimensions of career awareness, as reported by the Division: a) knowledge—factual information about the skills and educational requirements of an occupation, the nature of the occupation in terms of its processes and products, its potential for access, advancements, and benefits; b) preferences—the set of occupations or adult roles which fall on a continuum of aspiration, preference, interest, or liking; c) values—beliefs concerning the status of occupations and what an individual considers important with respect to aspects of work and the place of work in adult life; and, d) self-concept—beliefs an individual holds about the abilities he or she has and how successful he or she would be at an occupation or occupational role. These elements are dynamic and interactive in the way they contribute to the formation of individual career awareness and career choice.

Individuals vary in the cognitive and affective resources they bring to a career forming situation; so the Division speaks of
differences in career awareness and of increasing and expanding career awareness which means that aspects of career awareness can be represented by appropriate measures, and that a profile of such measures can picture the state of an individual's occupational awareness. Such a profile would be unique for each individual and would be influenced in particular by family, peer group, school, and media. The status of the four elements, claims the Division, function as the inventory of knowledge, attitudes and values that a person draws on to recognize, shape, and assess career choices. The processes of identifying opportunity will become increasingly more important in a lifetime of work as career choice recurs, ideally, on the basis of a continuing enhancement of occupational knowledge and occupational self-awareness.

A good career education program, according to Hoyt (1975), will involve all students at all educational levels in a systematic exposure to career awareness issues. Further, it will be coordinated to reflect what is known about career development; it will be collaborative both in terms of relationships involving the educational system and all other phases of business and society. Finally, says Hoyt, it will be learner-centered in goals, basic methodology and evaluation. It is necessary to implement career education at the elementary level, according to Hoyt, since work values as part of one's personal values cannot be ignored during the elementary school years. Furthermore, realizing the crucial importance of basic academic skills in the world of work should motivate elementary school students to learn such basic skills better.

Career education is, of course, a fairly new movement although it has its antecedents in the 1951 establishment of the National Manpower
Council at Columbia University under a grant from the Ford Foundation. Bailey and Stadt (1973) describe this time in America as a time when education came under severe criticism as the nation was seen to be technically lagging. In their explanation of that time, it was becoming the thinking of the time that the nation's most critical resource is people and that people must have opportunities to acquire skills for life and work so that they are productive and versatile citizens who will build a better, stronger America. Critics of education, both inside the profession and outside it, clamored for reform, according to Baildy and Stadt. Academic standards were seen as seriously lacking as were important learnings, instructional organization and methods and development of the person. With the post-Sputnik clamors for educational excellence during the early sixties, there was a particular interest in math, science and language and a concern for the educational inadequacy in preparing people for the demands of science and technology. This concern gave way to a nationwide call for relevance in the late sixties. Education was expected to prepare people personally and socially for the changing world. Educators were being confronted with the task of accountability, according to Bailey and Stadt.

Herr (1976) writes that it is clear that while the climate in the U.S. Office of Education for Career Education was congenial for some years prior to 1971, the major implementation of the concept got underway subsequent to U.S. Commissioner of Education, Sydney Marland's, address on January 23, 1971 before the annual convention of the National Association of Secondary School Principals at Houston, Texas. This speech, along with many which followed in rapid succession to various
professional, civic, and industrial groups, gave visibility and credibility to career education. Within six months of Commissioner Marland's 1971 speech, reports Herr, two units within the U.S. Office of Education had assumed the major burden of leadership in career education although each had other responsibilities as well and other agencies of the Office of Education were also making contributions of funds or analysis to the career education effort.

A major share of the career education leadership initially fell to the Bureau of Adult, Vocational, and Technical Education. Herr contends that, although it would have been, perhaps, more creditable to wait on research and development data before launching a national network of exemplary and demonstration career education projects among the states, it was felt within the U.S.O.E. that time did not permit such a time lag. Thus, he continues, simultaneous with the efforts of the Bureau of Adult, Vocational, and Technical Education, the National Center for Educational Research and Development was charged with designing and implementing new strategies for career education. By the end of July, 1971 four national models had been planned and initial contractors were selected and funded. Those models were: The School-Based Career Education Model, the Employer-Based Career Education Model, the Home-Based Career Education Model and the Residential-Based Career Education Model.

Herr further cites the major emphasis upon program development and model design were complimented by the conceptual development of fifteen occupational clusters which synthesized the major categories of commonality among the 20,000 jobs listed in the Dictionary of Occupational
Titles. In 1971, funds were awarded to create curricula for five of the fifteen clusters under the authority of Part I of the Vocational Education Amendments of 1968. In addition to this, in 1972, the curriculum effort was broadened to support the design of general career education curricula for grades K-6; fifty kindergarten through grade 14 exemplary projects had been funded just prior to 1971 and, in 1972, an additional fifty career education mini-models were funded. Thus, states Herr, by 1973, career education had become a significant presence in the federal structure. The four career education models, previously under the supervision of the National Center for Research and Development, were transferred to the National Institute of Education whose primary mission is that of research, development and dissemination with the Office of Education assuming major program operation roles.

Critics of career education have, of course, not been lacking. Hansen (1977) cites a major criticism as being that career education is simply a vehicle for expanding vocational education and that the perceived attempt to vocationalize education has brought about considerable resistance to career education. Teachers of academic subject matter have been particularly resistant, she writes.

Criticism of career education which offers a positive challenge to the movement will reflect a broadened understanding of the concepts involved—basically, how career education differs from vocational education, how career education differs from career guidance—and will examine career education within a global context of educational goals. Hoyt (1976) claims that, if career education's efforts are to be viewed within the context of the goals of American education, a global view of
education must be taken. He cites the Seven Cardinal Principles of education which were published in 1918 by the NEA Commission on the Reorganization of Secondary Education, chaired by Dr. Charles Eliot, President of Harvard University. The Seven Cardinal Principles include: 1) Health; 2) Command of Fundamental Processes; 3) Worthy Home Membership; 4) Vocation; 5) Civic Education; 6) Worthy Use of Leisure Time; and, 7) Ethical Character. Hoyt contends that a refocusing effort aimed at all of these goals at once would be useless insofar as developing an implementation scheme that would be operational for the system as a whole. Rather, says Hoyt, when a refocusing effort aimed at one of these seven basic goals, its implementation, if executed properly, holds positive potential for helping to attain all of the others.

The goal of education, according to Hoyt's view, is more than education itself.

Education must be viewed, in terms of its deeper purposes, as preparation for something. By trying to refocus American education around the global goal of education as preparation for work, career education has tried to create a basis for gaining a deeper sense of meaning and purpose in education both for those who teach and for those who learn. By using the global purpose of education as preparation for work, career education has been able to devise a set of implementation strategies that, in addition to meeting this goal, can also contribute, in a positive fashion, to meeting all other basic global goals of education as well. (p. 30)

In his analysis of career education, Spradley (1973) advocates the notion that it must deal with the need to enhance the continuity between school and work but that, primarily, it must enable every
person to make informed choices in regard to developing his/her career. Career, here, is used in a broad sense meaning the pattern of one's life and focuses on the lifelong process of decision-making, multiple careers, career change and career choices. The world of work, then, is a life-style containing a set of values and assumptions. It is for this that the individual must be prepared.

Considered in light of this discussion, criticism such as that of Nash and Agne (1973) seems to be missing the point, conceptually, of career education. Many teacher educators do voice their sentiments, however, so it bears consideration. They base their criticism on the federal conceptualization and criticize what they perceive to be an overly specialized learning experience; a merely utilitarian view of life, neglecting the aesthetic, spiritual and emotional; a particular body of skills and knowledge required of all, inconsistent with the needs of the future and furthering antihuman elements of the corporate state; and a performance-based curriculum which relieves the supposed inequities of credentialism. Obviously, this line of criticism is based on a narrow interpretation of conceptualization or a reported conceptualization, narrow in scope. Dewey (1938) provides a sound foundation for the more broadened concept of career education and the relationship between Dewey and career education has been well documented (Herr, 1972; Marland, 1974; Owens, et.al., 1974, O'Toole, 1975; Butts, 1975).

Issues having to do with conceptualization of career awareness and career education, along with problems of teacher understanding, acceptance and implementation, are further heightened by issues having to do with evaluation of career education. Hoyt (1977), in discussing
Perspectives on the Problem of Evaluation in Career Education, presents a summary view of two mini-conferences involving practitioners and consultants devoted to the evaluation of career education. He cites one of the evaluation problems as being that of a problem of instrumentation in that few instruments have been developed which will assess attitudinal change. Another problem has to do with evaluating the implementation of a concept. It is difficult to measure the effect of a concept which is aimed at reforming an entire system through infusion into existing courses. Hoyt claims that evaluation must be in the form of process evaluation where mission statements are subdivided into task analysis statements and product evaluation where there is an assessment of student a) attitudes toward work, b) self-awareness, c) knowledge of occupations, and d) future plans.

Some problems grow out of a seeming lack of attending to the purpose of evaluation itself. Bonnet (1977) summarizes the purpose of career education evaluation and program:

Exemplary or demonstration projects such as career education projects funded by the USOE have one primary mission: to develop programs which can be adopted or adapted by other schools to fulfill needs common to many of all American school systems. This mission implies many responsibilities for exemplary programs, one of them being to provide potential adopters of their program with sound bases for deciding whether to try them in their school systems. That is, a school administrator in California should be able to predict whether a program developed in Arkansas will work in his or her school on the basis of the Arkansas program's evaluation results. (p. 13)

Bonnet further cites the problem of choosing instruments as being prevalent in career education evaluation. Instruments chosen must
measure what the local district wants to evaluate so special attention must be given to what the district's program is trying to produce. As Bonnet explains, instruments which are chosen solely on the basis of how many other programs have used them or on recommendations of testing, experts are apt to yield disappointing evaluation results and invalid conclusions about the program's effectiveness. The career education program under consideration in this study is strongly committed to the development of healthy student self-concept and social adjustment skills. Hence, the measurement of those two variables is imperative for a valid evaluation of career education as is the measurement of academic achievement since basic academic skill development is another strong programmatical commitment. This exemplifies one of the evaluation problems which exist in a broader sense since self-awareness is an important career education outcome. Self-awareness in the context of career education, however, is defined as understanding one's own abilities, aptitudes and interests. This is different from self-concept, or self-esteem, which is a self-report measure of how one feels about or regards one's own self. Concerning this Bonnet states:

> Self-awareness is an important career education outcome and probably the most challenging to measure. So we do not quarrel with the practice of measuring self-esteem in lieu of self-understanding. However, the limitations should be recognized, as overlooking them leads to faulty conclusions. (p. 22)

Hoyt (1977b) in *A Primer for Career Education* delineates 54 roles and functions for eight kinds of key career education "actors." He contends that if all of those ascribed roles and functions are being performed effectively, an evaluative criteria can be applied to what
he terms the "career education treatment."

Career education, claims Hoyt, can be evaluated by assessing
a) the extent to which a true career education treatment is present;
b) the adequacy of methods used in implementing the treatment; and,
c) the results obtained as a result of the application of the treatment.
It is with the latter of these assessments with which programmers must
be primarily concerned, according to Hoyt. This is because the results
approach speaks to student outcomes operationalized through USOE
"learner outcomes."

Several attempts have been made to refine and revise the "learner
outcomes" for career education. The following is a list of the basic
learner outcomes that a true career education program, according to
Hoyt's view, should be able to produce:

Career education seeks to produce individuals
who, when they leave school (at any age or at
any level) are--

1. Competent in the basic academic skills required
   for adaptability in our changing society
2. Equipped with good work habits
3. Equipped with a personally meaningful set of
   work values that foster in them a desire to
   work
4. Equipped with career decision-making skills,
   job-hunting skills, and job-getting skills
5. Equipped with a degree of self-understanding
   and understanding of educational-vocational
   opportunities sufficient for making sound
   career decisions
6. Aware of means available to them for continu­
   ing and recurrent education
7. Either placed or actively seeking placement
   in paid occupation, in further education,
   or in a vocation consistent with their
   current career decisions
8. Actively seeking to find meaning and meaning­
   fulness through work and in productive use of
   leisure time
9. Aware of means available to themselves for changing career options—of societal and personal constraints impinging on career alternatives. (pp. 63-64)

Summary

Career education, which provides a programmatical framework for the educational development of career awareness, holds as its goal, a refocusing of American education and the actions of the broader community in ways that will help individuals acquire knowledge, skills and attitudes necessary for each to make work a meaningful, productive and satisfying part of his or her own way of living.

This chapter reviewed the literature on self-concept, social adjustment and career awareness in a career education program context. A discussion of the methodology used for this study is presented in Chapter III.
Chapter III
METHODOLOGY

The purpose of this study was to examine the relationships among the variables of self-concept, social adjustment, academic achievement, career awareness and teacher perception of fourth grade elementary students during a school year which incorporates a comprehensive career education program. This chapter is organized around three major areas: setting, procedures and analysis of data. The discussion of setting entails a description of the setting itself, the population, the total sample and the targeted population of students who scored low on one or more of the measures administered. The discussion of procedures presents the procedures and instrumentation used in gathering the data and a description of the delivery of a limited treatment, or intervention strategy. Finally, the analysis of data presents the method of analyzing each question in the statement of the problem.

Setting

This study was conducted in a mid-western, upper-middle class, largely white Anglo-Saxon Protestant city of 42,000 residents. Located in a central Ohio, metropolitan area, its boundaries are contiguous to those of a major university. Homes range from about $50,000 to $150,000 and upwards; of these, 85% are owner occupied. The governing body of the community consists of a city-council manager form of government. Revenue
for operating the city, which maintains its own municipal fire, police, recreation and education services, comes primarily from real property tax as there is no industry within the city limits.

The community has the second highest income per-family in the state for cities of more than 25,000 people. The mean family income is estimated at $31,688, or $9,320 per person. This is double that of the state capitol. White collar workers comprise 84.7% of the community's work force, the highest percentage in the state for a city of its size. Sixty-four percent of the women in the community are employed outside the home as well. The median of school years completed is fourteen, also the highest in the state proportional to size of city.

In excess of 600 businesses, retail stores and offices are located in the city. Within thirty minutes drive of the city there are six colleges and universities and two technical training institutions. In addition, there are countless multi-cultural suburban environments which are represented in the demographic area in which the city is located.

There are seven elementary schools in the community with 171.5 teachers serving 3,600 students in kindergarten through six. Full-time principals, media specialists, registered nurses, and art, physical education and general music teachers are stationed at each of the elementary schools. The teacher-student ratio is approximately one-to-twenty-five at the elementary level.

The two junior high schools serve 2,030 students in grades seven through nine and are staffed by 102.5 teachers. Each building has the services of a full-time principal and assistant principal, three guidance
counselors, a registered nurse, and a media specialist. A teacher-student ratio of approximately one-to-twenty-eight is maintained in the academic areas of the secondary schools.

The senior high has an enrollment of 2,232 students and a staff of 109 teachers, a full-time principal, three assistants, six counselors, a nurse and media specialists.

The system encourages professional creativity in its teachers. Teacher participation in developing instructional guidelines is solicited through a curriculum council which works with subject area coordinators to keep the developing K-12 instructional program attuned to changing student needs. This teacher involvement in a formal curriculum council provided a direct means for infusing career education activities throughout the entire school program.

The Board of Education is committed to the investment of funds in career education activities for its students. This allocation of funds reflects a needs assessment as conducted by administrators and school Board. Support of the community has been enthusiastic as well. Recognition of the needs of young people for sound preparation for the world of work has echoed through business, industry, professional and community groups. Their voluntary contributions of time, materials, funds, training facilities and student exploration assistance have been significant.

Major Objectives of the Comprehensive Career Education Project as described in the project proposal are as follows:

All students in grades K-12 of the school system will be involved in career education during the academic school year on a continuing basis through
knowledge, attitude and skills. Activities planned by each teacher will be based on selected learner outcomes.

A comprehensive K-16 career education program consisting of six components will be reinforced through three major approaches: a) curriculum infusion, b) guidance oriented strategies, and c) career education activities. The program will involve students, teachers, administrators, support personnel, parents, university personnel, and community, business and industry leaders.

Within the above broad objectives, three specific objectives will be emphasized: a) to develop more fully the career guidance dimension K-12, b) to further develop and reinforce career education infusion at the secondary level, and c) to expand the focus on school-community collaboration.

Project Activities are described as follows:

In each of the seven elementary and two junior high schools teachers have demonstrated an initial implementation of career education activities in all subject areas. These activities continue to be consistent with the Ohio Developmental Areas Schema and the objectives planned according to the USOE Ten Learner Outcomes. All career education activities will be planned, conducted, and evaluated with the career education staff.

A planned organization for career education will be reinforced consisting of K-6 Motivation, 7-8 Orientation, 9-10 Exploration, 11-12 Career Preparation, Placement, and Follow-Up, 13-16 Pre-Service Teacher Education, and Teacher Career Development components. Three approaches will be used within these components: curriculum infusion, guidance oriented strategies, and career education activities. In each component and in each approach specific activities will be targeted for students, teachers, administrators, support personnel, and parents, community, business, and industry personnel. All of these activities will be documented and logged to provide a description of an ongoing comprehensive program.

Specifics within the above activities will be the development of an expanded career guidance role in the career education program K-12. Strong emphasis will also be placed on career education at the secondary level with attention given to a comprehensive effort
at infusion of career education activities within each subject area at the junior and senior high schools. A continued emphasis on the newly developed placement and follow-up system will be a major activity area. A third area of focus deals with the expansion of school-community collaboration activities to include the larger metropolitan area surrounding the community. (Project Proposal, 1978, pp. 24-28; 46-76)

Population

The population was comprised of the total fourth grade population in six out of seven of the elementary schools in the system. One school was not included in this study due to inconsistency in testing procedures. The total number of subjects, ranging in age from nine to eleven years, was 442. There were 201 females and 241 males. Of these, 179 students were nominated by teachers to comprise a targeted group. The informal and combination classrooms consisted of multi-grade groupings; for the purposes of the study, however, only fourth graders from contemporary classrooms were included. Table 1 presents the distribution of population by building and classroom according to organization.

Data from all students were included in the analyses of the career education and self-concept variables. Students from the six combined classrooms were not included in the analysis of social adjustment variables. It was decided that the wide discrepancy in class size would have distorted the data on social adjustment where the number of selections for any student was dependent on part upon the number of students in the class who were making the selections. The option to develop a ratio of students in the class to number of selections was considered. However, the assumption of a consistency of interpretation of the ratio through the range of small class size to larger class size was not sound. In all analyses which investigate
social adjustment, 64 students in the informal or combination classrooms were omitted. This restricted the analysis of social adjustment to contemporary classrooms.

Table 1

Distribution of Population

N=442

<table>
<thead>
<tr>
<th>Building-Classroom</th>
<th>Organization</th>
<th>N</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1</td>
<td>Contemporary</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>A-2</td>
<td>Informal</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>A-3</td>
<td>Contemporary</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>A-4</td>
<td>Informal</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>A-5</td>
<td>Contemporary</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>A-6</td>
<td>Informal</td>
<td>8</td>
<td>109</td>
</tr>
<tr>
<td>B-7</td>
<td>Contemporary</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>B-8</td>
<td>Contemporary</td>
<td>26</td>
<td>52</td>
</tr>
<tr>
<td>C-9</td>
<td>Contemporary</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>C-10</td>
<td>Contemporary</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>D-11</td>
<td>Combination</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>D-12</td>
<td>Contemporary</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>D-13</td>
<td>Contemporary</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>D-14</td>
<td>Contemporary</td>
<td>26</td>
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</tr>
<tr>
<td>E-16</td>
<td>Contemporary</td>
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<td>Contemporary</td>
<td>25</td>
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<td>Informal</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>F-21</td>
<td>Combination</td>
<td>10</td>
<td>70</td>
</tr>
</tbody>
</table>
Procedures

A team of trained career education consultants administered the Piers-Harris Self Concept Scale, a pupil-report Peer Reputation Form, and the Ohio Career Development Test during October of the 1978-79 school year. Two consultants were outside evaluators from OSU; two were members of the Career Education staff in the school district.

Students were told that information was being gathered for purposes of evaluating the career education program and that their test scores and responses would be revealed in summary form to their teachers only. The tests were read aloud so that reading difficulty would not be an influencing factor. The Stanford Achievement Test had been administered separately in accordance with the system's testing program.

Early during the second semester, the consultants met with teachers individually or in small groups to deliver a summary of results to the teachers regarding their students and to conduct a systematic processing of the information according to the following procedures:

Teachers were given class rosters with individual student scores indicated by + (high), = (average) or - (low) for each instrument. See Appendix A for scoring distribution.

A brief discussion of each instrument was presented.

Each student who received a low mark in any of the areas was pointed out in particular for each test sub-score.

Particular attention was given to results of the Piers-Harris Self Concept Scale and the Peer Reputation Form.

Discrepancies in scores were discussed with final assessment of students perceived as being low in self-concept and social adjustment. Teachers were asked to nominate those students they perceived as
low in the areas of self-concept and/or social adjustment.

Instructions for administration of the interim Peer Reputation Form were presented.

Permission was gained to assess each of the students agreed upon as low in self-concept and/or social adjustment through administration of an interim P-H. Time and administration were scheduled.

All questions from teachers were discussed and noted.

It was announced that follow-up sessions were available as requested until the year-end for purposes of helping teachers determine the best ways of addressing issues raised with the information.

Collection of the final data was discussed and tentative dates were determined.

Following the information processing session, the consultants retested targeted students according to a building schedule. At the scheduled time, students were taken from their classrooms and tested in a group, by building. Interim social adjustment (Peer Reputation) testing was conducted in the classrooms by the classroom teachers who were furnished printed directions.

Retest results were delivered to teachers by the consultants according to the systematic information processing format (Appendix A). In addition, self-concept improvement strategies were furnished for the teachers (Appendix B). Teachers were encouraged to process some of their own feelings and thoughts regarding the targeted students in their classes.

Post-testing was conducted at the end of the school year by the same team of consultants across grade level in the same fashion as pre-testing was conducted.
**Limited Intervention Format**—The conceptual framework for the limited intervention format, employed over a period of nine weeks during the second semester of the school year, was built on three basic assumptions. First, it was assumed that by focusing directly on children in the classroom who appeared low in self-concept, social adjustment and academic achievement, teachers would attend to these students and their specific needs as assessed by the pre-tests. The second assumption was that if teachers did attend they would, of their own creativity, expertise, and experience with children, identify appropriate interventions to apply; or they would, of their own initiative, seek help from the consultants. The third assumption was that continued intervention by the teachers would occur if their own activities and those which they sought were reinforced.

The first step in the intervention included pre-testing. Each of the teachers received a class roster with individual student results on the Ohio Career Development Test, Piers-Harris Children's Self Concept (P-H), Peer Reputation Form, and the Stanford Achievement Test (SAT). Important to the content aspect of the information gathering sessions was an explanation on the part of the consultant of what the instruments used were intended to measure. A handout regarding sociometry, in a general sense (Appendix C), was presented to the teachers for discussion. Teachers were reminded that the variables under study are emphasized as a part of the career
education program.

The results of the pre-tests were then presented to teachers by indicating "high" (+), "average" (=), or "low" (−) for each student. Each student who received a "low" was pointed out in particular for each test subscore. Particular attention was paid to results on the P-H and Peer Reputation Form. Discrepancies in scores were discussed with final assessment of students perceived low in self-concept and social relationships. (See Appendix A).

Teachers were then asked to nominate those students they perceived as low in the areas of self-concept and social adjustment. All questions were noted by the consultants. Consultants gained permission to administer an interim P-H. Instructions were presented for interim classroom administration of the Peer Reputation Form. It was announced that follow-up sessions were available as requested and that further information regarding student progress would be forthcoming.

The underlying assumption of the limited intervention format was that highly trained professionals attending and reinforcing teacher strategies were important variables in improving classroom instruction for self-concept and social adjustment. To assist teachers the pre-testing team, who comprised the trained professional group, met with the teachers in groups by building and delivered the summary of pre-test scores to them. For purposes of consistency, a systematic information format was used by each of the consultants (Appendix A). Teachers were encouraged to react to the information, discuss the meaning of the results and to nominate other students in their classes.
who should receive specific attention. These meetings were held at the beginning of second semester. The interim retest schedule was agreed upon at this time. Teachers were given instructions for administering the Peer Reputation Form in their classrooms to obtain interim Social Adjustment results.

For the second phases of the intervention, the consultants once again met with teachers by building and delivered results of the interim retesting on measures of self-concept and social adjustment. The same information processing format was used as before. Teachers were encouraged to look at the interim results against the pre-test results for verification of their nominations of targeted students. They were encouraged to discuss possible procedures to follow with these children. Most of the teachers expressed a desire for some specific self-concept improvement strategies. The consultants agreed to furnish them with these which led to the development of the Self-Concept Improvement handout (Appendix B). These were given to all teachers at a subsequent follow-up meeting two weeks later.

In the third phase the consultants assisted teachers in identifying specific interventions and reinforced those activities which teachers did choose to use for intervention. For this activity the consultants held four follow-up meetings with teachers at two-week intervals. These were structured according to a common format allowing teachers to express their reactions to how their intervention strategies were progressing and to express encouragement and reinforcement. The last meeting with teachers was intended as an informal evaluation. Post-testing was conducted at the end of the school year.
Instrumentation

Piers-Harris Children's Self Concept Scale (The Way I Feel About Myself) (P-H)

Students were assessed for self-concept according to self-report responses on the Piers-Harris Children's Self Concept Scale (The Way I Feel About Myself), (P-H), published in 1969 by Ellen V. Piers and Dale B. Harris. The P-H is a self-report instrument administered usually in group form, requiring approximately a third grade reading knowledge. It is designed for children over a wide age range (grades 3-12) and can be completed in 15 to 20 minutes. Although it is easily administered and scored, Piers recommends that it should be interpreted with the aid of someone knowledgeable in measurement and statistics, psychology of adjustment, and self theory. Piers further states that the scale was designed primarily for research and development of children's self attitudes and correlates of these attitudes (Piers, 1969).

The items were derived from Jersild's (1952) collection of children's statements about what they liked and disliked about themselves and were written as simple declarative statements, at least half of which were negative in content. The preliminary pool of 164 statements was administered in a pilot study which established that the children (third, fourth and sixth graders) understood the items. Items answered by fewer than 10% or more than 90% were, in most cases, dropped. Further standardization and item analysis work eventually reduced the item pool to eighty items. The items that remained were items that were answered in the expected direction by half or over half
of the high group. Cureton's chi test was applied to determine whether each item significantly discriminated between the high and low groups at the .05 level or better.

Most of the reliability data comes from the original standardization work on the instrument. The Kuder-Richardson Formula 21, which assumes equal difficulty of items, was employed with resulting coefficients from .78 to .93. The Spearman-Brown odd-even formula was applied, as a check, with resulting coefficients of .90 and .87.

A retest after four months on half of the standardization sample resulted in coefficients of .72, .71 and .72 which, according to Piers, were satisfactory for a personality instrument in the experimental stage. The standardization sample received a 95-item version of the scale. The revised 80-item scale was shown to have better reliability (.77 coefficient) for both a two-month and four-month test-retest. Piers states that test-retest reliability coefficients which are calculated on a lumping together of several ages or grades, or over a shorter period of time, or any sample with increased variability, can be expected to be higher. The scale, according to Piers, is judged to have good internal consistency and adequate temporal stability. Wylie (1974) substantiates this claim. She recommends this instrument on the basis of established reliability and stability coefficients of .78 to .93 and .72, respectively, and further underscores the instrument for having established respectable construct validity.

Piers notes that individual changes in scores or group differences should not be taken at face value. It is recommended that individual score changes of less than ten points be ignored. Further, it should
be noted that changes in group means on a retest, up to five points, have been found to be consistently in the direction of a higher score even if no treatment manipulations have taken place. In answer to those who question whether children do, in fact, even have stable self-concepts, Piers claims that by age eight self attitudes have a reasonable amount of stability.

To build content validity into the scale, items were written to cover all the areas about which children reported qualities they liked or disliked about themselves (Jersild, 1952). During the item analyses, non-discriminating items were dropped so that, presumably, a better reflection of a child's general self-concept is provided by the scale. Studies comparing scores on the P-H with scores on other instruments yielded correlations of .68 and -.64 (Mayer, 1965; Cox, 1966). Correlations of children's self-reports with ratios of teachers and peers were obtained by Piers (1965) ranging from non-significant to .43 and by Cox (1966) who obtained correlations of .43 and .31.

Peer Reputation Form

To determine how each student was perceived by his/her peers, an instrument was devised based on the near-sociometric "guess-who" technique as developed by Hartshorne and May (1929). According to Gronlund (1951), on sociometric instruments, sociometric choices should be based on a criterion which reflects an actual situation or activity in which group members have a real opportunity for participation. More valid choices are made if the situation or activity is meaningful to the students and if they can see consequences of their choices. The lack of clear-cut criterion of choice and absence
of any implied action will not assure valid responses. Instruments using such questions have been labeled "near-sociometric tests" and are useful in research settings. These tests must utilize special motivational techniques to assure sincere and accurate responses. One such test is the pupil-report method employing the "guess-who" technique (Gronlund, 1959).

The development of this technique was independent of the sociometric movement and only recently has been used in conjunction with sociometric studies as it provides useful insight into why students respond on sociometric measures as they do. The "guess-who" technique presents the group members with a number of positive and negative behavior descriptions and requests each individual to indicate the group members who best fit each description. Any behavior description that seems pertinent to the purpose of using this technique may be incorporated into the items. Scores are obtained by totaling the number of mentions each pupil receives on each of the behavior descriptions. The strength of the characteristic is assumed to be roughly equivalent to the number of mentions received on that characteristic. The data obtained by the "guess-who" technique provides, as a result, a measure, according to Gronlund, of each individual's reputation among the other group members.

The instrument used in this study included six items for which each student was asked to list three names per item, excluding himself or herself. The names were to be limited to those students in his or her class at the fourth grade level. The items were listed as follows:
1. These three classmates are the most happy.
2. These three classmates work best in class.
3. These three classmates are most fun on the playground.
4. These three classmates seem the most worried.
5. These three classmates are always picking on others.
6. Three best friends in class are...

The first three items were intended for positive peer appraisal. The next two were for negative peer appraisal, one for withdrawn behavior and the other for aggressive behavior. The last item indicated peer friendship. For purposes of data analysis the results of students enrolled in combined and informal classrooms where enrollment was smaller than in contemporary classrooms could not be used.

**Ohio Career Development Test**

Several instruments were reviewed for purposes of assessing career awareness. The evaluation team recommended usage of the Ohio Career Development Test, intermediate level 6, since that is the instrument which was implemented by the National Testing Service for program evaluation in the district. This instrument is comprised of final test field-based items and was copyrighted in 1976 by the Ohio Department of Education. Part One contains thirty-five multiple choice items which assess career knowledge. Part Two consists of thirty-five "agree," "disagree," or "not sure," items which assess career attitude.

This instrument was used in developing a fifty-six item 1980 pilot inventory related to each of the Seven Developmental Areas of career education. The resultant Ohio Career Education Inventory (OCEI) consists of 56 items at each grade: twenty-eight from the cognitive domain and twenty-eight from the affective domain. The
questions in each domain are further categorized into one of the Seven Developmental Areas. Each Developmental Area is represented by eight questions: four cognitive and four affective. Building and district summaries are reported to districts which assess two or more classes in a building and two or more buildings in a district. Each class report contains the names of the class/group, the building, and the district. The information is organized according to raw score summaries, item response summaries and a key for evaluating significant differences between percent correct. It is possible for a district to ascertain the differences between state and local percent corrects.

The total Ohio mean, as reported in 1980, on the cognitive measures is 18.5. The total State mean on the affective measures is 19.2 and the developmental total State of Ohio is 37.7.

The purpose of the OCEI is to assess the attainment of specified career education objectives by students in a particular class, building, or district, as well as at the state level. Districts were called upon to participate in a statewide assessment in 1980. The reports were to be mailed to the districts in May, 1981, after which time data of test reliability and validity would be available.

Teacher Nomination

Teacher nomination of targeted students was obtained by asking each teacher to respond with a "yes" or "no" for each of the students according to whether or not the teacher perceived the student as being low in the areas of self-concept and/or social adjustment. As the teachers responded, the consultants noted the teacher responses.
Teachers were presented a list of students who were low on one or more areas of the SAT. In this study, low was defined as being in stanines 1, 2, or 3 on any subtest of the SAT. Teachers nominated students for a targeted low self-concept and low social adjustment group based on these data and on their own perceptions of the students' functioning in the classrooms. In addition, teachers were also presented scores on self-concept translated into "high," "average," and "low" for each measure. These students were included with the first group of achievement nominated students. The final list of targeted students consisted of 179 subjects out of the 442 fourth grade students in the study.

**Stanford Achievement Test**

The **Stanford Achievement Test**, 1973 edition, has been in the process of development for over half a century. The test was first published in 1923 thus making the 1973 edition the "Golden Anniversary Edition." The latest edition covers grades 1.5 - 9.5 in approximate one-year spans. The battery used across fourth grade level in this study was Primary Level 3 which covers grade 3.5 - 4.4. This battery provides scores for the following subscales: Vocabulary, Reading Comprehension, Word Study Skills, Math Concepts, Math Computation, Math Application, Spelling, Language, Social Science, Science, Listening Comprehension, and Complete Battery. Percentile ranks, stanines, grade equivalents and scaled scores have been derived for use in interpreting individual pupil scores. In addition, there are two supplementary sets of group interpretive scores, consisting
of p-values, percent of pupils in specified groups who answered an item correctly at the various national standardization points, and School Group Stanines, for use in translating group averages into group stanines. For the purposes of this study, individual pupil scores were examined through local stanines since the population tested characteristically scores well above the national norms.

The Technical Data Report acknowledges content validity as having special relevance for achievement tests. Content validity is defined as the extent to which the content of the tests constitutes a representative sample of the types of skills, knowledge and understanding that are goals of instruction in a contemporary school. Instructional objectives and p-values for each item of each test, and for certain item groupings within subtests, are presented in the Index of Instructional Objectives and in the Teacher's Guide for Interpreting, respectively. It is recommended by the test authors that the school administrator compare a test's content and design with that of the school's curriculum in order to form a judgment about the content validity of the test for its intended use. Ebel (1978) in his review for Buros' Eighth Mental Measurements Yearbook, cites the technical data report as placing principal emphasis on the content validity of the tests but concludes that the manual does not deal in sufficient detail with the question of content validity. Ebel claims that what needs to be presented are the credibility of the verbal premises and the logic of the inferences drawn from them that led to the decisions that shaped the test content.
The Technical Data Report states that additional research studies will yield information on the criterion-related validities and construct validity. Test characteristics which contribute to understanding the construct validity of the Stanford Achievement Test include the rationale underlying the tests and psychometric characteristics such as a) decreasing difficulty of items with school grade progress; b) relationships with prior editions of the Stanford Achievement Test and the Metropolitan Achievement Tests; c) internal consistency indices of items; d) expectancy tables with the Otis-Lennon Mental Abilities Test; and, e) continuing reviews by representatives of minority and other groups (Madden, et. al., 1973).

Two types of reliability coefficients are furnished: one in terms of split-half estimates based on odd-even scores corrected by the Spearman-Brown Formula and the second based on Kuder-Richardson Formula 20. These are presented for each test at each level, for beginning, middle and end of the grade for which each level is most appropriate. Of the 668 coefficients reported, 428, or 64 percent, are .90 or above. Only 30, all of these in Primary Level 1 and 2 batteries, are below .80.

The reviewers in Buros' Eighth Mental Measurements Yearbook concur that, whereas there are easily correctable deficiencies which impair the test's validity, reliability coefficients are high. For the most part, the test is highly commended and, as Ebel, states, it "embodies most of the best that is currently known about the measurement of educational achievement" (Buros, 1978, p. 98).
Chapter IV

RESULTS

This chapter contains findings of the study. The findings are reported as they relate to research question posed in the statement of the problem. The central purpose of this study, as stated in Chapter I, was to examine relationships among the variables of a) Self-Concept, b) Social Adjustment, and c) Career Awareness of fourth grade students during one school year which incorporates a comprehensive career education program. A second purpose was to determine what changes in the same variables took place in the students across the school year. A third purpose was to examine relationships among the variables cited above, including Academic Achievement, among a targeted group of students who had been identified as low on the measures across the academic school year. A fourth purpose was to determine what changes took place in the same variables in children identified as part of the targeted group. A final purpose was to determine implications for teacher-consultative strategies for improving low self-concept, low social adjustment and low academic achievement among fourth grade students and implication for career education and teacher education programming. These implications will be addressed in Chapter V.

The data are organized in the order of the questions posed

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and are reported in tables with pertinent information discussed following each table. The first section presents information about the population studied. The following sections contain a statistical analysis for each question posed.

Research Population

Table 2 describes the research population of the study by total group, non-targeted group and targeted group according to sex. The targeted group was comprised of children identified as low on the variables studied through a process of teacher nomination.

Table 2

Description of Population by Sex, Group and Total

<table>
<thead>
<tr>
<th></th>
<th>Total Group</th>
<th>Non-Targeted</th>
<th>Targeted</th>
</tr>
</thead>
<tbody>
<tr>
<td>M F Total</td>
<td>241 201 442</td>
<td>133 130 263</td>
<td>108 71 179</td>
</tr>
</tbody>
</table>

The school sizes ranged from a total fourth grade population of 50 to a total of 106 with the number of fourth grade classrooms varying from two to six in a building. Six schools had 15 contemporary classrooms; two schools had four informal classrooms, three in one school and one in another; and two schools had two combination classrooms. The ratio of boys to girls was consistent across the schools as expected with the total adjusted frequency percentages being 54.8 % male and 45.2 % female.

With regard to the targeted population, which identifies 179 students who were low on any measure used in the study or received
teacher nomination, the mean number of students targeted between classes was 10.41 with a range of two to thirteen.

Table 3 presents absolute frequencies of targeted students and adjusted frequency percents by school, classroom and classroom organization. The highest percentages of targeted students (5.6% - 6.7%) were selected from contemporary classrooms. The lowest percentages of targeted students came from two of the four informal classrooms (2.8% and 1.1%) and one of the two combination classrooms (2.2%). It should be remembered that for purposes of statistical analysis on the measures of social adjustment the informal and combination classroom students were omitted due to the discrepancy in class size.

Table 4 presents the mean scores for each of the measures used in the study by school attended and by sex. The mean scores for males and females were higher at the end of the year than they were at the beginning although the scores on the Career Attitude variable for males were very close pre and post. The mean scores among the buildings all were higher at the end of the year than they were at the beginning although Schools B, D and F show very close pre and post mean scores on the measure of Career Attitude. On the measure of Self-Concept, males and females show higher mean scores at the end of the year than at the beginning; however, the mean scores are very close, pre and post. Among the buildings, Schools B, E and F show lower mean scores at the end of the year than at the beginning. Social Adjustment scores, overall, remain close, pre and post.
Table 3
Percentages of Targeted Students by School, Classroom and Classroom Organization

N=179

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<th>Classroom Org.</th>
<th>Class - Targ.</th>
<th>% of Cl.</th>
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<td>Informal</td>
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<td>Contemporary</td>
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<td>3.9</td>
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</tr>
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<tr>
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<td>4.5</td>
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Description of Population by Pre and Post Mean Scores

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</table>
A two-way analyses of variance were conducted to examine the significance of differences among the variables by school and by sex. These analyses indicated that School C had a higher mean pre-score on Career Knowledge and that School F had a higher mean pre-score on Career Attitude. Boys had higher selection on Pick on Others while girls were more often selected Most Happy. Girls in School E and School B had higher scores when nominated for Work Best. Tables for these data appear as Appendix D, Tables 5, 6, 8, 9, and 11.

At the end of the school year, a significant difference in Self-Concept was found in School A which had the highest mean score and School B which had the lowest. The same significant difference between boys and girls with regard to scores on Work Best and Pick on Others that were found at the beginning of the year upheld at the end. These data appear as Appendix D, Tables 7, 10 and 12.

The following sections of this chapter will address the research question as they were posed in Chapter I. Tables are presented and pertinent discussion follows each table. Summaries are provided at the conclusion of the discussion for each research question.

Question 1: What are the relationships among variables of a) self-concept, b) social adjustment, and c) career awareness at the beginning and end of an elementary school year which incorporates a comprehensive career education program?

Research Question 1 was examined by an application of a Pearson Product Moment Correlation Coefficient (r) technique. The
variables Career Knowledge, Career Attitude and Self-Concept were examined by this application to the total group of 442. The Social Adjustment Peer Reputation variables—Most Happy, Work Best, Most Fun, Most Worried, Pick on Others and Best Friends—were examined by contemporary classroom organization, only, due to the wide discrepancy in class size in the informal and combination classroom groupings. The total group measured on Social Adjustment variables numbered 371. Sixty-four informal and combination classroom students were omitted and seven additional cases were omitted due to insufficient data reported.

Table 13 presents the r-values for variables of Career Knowledge, Career Attitude, Self-Concept, and the Social Adjustment variables of Most Happy, Work Best, Most Fun, Most Worried, Pick on Others and Best Friends at the beginning of the school year.

Career Knowledge—A significant positive relationship was found between Career Knowledge and Career Attitude. A Coefficient of Determination would indicate that 16% of the variance of one variable can be accounted for by the variance of the other, whereas 84% is related to other factors. This means that, whereas there was a significant relationship found, the level of strength of the correlation was low, approaching mid-range.

A significant positive relationship was found between Career Knowledge and Work Best. This was a low correlation in that 11% of the variance in one variable can be accounted for by the variance in the other; 89% is related to other factors. Career Knowledge was significantly related, negatively, with Most Worried and Pick
Table 13
Pearson Coefficients of Correlation for Pre Test Measures of Career Awareness, Self-Concept and Peer Reputation for Total Group of Fourth Grade Students

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on Others. Whereas these relationships were significant, the correlations were low.

The Career Knowledge measurement was comprised of 35 items. The range of correct responses was 7 - 29.

**Career Attitude**—The Career Attitude measurement included 35 items. The correct responses ranged from 6 - 33.

Positive significant relationships were found between Career Attitude and Self-Concept, Most Happy, and Work Best. These data would suggest that career attitude, rather than career knowledge, is more apt to relate self-concept and happiness among fourth grade students under study. An examination of these correlations, however, through an application of a Coefficient of Determination, would indicate that the correlations are low, with Work Best showing the most strength of the three. Only 8% of the variance of one variable can be accounted for by the variance in the other when looking at the relationship between Career Attitude and Work Best. A significant negative correlation was found between Career Attitude and Most Worried. It was a low correlation, however.

**Self-Concept**—There were eighty items on the Self-Concept measure. The scores ranged from 12 - 79. Significant low positive relationships were found between Self-Concept and Career Attitude, Most Happy, Work Best, Most Fun and Best Friends. It is interesting to note that Self-Concept was found to have statistically significant relationships with all of the positive measures of Social Adjustment in addition to Career Attitude. The level of strength of the correlations for all of the variables mentioned,
however, was low. A significant negative relationship was found between Self-Concept and Most Worried but it was low.

**Social Adjustment**—The possible range of responses on any one of the Social Adjustment Peer Reputation variables was 0 - 26. The range of pre-test scores on these measures was as follows:

- **Most Happy** 0 - 10
- **Work Best** 0 - 21
- **Most Fun** 0 - 13
- **Most Worried** 0 - 15
- **Pick on Others** 0 - 21
- **Best Friend** 0 - 11

Significant high average relationships were found between the variable Most Happy and Work Best, Most Fun, Best Friends and Self-Concept. One would expect to find the positive measures related but there was also a significant negative relationship between Most Happy and Most Worried. Of these relationships, Most Happy with Work Best and Best Friends show a mid-range of strength with 25% of the variance of one variable being accounted for by the variance in the other. The remaining 75% would be attributable to other factors.

The variable Work Best was significantly related to the variables Most Fun, and Best Friends. It was related negatively to Most Worried and Pick on Others. Most Fun was related positively to Work Best and negatively to Most Worried. Of these relationships, all were low with the exception of Most Fun and Best Friends which approached the mid-range of strength with a 16% Coefficient
of Determination.

The variable Best Friends was included in the measure separately as an overt explicated dimension of social interaction. As such, it was found to have significant positive relationships with Self-Concept, Most Happy, Work Best and Most Fun. The variables most strongly related to Best Friends were Most Happy and Most Fun. In fact, 50% of the variance in Most Fun could be accounted for by the variance in Best Friends. From this, it appears that students selected their friends on the basis of how much fun they had with them outside of the classroom more than the other variables. Best Friends was found to have a significant negative relationship with Most Worried but the level of strength was in the low correlational range.

Table 14 presents r-values for the variables of Career Knowledge, Career Attitude, Self-Concept, Most Happy, Work Best, Most Fun, Most Worried, Pick on Others, and Best Friends at the end of the school year.

Career Knowledge, Post—Of a possible 35 items, correct responses ranged from 5 – 31 on the post-test total group measurement of Career Knowledge. A significant positive relationship was found between Career Knowledge and Career Attitude. A Coefficient of Determination would suggest that this relationship would be in the mid-range of strength with 25% of the variance of one variable being accounted for by the variance in the other. Career Knowledge was also found to relate positively to Work Best and Best Friends. Both of these correlations, while significant, are low. A significant
negative relationship was found between Career Knowledge and Most Worried, again a low correlation in that only 10% of variance within one variable could be accounted for in the other.

**Career Attitude, Post**—There were 35 items on the measure of Career Attitude and the post-test range was 8 – 33. Career Attitude related positively to Self-Concept, Work Best and Best Friends. Of these relationships, Work Best shows the greatest strength, but it is a low level correlation. Career Attitude related negatively to Most Worried, again, a low correlation.

**Self-Concept, Post**—The post-test measure of self-concept contained 80 items. The scores ranged from 3 – 79. Significant positive relationships were found between the variables of Self-Concept and Career Attitude, Most Happy, Work Best, Most Fun and Best Friends. Whereas Self-Concept was found to relate significantly to all of these variables, the correlations were low. A significant negative relationship was found between Self-Concept and Most Worried, again a low correlation.

**Social Adjustment, Post**—The possible range of scores on any of the Social Adjustment Peer Reputation variables was 0 – 26. The range of post-test scores was as follows:

- Most Happy 0 – 15
- Work Best 0 – 21
- Most Fun 0 – 12
- Most Worried 0 – 22
- Pick on Others 0 – 21
- Best Friends 0 – 12
Table 14

Pearson Coefficients of Correlation for Post Test Measures of Career Awareness, Self-Concept and Peer Reputation for Total Group of Fourth Grade Students

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The variable Most Happy was found to relate significantly to the variables Self-Concept, Work Best, Most Fun and Best Friends. All of these relationships were positive. The correlations between Most Happy and Work Best, Most Fun, and Best Friends are in the low to mid-range when considering level of correlational strength. Both Most Fun and Best Friends, when correlated with Most Happy, suggest a 25% Coefficient of Determination.

Work Best was found to have a significant positive relationship with the variables Career Knowledge, Career Attitude, Self-Concept, Most Happy, Most Fun, and Best Friends. There was a significant negative relationship between Work Best and Most Worried and Pick on Others. All of these correlations were in the low range with the exception of Most Happy and Best Friends which, when correlated with Work Best, approach the mid-range.

Most Fun was found to have significant positive relationships with the variables Self-Concept, Most Happy, Work Best, and Best Friends. Of these, Most Happy indicates a 25% Coefficient of Determination level and Best Friends suggests a 56% level. Over half of the variance of one variable can be accounted for by the variance in the other when Most Fun is correlated with Best Friends. There was a significant negative relationship between Most Fun and Most Worried.

Most Worried was found to have significant negative relationships with the variables Career Knowledge, Career Attitude, Self-Concept, Most Happy, Work Best, Most Fun, and Best Friends. Where there was any significance of relationship between Most Worried and other variables, it was negative although the level of correlational
strength was low with the exception of Most Worried and Best Friends which begins to approach the mid-range.

Pick on Others was found to have a significant negative relationship with Work Best. There was no significance found between Pick on Others and any other variable.

Best Friends was found to have significant positive relationships with the variables Career Knowledge, Career Attitude, Self-Concept, Most Happy, Work Best, and Most Fun. Of these, Most Happy is in the mid-range of correlational strength and Most Fun is in the high (r= .50) average range. A significant negative relationship was found between Best Friends and Most Worried. This begins to approach the mid-range of correlational strength.

**Summary**—These data suggest that findings in relationships among variables of Career Knowledge, Career Attitude, Self-Concept and Social Adjustment Peer Reputation variables at the beginning of the school year and at the end were fairly consistent with several exceptions. There was a significant positive relationship between Career Attitude and Most Happy at the beginning of the year but no significance was found at the end of the year. There was a significant negative relationship between Career Knowledge and Pick on Others at the beginning of the year but no significance was found at the end of the year. There was no significance in the relationship between Career Attitude and Best Friends at the beginning of the year but significance was found at the end of the year.

It would appear that Self-Concept is related significantly
to all of the variables under study except for Career Knowledge and Pick on Others. Most Worried was related negatively to all of the other variables. Best Friends was significantly related to all variables except Career Knowledge, Career Attitude, and Pick on Others. Career Knowledge was not significantly related to Self-Concept but Career Attitude was. Work Best was significantly related to all variables except for Pick on Others. The data tend to suggest that attitude, rather than knowledge, toward career, concept of self, and regard of others, are closely linked.

Question 2: What changes in the variables of a) self-concept, b) social adjustment, and c) career awareness take place in the children comprising a fourth grade population across a school year which incorporates a comprehensive career education program?

Table 15 presents t-test comparisons of pre with post measures of the variables Career Knowledge, Career Attitude, Self-Concept and the Social Adjustment Peer Reputation variables of Most Happy, Work Best, Most Fun, Most Worried, Pick on Others and Best Friends. The t-test comparisons were intended to show significance of difference or change across a school year on the variables measured.

The total group showed a significant change beyond the probability level of .001 on the variable Career Knowledge. Specifically, Career Knowledge measures knowledge of information about the nature and requirements of occupations in the area of the Ohio Model Seven Developmental Areas: Self, World of Work, Decision Making, Individual and Environment, Economics, Education and Training and Employability and Work Adjustment.
Table 15

T-Test Comparisons of Pre and Post Total Group Measures of Career Awareness, Self-Concept and Social Adjustment

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<td>676</td>
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Examples of knowledge items are the following:

1. Which of these persons might work with an anthropologist?
   a. A teacher
   b. A psychologist
   c. An archaeologist
   d. An economist

2. Being interested in both plants and animals is most important for a:
   a. Forest ranger
   b. Botany teacher
   c. Veterinarian
   d. Geologist

It should be remembered that Career Knowledge and Career Attitude are addressed at the fourth grade level through curriculum infusion as a part of the comprehensive career education program. Thus, it is interesting to note that the only significant change to occur across the school year on the variables measured was in the variable of Career Knowledge. It should also be remembered that for purposes of data analysis the informal and combination classroom students were omitted from the Social Adjustment measures. No significance was found across the school year in change among the Social Adjustment variables, Self-Concept or Career Attitude.

Question 3: What are the relationships among the variables of a) self-concept, b) social adjustment, c) career awareness, and d) academic achievement for children identified as low on measures of self-concept, social adjustment, career awareness, teacher nomination, and/or academic achievement at the beginning of an elementary school year which incorporates a comprehensive career education program?

Research Question 3 was examined by an application of a Pearson Product Moment Correlation Coefficient (r) technique.
Table 16 presents the r-values for variables of Career Knowledge, Career Attitude, Self-Concept, Social Adjustment Peer Reputation, and Academic Achievement. For purposes of data analysis, students from the informal and combination classrooms were not included in the measures of Social Adjustment due to discrepancies in class sizes.

**Career Knowledge, Targeted, Pre**—There was a significant positive relationship found at the beginning of the school year between Career Knowledge and Career Attitude. A Coefficient of Determination would indicate that 16% of the variance in one variable would be accounted for by the variance in the other, while 84% would be due to other factors. This would place the correlational strength in the mid-range. A significant negative relationship was found between Career Knowledge and Pick on Others. The strength of the relationship is low, however. The measure of Career Knowledge was comprised of 35 items and the scores for the targeted students at the beginning of the school year ranged from 8 - 27.

**Career Attitude, Targeted, Pre**—The measure of Career Attitude was comprised of 35 items and the scores ranged from 7 - 32. There was a significant positive relationship between Career Attitude and Career Knowledge as reported above. A significant negative relationship was found for Career Attitude and Pick on Others but it was low.

**Self-Concept, Targeted, Pre**—There were 80 items on the measure of Self-Concept. The scores ranged from 12 - 78 at the beginning of the year among the targeted students. The only relationship found for Self-Concept was a positive one with Pick on Others but it was weak.
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* * p < .05
** p < .01
Social Adjustment, Targeted, Pre--The possible range of responses on any one of the Social Adjustment Peer Reputation variables was 0 - 26. The range of pre-test scores among targeted students was as follows:

- Most Happy: 0 - 9
- Work Best: 0 - 17
- Most Fun: 0 - 6
- Most Worried: 0 - 15
- Pick on Others: 0 - 20
- Best Friends: 0 - 6

Significant positive relationships were found between Most Happy and Work Best, Most Fun, and Best Friends. All of these relationships are in the mid-range of strength with 16% of the variance in one variable being accounted for by the variance in the other. A significant negative relationship was found between Most Happy and Most Worried. This is a weak correlation, however.

Work Best related significantly with Most Happy, Most Fun, and Best Friends. A Coefficient of Determination would suggest that, of these, Most Fun and Best Friends would be in the mid-range of correlational strength. There was a significant negative relationship between Work Best and Most Worried but it was low. Only 5% of the variance in one variable would be accounted for by the variance in the other.

Most Fun was found to have significant positive relationships with Most Happy, Work Best and Best Friends. Of these, Most Happy would be in the mid-range of correlational strength and Best Friends
would approach the higher range of strength with a 36% Coefficient of Determination. The relationship between Most Fun and Work Best, while significant, was low. A significant negative relationship was found between Most Fun and Most Worried. It was low, however.

Most Worried was found to have significant negative relationships with Career Attitude, Most Happy, Work Best, Most Fun, and Best Friends. All of these relationships, while significant, were low.

There was a significant negative relationship found between Pick on Others and Career Knowledge and a significant positive relationship found between Pick on Others and Self-Concept. Both of these correlations were low, however.

Best Friends was found to have significant positive relationships with Most Happy, Work Best, Most Fun and it was found to have a significant negative relationship with Most Worried. Of these relationships, Most Happy is in the mid-range of correlational strength and Most Fun approaches the higher range.

The Academic Achievement subscale relationships with the Career Awareness, Self-Concept and Social Adjustment variables are presented in summary form in Table 16. When examining the Complete Battery score for Academic Achievement, significant positive relationships were found with Career Knowledge, Career Attitude, Work Best and Best Friends. The relationship with Career Knowledge would be the only one approaching the higher range of strength with 25% of the variance in one variable being accounted for by the variance in the other. The others were in the lower range
of strength. Academic Achievement was found to be negatively related to Self-Concept. The subscales which showed negative significance in relation to Self-Concept were Reading Comprehension, Word Study, Spelling, and Language. There were also significant negative relationships found between Achievement and Most Worried and Pick on Others. Both of these relationships were in the low range of strength, however.

Table 17 presents the r-values for variables of Self-Concept and Social Adjustment in the middle of the school year, determined by interim retest measures.

**Self-Concept, Targeted, Interim**—The self-concept measure was comprised on 80 items and the interim scores among the targeted students ranges from 29 – 76. A significant negative relationship was found between Self-Concept and Most Worried but it was low. No other relationships were found with Self-Concept.

**Social Adjustment, Targeted, Interim**—The possible range on any one of the Social Adjustment variables was 0 – 26 in that the classes responded in total. Only the targeted students, minus the informal and combination class students due to class-size discrepancy, are discussed here, however. The range of interim test scores was as follows:

- **Most Happy** 0 – 15
- **Work Best** 0 – 22
- **Most Fun** 0 – 11
- **Most Worried** 0 – 19
- **Pick on Others** 0 – 21
- **Best Friends** 0 – 8
Table 17

Pearson Coefficients of Correlation for Interim Test Measures of Career Awareness, Self Concept and Peer Reputation for Targeted Fourth Grade Students

<table>
<thead>
<tr>
<th>Variable</th>
<th>SC</th>
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<th>WB</th>
<th>MF</th>
<th>MW</th>
<th>PO</th>
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</tr>
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</table>

116
There were significant positive relationships found between Most Happy and Work Best, Most Fun and Best Friends. Most Happy was found to relate negatively with Most Worried and Pick on Others. All of these correlations were low with the exception of Work Best and Best Friends which approach the mid-range of strength.

There were significant positive relationships between Work Best and Most Happy, Best Friends with Most Happy approaching the mid-range of strength and the others being low. Most Happy related negatively with Most Worried and Pick on Others. These correlations were low, however.

Most Fun was found to have positive relationships with Most Happy and Best Friends. Of these, Best Friends approaches a higher level of correlational strength with 25% of the variance in one variable being accounted for by the variance in the other. There was a significant negative relationship found between Most Fun and Most Worried but it was low in strength.

Most Worried related negatively with Self-Concept, Most Happy, Work Best, Most Fun and Best Friends but the relationships were low. There was a significant negative relationship found between Pick on Others and Most Happy and Work Best but both relationships were low.

Best Friends was found to have significant positive relationships with Most Happy, Work Best and Most Fun. Of these, Most Fun is in the mid-range of correlational strength with Most Happy approaching the mid-range.

As discussed in the first and third chapters of the study
the Social Adjustment scores for students enrolled in the informal and combination classrooms were eliminated from the statistical analyses. Since the scores earned on any one of the Social Adjustment variables were nominations by peers, the unequal size of these classrooms, approximately one-half the total of the regular classrooms, would result in less possibility for these students to receive the same number of nominations.

Table 18 presents r-values for the variables of Career Awareness, Self-Concept, and Social Adjustment for the targeted students at the end of the school year.

**Career Knowledge, Targeted, Post**—There were 35 items on the measure of Career Knowledge and the post-test scores among the targeted students ranged from 5 - 30. There was a significant positive relationship found between Career Knowledge and Career Attitude and Most Fun. Of these, Career Attitude approaches the mid-range of strength with 22% of the variance being accounted for by variance in the other. The correlation between Career Knowledge and Most Fun, while significant, is low.

**Career Attitude, Targeted, Post**—There were significant positive relationships found between Career Attitude and Career Knowledge, Self-Concept and Most Fun. Except for the relationship between Career Attitude and Career Knowledge which is in the mid-range of strength, the correlations were low. The scores ranged from 8 - 32 out of a possible 35.

**Self-Concept, Targeted, Post**—There were 80 items on the measure of self-concept and the post-test scores among targeted students
Table 18

Pearson Coefficients of Correlation for Post Test Measures of Career Awareness, Self-Concept and Peer Reputation for Targeted Fourth Grade Students

<table>
<thead>
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<th>SC</th>
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<th>WB</th>
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<td>.04</td>
<td>.02</td>
<td>-.04</td>
<td>-.11</td>
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</table>
ranged from 3 - 78. There was a significant positive relationship found between Self-Concept and Most Worried. It is a low correlation, however. There was a high positive relationship between Self-Concept and Most Happy found.

**Social Adjustment, Targeted, Post**–The possible number of choices for any student to receive on the Social Adjustment Peer Reputation measures ranged from 0 - 26 since only contemporary classroom students were examined on these measures. These students comprised the regular classroom groups. The informal and combination classrooms were not included for purposes of data analysis due to class size discrepancy. The range of post-test scores on the Social Adjustment measures for targeted students were as follows:

- Most Happy: 0 - 12
- Work Best: 0 - 19
- Most Fun: 0 - 8
- Most Worried: 0 - 22
- Pick on Others: 0 - 19
- Best Friends: 0 - 7

Most Happy was found to have positive significant relationships with Self-Concept and Most Worried. The strength of the correlation between Most Happy and Self-Concept is very strong with 86% of the variance in one variable being accounted for by the variance in the other. The relationship between Most Happy and Most Worried, while significant, is in the low range of strength.

Work Best was found to relate positively to Most Fun and Most Worried. Both of these relationships are in the mid-range
of strength. There was a significant negative low relationship found between Work Best and Pick on Others.

Most Fun was found to have significant positive relationships with Career Knowledge, Career Attitude, Work Best, Most Worried and it was found to have a significant negative relationship with Pick on Others. All of these correlations were low with the exception of Most Worried and Work Best which approach the mid-range of strength.

Most Worried was found to have significant positive relationships with Self-Concept, Most Happy, Work Best, and Most Fun. Of these, Work Best is in the mid-range of correlational strength while the others are low. There was a significant negative relationship found between Most Worried and Pick on Others. This would indicate only a 7% Coefficient of Determination level, however.

Pick on Others was found to have significant negative relationships with Work Best, Most Fun, and Most Worried. All of these correlations were low. There were no significant relationships found among the measures with Best Friends at the end of the school year.

Summary—These data suggest that among the targeted group of students there was a consistent relationship between Career Knowledge and Career Attitude across the school year. Career Knowledge related negatively to Pick on Others at the beginning of the year but no significance was found at the end of the year. There was no significance found between Career Knowledge and Work Best at any
time during the school year.

With regard to Self-Concept, Career Attitude and Self-Concept were positively related at the end of the year. There was also a strong relationship between Self-Concept and Most Happy at the end of the school year. In the middle of the year, Self-Concept was negatively related to Most Worried whereas, at the beginning of the year, it was negatively related to Pick on Others.

Work Best, Most Happy, Most Fun and Best Friends appear to be related, for the most part, with each other across the school year. Most Worried appeared to be related to the other variables consistently across time as did Pick on Others and both of these variables were found to relate negatively to the other variables. Whereas relationships among the Social Adjustment variables were significant, they were, for the most part, low.

Academic Achievement was found to be related to the variables Career Knowledge, Career Attitude, Work Best and Best Friends, positively, at the beginning of the school year. There were negative relationships found between the complete battery achievement scores and Self-Concept, Most Worried and Pick on Others. The Achievement subscales which accounted for the relationships among the variables of Self-Concept and Social Adjustment were Reading Comprehension, Word Study Skills, Spelling and Language. On the variables Work Best and Most Worried, however, nearly all of the subscales related significantly. There were relationships among Career Knowledge and Career Attitude with all of the Achievement subscales.
Question 4: What changes in the variables of a) self-concept, b) social adjustment, and c) career awareness take place across a school year in children identified low on measures of the same variables and/or the variable academic achievement?

Table 19 presents t-test comparisons of pre with interim measures of the variables Self-Concept and Social Adjustment Peer Reputation. The t-test comparisons were intended to show significant changes from the beginning to the middle of the school year among the targeted group of students. There was a significance of difference in Self-Concept. Most Fun and Most Happy showed a significant difference between pre and interim test results.

Table 20 provides t-test comparisons of the variables Self-Concept and Social Adjustment from interim to the end of the year. Self-Concept showed significant change with the mean score going from 56.49 to 58.59. Most Fun showed a significant change also.

Table 21 presents t-test comparisons for the variables Career Knowledge, Career Attitude, Self-Concept and Social Adjustment at the beginning and end of the school year. There was a significant change found for Career Knowledge and Career Attitude. The only other variable to show a significant change from the beginning of the year to the end of the year was Self-Concept.

Summary—T-test comparisons revealed changes at or beyond the .01 level of significance which took place from the beginning to the middle of the school year occurred in targeted group Self-Concept and Most Happy. From mid-year to the end of the year, significant changes were found for Self-Concept and Most Fun. Significant changes from the beginning of the year to the end occurred
Table 19

T-Test Comparisons of Pre and Interim Targeted Group Measures of Self-Concept and Social Adjustment

<table>
<thead>
<tr>
<th>Variable</th>
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<td>SD</td>
<td>N</td>
<td>Mean</td>
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<td>2.09</td>
</tr>
<tr>
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<td>2.41</td>
<td>140</td>
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<tr>
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<td>2.98</td>
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<td>4.17</td>
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<tr>
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<tr>
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<td>1.49</td>
<td>129</td>
<td>1.98</td>
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</table>
Table 20

T-Test Comparisons of Interim and Post Targeted Group Measures of 
Self-Concept and Social Adjustment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Interim</th>
<th></th>
<th>Post</th>
<th></th>
<th>t</th>
<th>df</th>
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<td></td>
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<td>SD</td>
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<td>SD</td>
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125
Table 21
T-Test Comparisons of Pre and Post Targeted Group Measures of Career Awareness, Self-Concept and Social Adjustment

| Variable         | Pre          |   | Post         |   | t    | df | p   |
|------------------|--------------|---------------|----------------|---------------|
|                  | N | Mean | SD | N | Mean | SD |    |    |     |     |
| Career Knowledge | 160 | 16.09 | 4.18 | 160 | 18.31 | 4.80 | -7.83 | 318 | .001 |
| Career Attitude  | 162 | 18.79 | 4.94 | 162 | 20.15 | 5.40 | -3.40 | 322 | .001 |
| Self-Concept     | 161 | 53.68 | 12.83 | 161 | 57.50 | 13.56 | -3.82 | 320 | .001 |
| Most Happy       | 140 | 1.64 | 1.87 | 140 | 1.96 | 1.97 | -1.81 | 278 | .072 |
| Work Best        | 140 | 1.26 | 2.41 | 140 | 1.46 | 3.16 | -1.15 | 278 | .253 |
| Most Fun         | 140 | 1.78 | 1.45 | 140 | 1.98 | 1.67 | -1.36 | 278 | .175 |
| Most Worried     | 140 | 3.87 | 2.98 | 140 | 3.97 | 3.54 | -0.35 | 278 | .724 |
| Pick on Others   | 140 | 3.34 | 4.36 | 140 | 3.15 | 4.15 | 0.76  | 278 | .450 |
| Best Friends     | 129 | 1.78 | 1.49 | 129 | 1.91 | 1.57 | -0.89 | 256 | .376 |
in the variables Career Knowledge, Career Attitude and Self-Concept among targeted students. All of these changes resulted in gains from pre to post. There were no significant differences found across the school year in measures of Social Adjustment.

**Summary**

The major findings in this chapter indicated that there were significant relationships among the variables Career Knowledge, Career Attitude, Self-Concept and Social Adjustment for the total group of fourth grade students both at the beginning and at the end of the school year. Self-Concept was related significantly to all variables examined except for Career Knowledge and Pick on Others. Total group changes across the school year occurred in Career Knowledge and Career Attitude. There was no significant difference in Self-Concept and Social Adjustment pre to post for the total group.

Significant relationships were found for the targeted group among measures of Self-Concept and certain of the Social Adjustment measures. Specifically, Self-Concept was found to relate significantly with Most Worried at the beginning of the year. This was a negative relationship. At the end of the year, there was found a strong positive relationship between Self-Concept and Most Happy. Career Knowledge did not show strong relation with any of the other variables except for Career Attitude. There was no relationship found between Best Friends and any other variable at the end of the school year for the targeted group of students. Academic Achievement
related significantly to all of the other variables under study except for Most Happy and Most Fun.

Of particular interest was the finding that the targeted group of students made a significant gain in Self-Concept from the beginning of the year to the end. This group also made significant gains in Career Knowledge and Career Attitude. There were no significant differences found among the measures of Social Adjustment for the targeted group.
Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter is organized in three sections. The first section contains a summary of the research study including the findings. The second section presents the conclusions of the study. In the third section, recommendations are presented for further research.

Summary

This section reviews the purpose of the study, the procedures used for data collection and analysis, and the results.

The central purpose of this study was to examine relationships among the variables of a) Self-Concept, b) Social Adjustment, and c) Career Awareness of fourth grade students during one school year which incorporates a comprehensive career education program. A second purpose was to determine what changes in the same variables took place in the students across the school year. A third purpose was to determine what changes in the same variables took place in children identified as low on measures of self-concept and social adjustment according to teacher nomination and/or low measured academic achievement. A fourth purpose was to determine implications for teacher-consultative strategies for improving low self-concept, low social adjustment and low academic achievement among fourth grade students and implications for career education and teacher education.
The rationale for this study rested in a) the significance to education of four separate constructs—self-concept, social adjustment, career awareness, and academic achievement—and relationships among these constructs; b) the efficacy of career education as a means for improving educational programs; c) the need for a means of assisting teachers in working with students low on measures of self-concept, social adjustment, career awareness and academic achievement; and d) within career education, the need to work with teachers, specifically, in these areas.

Subjects for this study were comprised of a total fourth grade population in six out of seven elementary schools in an upper-middle class, suburban school district located near The Ohio State University. The total number of subjects, ranging in age from nine to eleven years was 442. There were 201 females and 242 males. Informal and combination classrooms were comprised of multi-grade groupings; however, for the purposes of this study, only fourth grade students were included. And for purposes of data analysis, only contemporary classroom students were examined on measures of social adjustment.

A team of trained career education consultants administered the Piers-Harris Self Concept Scale, an informal pupil-report Peer Reputation Form, and the Ohio Career Development Test during October of the school year. Students were told that information was being gathered for purposes of evaluating the career education program and
that their test scores and responses would be revealed in summary form to their teachers only. The tests were read aloud so that reading difficulty would not be an influencing factor. The Stanford Achievement Test had been administered separately in accordance with the system's testing program.

At the beginning of the second semester, the consultants met with teachers individually or in small groups to deliver a summary of results to the teachers regarding their students and to conduct a systematic processing of information. Following the information processing session, the consultants retested targeted students according to a building schedule. At the scheduled time, students were taken from their classrooms and tested in a group, by building. Interim Social Adjustment testing was conducted in the classroom by classroom teachers who had been furnished printed instructions on administering the Peer Reputation Form.

Following the interim retesting sessions, retest results were delivered to teachers by consultants according to the systematic information processing format (Appendix A). In addition, self-concept improvement strategies were furnished for the teachers (Appendix B). Teachers were encouraged to process some of their own feelings and thoughts regarding the targeted students in their classes. Teacher-attending, supported by trained career education consultants, was initiated and developed through the information processing sessions.

Post-testing was conducted at the end of the school year by the
same team of consultants across grade level in the same fashion that pre-testing was conducted.

In order to determine relationships among the variables, Pearson Product Moment Correlation Coefficients were computed through an SPSS computer program. To determine changes in pre-post scores t-test comparisons for significant differences were computed. To examine interaction among variables and to examine the variables by school and by sex, two-way analyses of variance were calculated.

The results of the Pearson Product Moment Correlation Coefficients responded to Questions one and three. The analysis of variance data was referred to for purposes of eliciting more clarity regarding demographic information, prior to examining these relationships. In examining relationships among the variables for the total group, it was found that findings in relationships among the variables of Career Knowledge, Career Attitude, Self-Concept and Social Adjustment at the beginning and end of the year were fairly consistent with several exceptions. There was a significant positive relationship between Career Attitude and Most Happy at the beginning of the year but no significance was found at the end of the year. There was a significant negative relationship between Career Knowledge and Pick on Others at the beginning of the year but none was found at the end. There was no significance between Career Attitude and Best Friends at the beginning of the year but there was at the end.

It would appear that Self-Concept related significantly to all
variables studied except for Career Knowledge and Pick on Others. Most Worried was related negatively to all of the other variables. Best Friends was related to all variables except Career Knowledge, Career Attitude and Pick on Others. Work Best was related to all variables except for Pick on Others. The data tended to suggest that attitude toward, rather than knowledge about career, along with concept of self and regard of others, displays significant relationship.

The total population showed a significance of gain in t-test comparisons on the variables of Career Knowledge and Career Attitude. When examining the significance of gains on these measures, it should be remembered that these variables are addressed at the fourth grade level through curriculum infusion as a part of the comprehensive career education program. There were no other significant differences found for the total population.

With regard to students identified as low on measures of Self-Concept, Academic Achievement and Social Adjustment and/or nominated by teachers, the findings showed that Career Knowledge was positively related to Career Attitude, negatively related to Pick on Others and again, positively related to Most Fun at either the beginning or the end of the school year. Career Attitude appears to be related to positive Self-Concept and negatively related to Most Worried.

Targeted students with high Self-Concept scores were nominated to have Picked on Others by their peers at the beginning of the school year. At the end of the year, however, there was a high positive relationship between Self-Concept and Most Happy and Career Attitude.
and a negative relationship with Most Worried. In general, the Social Adjustment measures which appeared to be most commonly associated with each other in a positive direction were Work Best, Most Happy, Most Fun, Most Worried, and Best Friends at the beginning of the year. By mid-year Work Best was negatively associated with Most Worried and Pick on Others.

Academic Achievement was found to be positively related to Career Knowledge, Career Attitude, Work Best and Best Friends. It was negatively related to Self-Concept, Most Worried and Pick on Others.

The targeted group showed a significant increase in Self-Concept and Most Happy from the beginning of the year to mid-term. A significant change positively was also found for Self-Concept and Most Fun from mid-year to the end of the year. Overall, targeted students increased in Career Knowledge, Career Attitude and Self-Concept across the year, while no significant differences were found in measures of Social Adjustment.

Conclusions

This section presents the major conclusions drawn from the study and discusses the implications of the findings for teacher intervention strategies for students low on measures of self-concept, social adjustment and career awareness as these strategies relate to career education and teacher education programming.

The data showed that, when examined for significant differences by school, only in three instances, was a single school
different in scores than the others. In each case the school which was significantly different was a different building. When examined by sex, boys differed in scores from girls in one instance. From this it can be concluded that there is homogeneity by school and, in part, by sex in relation to the variables studied and that similarities in program exist even with the various kinds of classroom organizational styles being employed. This substantiates the view of the community itself as being a fairly homogeneous one with socio-cultural factors being fairly consistent across the community.

The single exception to this consistency is the pattern of girls appearing as Most Happy and Work Best and boys appearing to Pick on Others more which follows a common expectation in the elementary school setting. This would imply that educational programming could be useful if it were to treat information regarding ways in which children cope with anxiety with more emphasis on the variable of sex. More importantly, it would also mean that perhaps career education might be useful if it were to focus on sex-role stereotyping.

The variables Career Knowledge and Career Attitude seem to be related to each other and would be related similarly to other variables, the exception being Self-Concept which is more a function of attitude than knowledge. Therefore, a second major conclusion which can be drawn is that Career Knowledge and Career Attitude can be worked with similarly. It can further be concluded that, in the areas of Career Knowledge and Career Attitude
there is a common program operating and that comprehensive career education programming is effective going across grade level and across schools.

A subsequent conclusion regarding Career Awareness, across the total group, is that the only significant change which occurred was in the cognitive area. The fact that there were no gains across the total group in Career Attitude could mean that the program is having no impact or that the population is operating at a high level of functioning already. An assessment of the higher than average normative data on this population would perhaps point toward the latter assumption. Certainly, it can be concluded that, across the total group, gains on cognitive measures can be expected.

A similar subsequent conclusion was reached regarding Self-Concept. Since there were no significant changes across the year for the total population, either the program is having no impact or the students, as a whole, are operating at a higher than normal level of functioning already. Because the total group mean percentile score was 69.75 at the end of the year, and 67.99 at the beginning, the latter assumption is entirely plausible.

The Peer Reputation Social Adjustment variable, Most Worried, related negatively to everything else. From this it can be concluded that one single variable, Most Worried in this instance, can have a negative influence on all other aspects of school. The implication of this conclusion is that worry may be an indicator of anxiety and pressure. This could have an adverse personal affect
though not necessarily an academic affect. In other words, high anxiety children could be high achievers without perceived adjustment problems. For these children, personal adjustment problems could result in an internalization process rather than in acting out behaviors.

In terms of the targeted population, a third more boys were nominated by teachers as being low in self-concept and social adjustment than girls. This was consistent across schools. From this a fourth major conclusion which can be made is that there is a difference according to sex in those children teachers identify as low in these areas. Here again, career education might be useful if it were to focus more on sex-role stereotyping.

The pattern of relationships among the variables was much the same as it was for the total group with several exceptions. The correlations, in most instances, were higher for the total group. This is probably due to the fact that statistics will produce higher r-values for a higher number of cases. Therefore, this could simply be a function of the higher number in the total group.

One noticeably higher correlation in the targeted group, at the end of the year, was that between Self-Concept and Most Happy. The findings that there is a strong relationship between happiness and self-concept among a targeted group of students and that this relationship was considerably stronger than than for the total group lead to the conclusion that students perceived as Most Happy by their peers, at any point on the academic
continuum, will exhibit more positive behavior; feel positive about their intellectual and school status; by satisfied with their physical attributes; be less anxious; feel popular; and feel, generally, happy and satisfied.

Another difference in the pattern of relationships for the targeted group was that there was no significance in the relationships between the Career Awareness measures and Most Worried at the end of the year. From this, a corollary conclusion can be reached that, whereas a negative relationship between career awareness measures and a measure of student worry might serve as an indicator for a total population of elementary students, worry will not necessarily serve as an indicator for career knowledge and attitude measures among a targeted group of students.

Another end of year difference between the groups was that, among targeted students, Pick on Others correlated negatively with Work Best, Most Fun and Most Worried, whereas the total group relationship was between Pick on Others and Most Happy. From this it can be concluded that a measure of Pick on Others will serve as an indicator for more social adjustment variables among a targeted group of students than it will across a total population. Perhaps these academically targeted students vent their feelings outward by picking on others.

An important implication which can be drawn from this conclusion is that career education and teacher education programming can be useful if they focus on aggressive behaviors of children.
An understanding of how children cope with anxiety in the school setting might be served if peer reputation of aggression were more thoroughly studied. It should be remembered, also, that there was a significant difference by sex across the total population on the measure of picking on others. Boys consistently scored higher on this measure than girls which indicates a need for understanding the difference in anxiety-coping behaviors between the sexes. This behavior, then, seems to be sex-related.

Another difference between the groups was that, whereas among the total group Best Friends related significantly to all other variables except Pick on Others, in the targeted group, there was no significant difference between Best Friends and any other variable. From this it can be concluded that, whereas a social measure of friendship might be useful for an overt explicated social behavior, it is not useful as an evaluative indicator. In other words, a social measure of friendship selection will provide information about children in terms of which ones are or are not social isolates or rejectees but it will not be useful in terms of indicating other variables. The measure of Work Best was not related to any other variable among the targeted groups either which leads to the conclusion that a social measure of student Work Best will not serve as a valid indicator for other variables among a targeted group of students.

There was a positive relationship between Most Fun and the two Career Awareness variables among the targeted group whereas this relationship was not found for the total group. This leads
to a possible conclusion that a social measure of Fun can serve as an indicator for career variables among a targeted group of students.

An important implication for career education and teacher education programming which can be drawn from this possible conclusion is that perhaps, among targeted students, as they become more aware in terms of career knowledge and attitude, they will be perceived by others as being more fun. The reverse to this could also be true. Certainly, the career educator cannot afford to overlook as a possibility the fact that targeted children who because of career education classroom activities increase their career awareness may become perceived as socially more attractive, in terms of "fun," by their peers. Career education can be a vehicle for enhancing targeted student classroom performance and social behavior.

The differences in relationships between the targeted and the total group lead to an overall conclusion that, whereas the general pattern between the two groups will look the same, there are certain differences in the patterns which suggest implications for career education and teacher education programming. Among the targeted students, the total battery of Academic Achievement related to Self-Concept. It was more individually related to the reading and language sub-scales than math and science although the correlations were low. From this it can be concluded that student self-concept relates to explicit academic skills. It should be remembered, however, that the relationships were negative.
Most Worried consistently showed a significant negative relationship across the academic achievement subscales. This would substantiate Most Worried as an indicator of academic difficulty. Work Best consistently related positively across the subscales and Pick on Others related negatively. It can be concluded from these findings that students will readily identify their classmates who work best, who are most worried and who pick on others.

An implication for programming which can be drawn from this conclusion is that there is value in soliciting peer identification of students who exhibit positive social and negative social behaviors. The value rests in this identification process as being a viable means of targeting students who are experiencing academic difficulty. It is important to note that the measures of Most Happy and Most Fun did not relate to Academic Achievement.

Another important implication for the career educator rests in the positive relationship between Work Best and Academic Achievement. The emphasis which career education places on appreciation of and motivation for work in the Eriksonian sense of industriousness at the elementary level is substantiated by this relationship finding. As students increase their motivation for work, and learn good work habits, they will be readily identified by their peers and perhaps would show improved levels of academic functioning.

The pattern of relationships across the school year among the targeted students generally remained consistent. There were several exceptions, however. Most Worried did not relate significantly to Self-Concept at the beginning of the year but it did
relate, negatively, at mid-year and at the end of the year. From this it can be concluded that, as a school year, progresses, the peer identification of Most Worried students serves as a valid indicator of self-concept targeting. Best Friends showed no significance in relationship to other variables at the end of the year which leads to the assumption that this variable loses value as an indicator of other variables as the year progresses. The relationship between Most Happy and Self-Concept was strong at the end of the year with no significance found at the beginning or in the middle of the year. From this it can be assumed that student identification of peers who were Most Happy at the beginning of the year did not serve as an indicator of Self-Concept adjustment but, at the end of the year, it served as a strong indicator.

An important implication which can be drawn for purposes of career education and teacher education programming from the above is that something may have intervened during the school year to have influenced the relationship between peer identification of Most Happy and the Self-Concept variable. In light of the fact that there was a teacher-intervention strategy in operation, it is possible that this strategy did serve as a positively influencing factor and that such strategies will exert positive influence over variable relationships.

On the measure of Self-Concept, the targeted group made a significant gain. From this, a final conclusion can be drawn that a targeted group of students whose group mean score is below that
of a total group can make a significant gain across the school year. Specific factors comprising the P-H measure of self-concept used in the study are Behavior, Intellectual and School Status, Physical Appearance and Attributes, Anxiety, Popularity, and Happiness and Satisfaction. It is important to note that if students are making gains in self-concept, they are in all likelihood making gains across all of these factors in terms of how they feel about themselves in relation to those factors.

An important implication which can be drawn from this conclusion is that career education programming, which attends to systematic teacher processing of teacher-targeted student information, can possibly contribute to improving the self-concept of a targeted group of students. A further implication which can be drawn is that the students who were targeted within the population studied would not necessarily be targeted if they were part of a different total population. Whereas these students were targeted as low in this population, they are, in fact, operating at a higher level of functioning than the norm. This trend would have to be considered as a unique form of pressure being exerted upon this particular group of targeted students.

Recommendations for Further Research

It is recommended that to improve the generalizability of these findings, further research be conducted with other populations. The higher than average level of functioning of the population studied has an impact on the findings. It would be possible only
to generalize from these findings to other populations which are homogeneous in nature and where students operate at a high level of functioning. It is suggested that additional investigation be conducted with other groups which represent a more heterogeneous, cross-cultural mixture of students.

It is recommended that future research be undertaken in a manner so as to obtain objective information for each of the Career Awareness and Self-Concept variables. One of the limitations of this study was that the Self-Concept subscales were not examined. It is possible to do this on the measure of self-concept using the P-H through the analysis of cluster scores. These are not factor scores and the information derived from them is of a tentative nature but it does give promise of being useful.

A further recommendation is that an item analysis be conducted on the measures of Career Knowledge and Career Attitude so as to discover specific determinants of cognitive and affective career variables. It is suggested that a content analysis of the Career Awareness and Self-Concept scores themselves be conducted.

It is recommended that further research be conducted in the area of teacher perception of students who are low in self-concept and social adjustment. It is essential to learn whether targeting of these students is sex-biased and if their anti-social behaviors are somehow being negatively reinforced within the educational setting.

It is recommended that further research be conducted utilizing
the P-H instrument to provide further construct validation and to contribute to the developing body of self-concept theory. There is also a need for factor analysis work on this instrument.

It is recommended that further statistical analyses be conducted on the data used in this study to determine significance of relationship changes across the school year and to further determine main effects significance by school and by sex through a more extensive analysis of the interaction of the variables.

It is recommended that a case-study approach be implemented to study those students who received a high number of peer nominations on the measures of Pick on Others and Most Worried. Those who received the high scores were few in number, but they signify children who need attention.

It is recommended that further research be conducted on the utility of consultative teacher-intervention strategies. This study employed a limited intervention strategy. It was conducted as action research and, as such, tight controls were not exercised. It would be useful to explore the potential usefulness of this sort of strategy and the implications of its potential usefulness could be further substantiated by a more tightly controlled research design.
APPENDIX A

Information Processing Format
TREAT #1: INITIAL REPORT OF DATA TO TEACHERS

Materials: Handouts (Piers-Harris, Sociometric Information)
Sociometric Measure
Class rosters with individual student results on
Ohio Career Development Test
Piers-Harris Children's Self Concept Scale
Sociometric instrument
Stanford Achievement Test

Results: Presented by indicating +, = or - for each student as follows:

Ohio Career Development Test:  
+ (4 points or more above the mean)
+(plus or minus 4 points from the mean)
-(4 points below the mean)

Piers-Harris Self Concept:  
+(75th percentile or above)
=(75th to 26th percentile)
-(25th percentile or below)

Sociometric Instrument:  
(Items 1, 2, & 3)  
+ (5 or more choices)
=(2, 3 or 4 choices)
-(0 or 1 choice)

(Items 4 & 5)  
+ (0 or 1 choice)
=(2, 3, or 4 choices)
-(5 or more choices)

Stanford Achievement Test:  
Only students who have one subscore in local stanines 1, 2, or 3 are included.
+ (stanine 7, 8 or 9)
=(stanine 4, 5 or 6)
-(stanine 1, 2 or 3)

Time: One half hour.

Procedures: 1. Teachers are given class rosters with scores in indicated +, = or - for each instrument.

2. A brief discussion of each instrument is presented.

3. Each student who received a "-" is pointed out in particular for each test subscore.
4. Particular attention is paid to results on Piers-Harris and Sociometric Instrument responses.

5. Discrepancies in scores are discussed with final assessment of students perceived low in self-esteem and social relationships.


7. Gain permission to assess each of the students agreed upon as low in self-esteem through administration of an interim Piers-Harris. Schedule time and administrator.

8. All questions should be noted.

Follow-up:

1. Announce follow-up sessions are available as requested until the year-end for purposes of helping teachers determine the best ways of addressing issues raised with the information.

2. Announce end of April or early May for collection of final evaluation data and determine tentative dates.
CAREER EDUCATION EVALUATION

Follow-Up Session #2

Purposes:
A. Process information delivered during Follow-Up Session #1
B. Present new information
C. Process new information
D. Support/reinforce goals and methods of teachers for altering student behavior

Conference Procedure:
1. Process information delivered during Follow-Up Session #1.
   a. Reactions to information presented
   b. Accuracy of information, in teacher's perception
   c. Implications for teacher as teacher
   d. Feelings sensed by teachers; implications for teacher as person

2. Present new information.
   a. Review "Sociometry" handout
   b. Review Sociometric Instrument
      (1) Items—six questions, listed on handout
      (2) Scoring:
         Items 1, 2, 3, & 6         + (5 or more choices)
         = (2, 3 or 4 choices)
         - (0 or 1 choice)
         Items 4 and 5              + (0 or 1 choice)
         = (2, 3 or 4 choices)
         - (5 or more choices)
      "*" indicates 10 or more on any one item.
   c. Review Piers-Harris scoring procedure
      + (high percentile)
      = (average percentile)
      - (low percentile)

   a. Reactions to information
   b. Accuracy of information, in teacher's perception
   c. Implications for teacher as teacher
   d. Feelings sensed by teacher; implications for teacher as person

   a. What have you done so far? What do you plan to do?
   b. What do you need? Where might these be obtained?
   c. Record responses
   d. Set time for Follow-Up Session #3
APPENDIX B

Self-Concept Improvement Strategies
SELF-CONCEPT IMPROVEMENT STRATEGIES

The Self-Concept Improvement Strategies are intended for use as a guide for classroom teachers. Consultants should present the handout to teachers as a part of the follow-up sessions, discuss the strategies with the teachers, allow time for reactions and agree to furnish the teachers with any other resources needed.

Specific topics for discussion are the following:

1. Self-worth
2. Caring
3. Understanding
4. Identifying
5. Recognizing
Career Education Evaluation

Self-Concept Improvement: Self, Work Adjustment, Decision-Making

In order to have self-worth, students have a need for:

1. Caring and being cared for
2. Being aware of their role in life
3. Having a positive self-concept
4. Having a willingness to learn/change
5. Fulfilling personal, pro-social goals
6. Being an independent person
7. Being pro-social in decision-making
8. Being industrious

The professional educator can help students meet their needs in several ways:

Caring

1. Greet students at the door.
2. Listen to students by focusing, clarifying and accepting.
3. Speak to the shy person every day with a friendly smile.
4. Know and use student's preferred name.
5. Write positive comments on papers in addition to grades.

Understanding

1. Notice non-verbal indicators that the child is happy, sad, glad, tired, etc. and communicate these observations.
2. Place success within reasonable reach for every child.
3. Give children an opportunity to air their views, or share their hidden agendas.
4. Have students interview each other and report discoveries to class.
5. Allow class to interview you.
6. Encourage the sharing of feeling words.
7. Have caring and feeling words around the rooms.
8. Use Magic Circles techniques.
9. Share lunch with a child.
10. Reverse roles with students.
11. Show that mistakes are legitimate.

Identifying

1. Have lower-ability children tutor lower grade children.
2. Encourage students to write special goals for themselves for the next day and follow through on these goals.
3. Encourage each child to keep a daily journal and respond in writing.
4. Provide each child with a space to display his/her work. The displays can be rotated at the discretion of the students when they have a replacement.
5. Make pictures or profiles of children and have other children write positive comments about that person on it.
Recognizing

1. Let students choose someone to work with and share the other person's success with the teacher.
2. Send notes of praise home to the parents.
3. Find a strength or interest in the child and give recognition for this, as well as provide opportunities to extend it.
4. Let children work as teacher assistants.
5. Praise in a positive manner any efforts of the child; use rewards, badges.
APPENDIX C

Peer Reputation Form

Explanation and Rationale for Teachers
SOCIOMETRY

Sociometry refers to the mapping of interpersonal likes and preferences with a classroom. The theory behind sociometry is that people can be more productive and cooperative when they are socially comfortable and at ease in a social situation.

Sociometry was initiated in the 1940's and, since then, certain terminology has evolved. "Stars" are pupils chosen by many pupils. "Pairs" are children chosen by each other in response to sociometric questions. "Isolates" are those who make their choices but remain unchosen by others.

One process of sociometric description is the "guess-who" technique, developed by Hartshorne and May¹. This process consists of description of the various roles played by children in a group. Children are asked to name the individuals who fit certain verbal descriptions. Such items yield interesting and significant peer judgments, and are useful in the study of individual roles.

Teachers who have used sociometry frequently report being surprised at seeing how much their perceptions differ from those of pupils. Hence, sociometry provides data on how pupils "coming across" to their peers. What one learns from such analysis can be useful in creating a more effective teaching-learning climate.

The instrument used with our fourth graders includes the following six questions:

1. These three classmates are the most happy.
2. These three classmates work best in class.
3. These three classmates are the most fun on the playground.
4. These three classmates seem the most worried.
5. These three classmates are always picking on others
6. Three best friends in class are...

The first three questions are for positive peer appraisal; the next two are for negative peer appraisal, one for more withdrawn behavior and the other for more aggressive behavior; the last item indicates friendship.

The first five questions only are used for purposes of evaluation.

GUESS WHO

1. These three classmates are the most happy.

2. These three classmates work best in class.

3. These three classmates are the most fun on the playground.

4. These three classmates seem the most worried.

5. These three classmates are always picking on others.

6. Three best friends in class are:
APPENDIX D

Two Way Analyses of Variance
Table 5

Two Way Analysis of Variance for Pre-Test Career Knowledge by School and Sex

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Two Way Analysis of Variance for Post Test Self Concept by School and Sex

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**Two Way Analysis of Variance for Pre Test Most Happy by School and Sex**

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### Table 9

**Two Way Analysis of Variance for Pre Test Work Best by School and Sex**

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Two Way Analysis of Variance for Pre Test Pick
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